UNIVERSITY OF KWAZULU-NATAL

MARKETS' REACTION TO FINANCIAL RESTATEMENTS OF THE TOP 40 JSE LISTED COMPANIES

By

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DECLARATION

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ABSTRACT

There has been a rapid growth of financial restatements. This concerns the investors about the integrity and reliability of the entity's financial reporting environment and restatements negatively affecting market reactions. Numerous listed companies are restating their financial statements due to inaccurate or misleading information in the previously published financial reports. JSE requires listed firms to correct and amend incomplete or misleading information. A survey on the market reaction around announcements of financial restatements of JSE companies has been a concern and interest to investors, management, and any other concerned parties. As a result, the aim was to examine the causes of financial restatements of the listed top 40 companies in South Africa and establish the markets' reaction. The study involved the top 40 companies listed on the JSE from 2007 to 2019. The study collected secondary data and the population of thirty-two events was pulled from the JSE SENS. A sample size equaled the entire population of thirty-two events. The window period included 10 days before the announcements, the day of the announcement, and 10 days after the announcement. The IBM SPSS Statistics 27, the statistics software, was used to analyse data. The results indicated a total of thirty-two restatements over a period of thirteen years. The year 2019 was the period that reported the most restatements. Causes of restatements were found to be accounting errors, adoption of the new standard, accounting irregularities, and change in accounting policy. A substantial number of restatements were due to accounting errors. A majority of companies experienced growth in share price on the 10th day after the announcement. Nonetheless, when all days within the window period were included in the analyses, the overall calculation indicated that companies experienced an average decline of -7.55% in the share price after the announcement. The empirical findings confirm that markets react negatively to the restatements since a significant number of companies exhibited an average decline in share price after the announcement.

Keywords: Restatements, markets' reaction, market efficiency, financial reporting, consistency concept.

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CHAPTER ONE
CONTEXTUALISATION OF RESEARCH

1.1 Introduction

There has been a rapid growth of financial restatements. This concerns the investors about the integrity of the entity's financial reporting environment, and restatements negatively affecting market reactions. Financial restatements are the corrections that listed companies make on published financial statements (Chi and Sun, 2014). The degree of restatements has grown rapidly among the listed enterprises, most of these restating are because of the inaccurate or deceptive information in the earlier published financial reports. Different reasons are the cause of the restatements of financials, and others that may be regarded as intentional. The intentional reasons may ruin a company's reputation (Mao, 2018). A total number of 3,513 restatements were reported between the years 2001 to 2014. These cases combine restatements which were due to fraud, and others which were due to honest error (Dutta, Dutta and Raahemi, 2017). Restatement is a modification of one or more of the enterprises's former financial statements to rectify an error and accounting practitioners are responsible for determining whether a historical error is material or substential enough to warrant a restatement. Hence, financial restatements are a straight admission by the entity's management of fabricated, incorrect accounting and financial misrepresentation (Xu and Kong, 2019).

The previous literature has extensively indicated severe consequences related to restatements such as losses, drop in earnings, and increased cost of acquiring capital and litigation risk. Restatements due to material misstatements are regarded as a violation of the company's commitment to providing accurate and reliable financial statements (Huang, Jenkins, Luo and Xie, 2018,). Restatements can change investors' confidence, which is significant to the capital market (Wu, 2002). Restatements have significant consequences that affect the company's position in capital markets (Beaulieu, Hayes and Timoshenko, 2017). This is because repetition of previously published statements is viewed as a severe violation of the enterprise's commitment to give reliable and accurate financial statements. As such, one direct consequence is that investors may lose trust in the credibility of the firm's financial reports and financial information (Chakravarthy, Dehaan and Rajgopal, 2014).

Great quality of financial information is an essential element for a vibrant and efficient stock market (Xu and Kong, 2019). Existing literature suggests that high-quality financial presentation allows capital markets to perform correctly (Firth, Rui and Wu, 2011). A set of financial statements and reports serve numerous reasons, for instance; comparable, verifiable, and consistent information. The financial statements inform users and investors about the economic events and position of the company, and these statements are based on a specific period. Investors observe annual financial statements to anticipate which company would produce great investment returns. The investors and other stakeholders depend on these financial statements when they decide on investment decisions, and they view different companies to decide on the most profitable investment (Robbetze, De Villiers and Harmse, 2017). Financial statements are indicators of the profitability and financial stability of the company. One of the main objectives of FS is to report on the financial performance of an enterprise. The International Accounting Standards Board (IASB) Conceptual Framework for financial reporting mentions that financial reports provide users with valuable financial information (Barker and Teixeira, 2018).

1.1.1 Overview of the stock market, stock exchange, and JSE

The stock market embodies the listed enterprises that list their equity shares for public investors to sell and buy stock. The stock market is one of the significant activities taken by the state in improving national economic growth. This is necessary for the fiscal and monetary growth of the country. While the stock exchange is an infrastructure that facilitates the trading of stocks, bonds, and other securities, it provides a platform for selling and issuing securities. Stock exchanges like Japan, the United Kingdom (UK), and the United States (US) have played a massive part in the investment process within developing countries (Musonera and Vincent, 2008).

The Johannesburg Stock Exchange (JSE) was founded in 1887, and in the year 1963 the JSE merged with the World Federation of Exchanges. It progressed from a traditional trading floor and the automated trading system was upgraded in the 1990s. The JSE operates under the Financial Markets Act No.19 of 2012. In 2003, the "JSE launched an alternative exchange, AltX, for small and mid-sized listings, followed by Yield X for interest rate and currency instruments. The JSE then acquired the South African Futures Exchange (SAFEX) in 2001 and the Bond Exchange of South Africa

(BESA) in 2009. Today it offers five financial markets, namely; Equities, Bonds, Financial, Commodity and Interest Rate Derivatives" (JSE, Limited).

The JSE has been in the top 20 of the largest equity exchanges globally and was reported to have a market capitalisation of R6 445 billion as of October 2010. In 2010 South Africa was ranked the first country within a pool of 139 countries for its regulation of security exchanges, the World Economic Forum announced the ranking. The listing information requires the release of data comprising price-sensitive information facilitated via Stock Exchange News Service (SENS). The Johannesburg listing states that all listed companies have to follow the laws by International Financial Reporting Standards (IFRS). Listing allows enterprises to raise their capital as investors can put their monies in these listed enterprises. The JSE allows the buying and selling of securities or shares, and secondly, it serves as a regulator of listed shares and regulates the investors who use the JSE (JSE Limited).

When it comes to company listing, it takes 9 to 13 weeks for a company to be listed, but it all depends on the method of listing, and the JSE functions on two markets, that is; Main Board and Alternative exchange (Altx) (JSE limited). "The JSE top 40 index consists of the 40 largest companies which are ranked by investable market value in the All–Share Index" (FTSE Russell Factsheet, 2020). "The Top 40 index is the 40 biggest companies on the JSE, ranked by market capitalisation (market cap). The market cap of a company is the market value of a publicly-traded company's outstanding shares. Market cap is equal to the share price multiplied by the number of shares outstanding. The Top 40 index is a fair reflection of what happens to the South African stock market as a whole because even though it contains only 40 out of the roughly 400 shares listed on the JSE, it represents over 80% of the total market cap of all JSE listed companies" (Capital, 2013).

1.2 Background

Many laws governing the Securities Acts want entities to rectify wrong, inadequate, and deceptive financial information. Management must correct published financial reports if they may be later revealed to have misleading and false information. The entity can find misleading information on their financials by condunsting internal audits and applying other internal control procedures (Palmrose, Richardson and Scholz, 2004). The restatements are continuing globally, so studies that involve restatements by different companies would be helpful. High-quality reporting suggests that an entity's financial reports are transparent, complete, and truthful; however, to repeat financial statements would indicate that the circulated information initially was not truthful, transparent and complete, which may drive the stakeholders that use financial reports to make inappropriate decisions (Flanagan, Muse and O'shaughnessy, 2008). The number of financial restatements on financial reporting is perceived as an indication of audit failure; hence the loss of investor confidence (He and Chiang, 2013). In reaction to the decline of investor confidence, the South African Institute of Chartered Accountants (SAICA) and the JSE Limited jointly formed a GAAP Monitoring Panel (GMP) on the 4th of September 2004. The GMP investigates and advises the JSE concerning compliance by issuers with IFRS. The JSE follows advice provided by GMP; as such, the JSE has the authority to instruct entities to re-issue information that is considered appropriate for the JSE. Therefore, the JSE requires listed firms to correct and amend incomplete or misleading information (Watson and Rossouw, 2012).

1.3 Research problem statement

The problem in research is defined as a common problem about the association in variables. A research problem has to be explained narrowly to move the emphasis to a specific problem or investigation that is important enough to be inspected (Bless, Higson-smith and Kagee, 2006). The latter concurs with Greener (2011) who suggested that a problem in a research project has to mention what the study will accomplish. The problem should pay attention to the study that is conducted. A survey on the market reaction around announcements of financial restatements of JSE companies has been a concern and interest to investors, management, and any other concerned parties (Watson and Rossouw, 2012). According to He and Chiang (2013), investors and regulators scrutinise restatements because they view it as an audit failure, and it causes an adverse market reaction. The purpose of the study was to examine the causes of financial restatements of the listed top 40 companies in South Africa and establish the response of the markets thereafter. The study focused on market reaction because excellent research in accounting literature has reported financial restatements due to financial reporting irregularities (Thompson and McCoy, 2008). However, the reaction of investors to financial restatements is largely unexplored. Therefore a local research exist in this area, the following question arises: How do markets react to financial restatements of the top 40 JSE listed companies? There are no locally identified previous studies addressing this question. Thus, there is no indication of how markets react to the restatements in the South African context. Because of the above reasons, there is a need and a great motivation to provide empirical evidence on the reaction of markets to financial restatements of the highest 40 companies registered on the JSE

1.4 Research aim and objectives

1.4.1 Research aim

The aim of the study is to examine the causes of financial restatements of the listed top 40 companies in South Africa and establish the markets' reaction.

1.4.2 Research objectives

a) To identify the frequency of financial restatements of the top 40 JSE listed companies;
b) To investigate the causes of financial restatements of the top 40 JSE listings;
c) To examine market reaction on financial restatements of top 40 JSE listed companies

1.5 Research questions

a) What is the frequency of financial restatements of the top 40 JSE listed companies?
b) What are the causes of financial restatements of top 40 JSE listed companies?
c) What is the market reaction on financial restatements of the top 40 JSE listed companies?

1.6 Significance and contribution of the study

The concern about financial restatements among listed firms has attracted increasing attention from investors. The IAS 8 is a prescribed condition for "selecting and changing accounting policies, changes in accounting estimates and corrections of errors” so that companies organise and present financial statements consistently and comparably. The findings of this study documented the frequency of financial restatements in the JSE and the causes of financial restatements. It was important to conduct this study to bridge the gap in body of knowledge by examining the markets’ reaction towards the re-issue of financial statements. The study is mainly on the highest 40 companies of the JSE. The findings of this study will also assist researchers who will conduct similar studies in the future. They will use this work as reference material to enlarge the pre-existing literature on the correlation between the share price movement and the restatements. It will provide a better understanding of these two variables to the companies. The recommendations will be helpful to the listed enterprises.

1.7 Delimitations of the study

The topic of this study by nature is inclined and exposed to certain limitations. The time is restricted as the study had to be concluded in a little period of time which is less than a year. The study is based on thirteen-year data only, and it is restricted to the top 40 listed companies; thus findings might not represent the larger corporate of the JSE. Although it would have been a great idea to examine all companies listed on the JSE however a manual process to examine each company was noticed that it will consumed time. Thus this study was narrowed to the listed Top 40. A further limitation was the lack of share price data for some of the companies. However, even with these observed limitations, the researcher will make an unbiased and truthful effort to do justice to the study.

1.8 Outline of the dissertation

This study is organised into five different chapters.

Chapter One introduces the study, discusses the background to the study, motivation for the study, the aim of the study, and presents the problem statement that recognises current and an existing gap in research. The chapter further presents research objectives, research questions, and significance of the study.

Chapter Two is devoted to the review of theoretical data and empirical literature. This chapter explores theories underpinning the consistency concept of financial reports, the conceptual framework for financial reporting, and the theory of stock market efficiency. It further explores empirical literature about the stock market, causes of financial statements, and market reaction towards restatements. This review affords readers the knowledge and ideas that others have established about market reactions to financial restatements. It also enables an important review of the findings and methodologies used by other authors to reach such findings

Chapter Three provides the research design and methodology. The chapter explains the methods to be employed to conduct the research, such as; research design, data collection source and procedure, population, sampling technique, data collections instruments, and methods to implement to maintain validity and reliability. It ends with explaining the techniques used in the data analysis and presentation of the data.

Chapter Four gives the presentation, analysis, and discussion of the results. The analysed results provide information for the originally formulated questions. The results are discussed and linked to the literature that has been reviewed to establish whether the research questions have been responded to and the objectives have been fulfilled.

Chapter Five gives the summary of the significant findings, conclusions, and recommendations founded by the findings. Therafter, the conclusions are the outcomes of the analysis of the results, and they are linked to the literature review with the research aim and objectives. Implications of the findings are discussed as well.

1.9 Chapter summary

This chapter gave the introduction and the background of this research. It mentioned the problem statement, the research objectives, research questions, significance of the study, and limitations. This study investigated the causes of financial restatements of the listed top 40 firms in South Africa and established the response of the markets. This part of study is considered appropriate and relevant as the Johannesburg Stock Exchange (JSE) requires listed firms to correct and amend incomplete or misleading information.

The following chapter discusses existing concepts and theories associated to financial reporting and their impacts. It critically discusses the empirical literature on the consequence of financial restatements on the reaction of the financial markets.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical framework and conceptual framework that supported this study. Thereafter the analysis of the applicable empirical literature is presented. It argues the theories and concepts employed and their relevance to financial restatements and financial markets' reaction. Thereafter, it will discuss the empirical research on the impact and effects of financial restatements on the financial markets and empirical studies on causes of financial restatements' effect on markets. Comparable prior studies will be analysed to show the significance of reliable financial statements. The literature review presents a consistency concept of financial statements, a conceptual framework for financial reporting, and the theory of stock market efficiency. This is followed by the causes of financial restatements and the market reaction towards restatements. Literature of financial restatements within South Africa is limited; therefore, the United States (US) literature is used to illustrate market reactions to financial restatements. The alignment of an entity's integrated reports to IFRS is a vital area in corporate reporting in finance. The consistency principle implies that an financial statements of an enterprise follow the same accounting principles, methods, practices, and procedures from one accounting cycle to the next cycle.

The previous study performed by Thompson and McCoy (2008) examined restatements due to errors; however, this study concentrated on various causes of restatements and the market reaction thereafter on the companies listed on the JSE. The findings from previous studies performed on different market reactions and causes of restatements are incorporated in this chapter.

2.2 Theoretical and conceptual literature review

To understand the variables applied in this study, it becomes vital to recognise the theoretical and conceptual framework that becomes the foundation for this study. The variables in this context denotes the phenomena that a study concentrates on to begin the trends or relationships. This section presents an understanding of related theories in financial reporting to improve the knowledge of the empirical research results.

2.2.1 Conceptual framework for financial reporting

In order to investigate the causes of restatments and causes of restatements, the conceptual framework for financial reporting becomes relevant since the conceptual framework is expected to be a constitution that reminds the regulators about the entire aim of financial reporting, i.e., particulars of individual standards are alligned with that of the framework (Schipper, 2010). Frameworks are based on rules which are much like rules in law; they facilitate the consistent and logical creation of IFRS A framework is a structure explaining common ethics and values for developing accounting standards in the supervised field. To achieve this objective, a framework has to be consistent for a lengthy period and express standard rules that constitute the fundamentals of financials. The conceptual framework provides valuable information to a complex of stakeholders and investors in deciding on viable economic decisions (Christensen and Demski, 2007).

The framework emphasises that financial reports have to deliver evidence regarding the financial position, financial performance, and cash flows of an entity. This information has to be useful to the user to make economic decisions (McAnthony and Jindal, 2017). The framework also provides explanations for recognition rules interconnected to the essential elements of financial statements if it includes matters related to measurement (Christensen, 2010). The common conceptual framework is an essential prerequisite for common standards because the conceptual framework is to bridge the gaps and make improvements where there is a need (Whittington, 2015). If the conceptual framework is not available, an individual associate of the International Accounting Standards Board (IASB) can apply their concepts. In view of the latter, it would be difficult to achieve the agreement needed to issue IFRS, as the IFRS would not be consistent (Wells, 2011; Christensen, 2010).

The supporters of obligatory adoption of IFRS maintain that IFRS improves financial reports comparability, which leads to more excellent cross-border investment (Defond, Hu, and Hung, 2011). The IASB's Framework mentions that "the objective of financial statements is to provide information about an entity's assets, liabilities, equity, income and expenses that is useful to users of financial statements in assessing the prospects for future net cash inflows to the reporting entity and in assessing management's stewardship of the entity's economic resources" (Barker and Teixeira, 2018). The former and latter are supported by Musonera and Vincent (2008), who mentioned that in the study conducted in Rwanda, the presence of a reliable accounting system is an essential element in the expansion of stock exchanges; as such the company to be listed in Rwanda has to be encouraged to adopt international accounting standards. The primary view on comparability when it comes to the "conceptual framework for financial reporting underlying IFRS and US GAAP is that accounting figures are comparable. Different studies confirm that accounting figures based on IFRS are similar to those founded on US GAAP" (Barth, Landsman and Williams, 2012).

According to Gissel (2016), one has to use accounting knowledge, apply professional judgement and critical thinking when evaluating a fixed asset. He further mentions that one has to analyse dissimilarities between a non-current asset under US GAAP and a non-current asset under IFRS. In the study piloted by Barth et al. (2012) in twenty seven nations that accepted IFRS in the period between 1995 and 2006, they established that IFRS abiding enterprises have a considerably superior accounting methods and value relevance that is comparability with US businesses when they use IFRS than when they apply non-US domestic standards. Brouwer, Faramarzi and Hoogendoorn (2014) raised an argument on whether a conceptual framework offers suitable ethics for reporting on an entity's performance. They further mentioned that the framework gives little understanding of assumptions that support accrual accounting. In some cases, accruals identify transactions before the actual exchange of cash sales, and payment can be identified before the actual payment is made, or cash is received.

Another view from Barker (2010) asserts that the definition of income and expense is incorrect because income and expense follow inevitably from the description of assets. This is consistent with Bromwich, Macve and Sunder (2010); their study argued that Boards have misquoted, misunderstood, and misapplied concepts of income; their paper demonstrates that income and expense are not defined correctly in the IASB conceptual framework. The arguments from the former and latter authors concur with Zhang and Andrew (2014), who mentioned that the 2010 framework had revised and reframed the identity of the users and redefined the purpose of financial reporting. This process has a substantial impact on the conceptual and technical alignment of accounting information. For a long time, shareholders have been recognised as the main stakeholders that use financial information; the 2010 framework had included the broader users. As such, the conceptualising of accounting through the framework of 2010 had put financial markets in the middle of accounting practice.

According to Zhang and Andrew (2014) the reconceptualization of accounting through framework of 2010 put financial markets in the middle of accounting practice hence the Framework provides strong foundations to examine the causes of financial restaments .

2.2.2 Consistency concept for financial statement

The consistency theory maintains that the firms have to conform to their chosen policies and procedures from one period to the next period without changing them. The consistency concept states that once a firm has chosen a method, that method has to be used every year for similar items; for instance, if a straight-line method has been selected to depreciate motor vehicles, it has to be applied on all vehicles to achieve comparability. This concept assists an entity in limiting short-term manipulation of reports, facilitating comparison internally and facilitating comparison externally. However, consistency theory does not forbid change in method. When change happens, the firm has to disclose the change by way of a note on financial statements because a change can affect net income or stockholders equity and impact working capital (Bariyima and Loveday, 2014).

The latter agrees with Wang (2018) who also mentioned that accounting consistency refers to the conformity from one period to the next period without changing policies and procedures. However, this does not mean companies cannot make any changes in accounting policies and procedures. Companies are allowed to change their policies for valid reasons, but this change has to be disclosed on the financial reports. According to McAnthony and Jindal (2017), financial statements are made out of the balance sheet or the statement of financial positions, income statements or the statement of comprehensive income, cash flow statements, and statement of retained earnings. He further mentioned that investors, creditors, and other stakeholders have so much confidence in the contents of these reports, especially when they have been audited.

The financial statements are arranged in adherence to IFRS developed by the IASB. The financials should contain the following statements:- “statement of financial position or the balance sheet, the statement of comprehensive income or the income statement, and statement of changes in equity, cash flow statements and notes” (Tarca, Brown, Hancock, Woodliff, Bradbury and Van Zijl, 2007). Standardised reporting promotes consistency in reporting format across countries which affords investors a reduced cost of processing financial information, and this may yield capital market efficiency (Qu, Fong and Oliver, 2012). Consistency over time has been classified as an essential quality in accounting; for instance, when a company uses accounting policies and estimates consistently, the investor can assess the company’s current-year earnings correctly by using former years’ accounting function to the current year economic events (Wang, 2018).

Capital markets are becoming more global; therefore an international adoption of IFRS will likely reduce transaction costs in these markets (Clements, Neill and Stovall, 2010). This is confirmed by Hail, Leuz and Wysocki (2010), who mentioned that when businesses present similar financial reports, it becomes easier and much afordable for stakeholders (especialy investors) to match and compare across firms. The vision of international standardisation by the IASB is primary to the service the needs of investors. The voluntary adoption of IFRS has been based on economic efficiency. Companies have reported improved quality of their financial statements (Guerreiro, Rodrigues and Craig, 2012).

A different argument from Wüstemann and Wüstemann (2010) mentions that consistent accounting standards are required in all accounting systems. However, numerous transactions and events are unclearly addressed in standards; the administrators must, in most cases, use their judgement when applying accounting standards to recognize or treat specific transactions. This practice compromises consistency, and this enquiry settles that a stable application and adoption of accounting standards can be attained if accounting standards are consistent within.

When standards are varying or inconsistant, and when there is no clear guidance, the managers of an entity are left to choose between different accounting methods.

2.2.3 Theory of stock market efficiency

This theory becomes relevant to examine market reaction on financial restatements, since the efficient market hyphothesis assumes that the investors are not rational and their trades are based on random assumptions(Naseer and Bin Tariq, 2015). An efficient market is a “market in which security prices at any time fully reflect all available information” (Moles, Parrion and Kidwell, 2011). The efficient market hypothesis can be divided into weak, semi-strong, and strong efficient market hypotheses and the strong suggests that security prices show market, public and private information (Naseer and Bin Tariq, 2015). The security price identifies the wealth allocation for both firms and people; establishing the information efficiency of capital markets is a significant interest for all market participants (Watson and Rossouw, 2012).

When markets are efficient, the prices of stocks consider all presented information, meaning any information that becomes available should be quickly integrated by the market and show in the share prices. Thus, the stock market efficiency shows that stock prices react rapidly and accurately to relevant information (Noakes and Rajaratnam, 2016). The market prices in an efficient market show all the known information, knowledge, and anticipations of all investors. In this market, investors have no reason to believe securities are not priced at or near their actual value (Moles, Parrion and Kidwell, 2011). When the market is efficient, the market participants can establish the risk and rewards for their investments because there would be no overvaluation or undervaluation of their assets (Arshad, Rizvi, Ghani and Duasa, 2016).

In the market is efficient, security prices would indicate the security’s actual fair price or the intrinsic worth. Market prices sometimes differ from this real intrinsic price; these abnormalities do not last extended period enough to allow thorough stockholders to receive abnormal or irregular returns consistently (Mandal and Rao, 2010). The market efficiency provides concerns for bookkeeping and the accounting part inside the capital market. If the efficient market hypothesis is found valid, share or a security price can not be impacted by modifications in accounting policies, standards, and choice in disclosure. In a case where markets are not efficient, “variations in accounting policies, standards, and disclosure selections can have consequences from reporting and accounting’s view” (Kothari, 2001). The efiicient market hyphothesis and the capital asset pricing model have opened opportunities for positive capital markets’ reseach with regard to accounting. The markets are assumed to be efficient because they are believed that security prices respond quickly to reflect the newly arrived information (Kothari, 2001).

The efficient market hypothesis mentions that prices from the market efficiently reflect all information or the news that is available about stocks, and they adjust immediately when new information is released. The market is found to respond to bad news, which strongly affects the stock market rather than good news (Du, 2021). While the inefficient market shows the opposite of an efficient market. Hence the prices in the inefficient market deviate from intrinsic prices by huge margins; securities are over and underpriced (Moles, Parrino and Kidwell, 2011). The efficient market hypothesis is idealised as a theoretical framework for behaviour of markets; hence, market efficiency is the centre of every finance model and strategy in the financial markets(Tuyon and Ahmad, 2016). .

The market efficient concept has been a topic of debate in theoretical as well as in empirical debates. The main debate is whether the markets are completely efficient as per the efficient market hypothesis (Tuyon and Ahmad, 2016). The financial market is stated to be effective when new information concerning the security is reflected on the security price. The efficient market hypothesis is amongst the influential financial theories that assume that all information that becomes available is quickly incorporated into the security price. However, investors and researchers disagree with the efficient market hypothesis in the theoretical text, as well as in the empirical context. (Naseer and Bin Tariq, 2015). To concur with the latter

2.3 Empirical literature review

The experiential literature review is significant as it scrutinises historical empirical studies to answer a particular research question.

2.3.1 Causes of financial restatements

Audited financial reports are restated under the subsequent four conditions: a) when there an e dectected inherent risk of a misstatement initiated by irregularity or an error; b) the company’s internal controls do not detect material misstatement; c) the external auditor is unable notice the misstatement and incorrect reports are issued; d) the error is revealed and is classified as a material error that requires correction and restatement (Presley and Abbott, 2013). According to Xu and Kong (2019), the restating of financials is caused by different reasons; others may be regarded internationally. Qasem, Aripin and Hussin (2017) explained the causes and stated that adopting new accounting standards and rectifying substantial miscalculations and deception, thus endorse that the enterprise's financials are materially misleading and incorrect. Flanagan et al. (2008) had a similar view, they mentioned that companies restate their reports due to a variation of corporate events, and although restatements due to fraud get the greatest attention, some restatements are the outcome of a simple mistake or a change in accounting policy.

The audited reports that show an a true picture of financial performance of the company instead of a fabricated rosy picture and fraudulent earnings are helpful to market participants (Rezaee, 2005). Mirzayi, Aslani and Khodabakhishi (2014), mentioned that the increase of restatements was due to increased strictness of rules and regulations associated to corporate governance and accounting. He further stated that restatements are necessary because of bookkeeping errors, erroneous usage of the state’s regulations, or even fraud. Whether the cause of restatements is an error or fraud, the investors view restatements as a signal of various potential reasons; for instance a) restatements indicate problems and weakness in the accounting system, b) restatements cause downward revisions in the future cash flows expectations and c) restatements indicate management attempts to shield income decline through the manipulation of company books (Callen, Livnat and Segal, 2006).

Manipulation of earnings remains unnoticed because restatements due to manipulation of earnings are categorised as unintentional restatements (Dutta et al., 2017). The latter is due to the fact that deciding to make an estimate implies a certain amount of subjectivity (Sačer, Sever Malis and Pavic, 2016). Futhermore, changes in accounting policy may be undertaken for the purpose of accounting manipulation (Mance and Katunar, 2012).

2.3.1.1 Change in accounting policy and accounting estimates

The IAS 8 is an approved principle for choosing and changing accounting policies, changing accounting approximations, and correcting mistakes. This standard ensures that the firm prepare and publish their financial statements in a consistent and comparable manner (Stainbank, Oakes and Razak, 2019). Accounting policies are explained as specific procedures and techniques applied by a firm's management; these policies are used to organise financial statements and include accounting techniques, measurement systems, and processes for presenting disclosures. In financial reporting, the established requirements and principles have to be adhered to, and the entity selects and establishes the most suitable accounting methods considering the particulars of their field of activity (Nukka and Kasearu, 2016).

The IASB put emphases on the importance of judgements and "the Board revised IAS 1 to require the disclosure of judgements made by management within the application of the company's accounting policies which significantly impact line items in the financial statements" (Hodgdon, Hughes and Street, 2011). However, Selling and Nordlund (2015) reported that the efforts to have auditors scrutinise estimates decided upon by management to be consistent with professional standards have had slight effect. The accounting estimates are capable of improving the applicability of financial information since they provide the management with the information that they convey to investors (Lev, Li and Sougiannis, 2010).

According to Lugovsky and Kuter (2020), accounting professionals are required to apply judgment in selecting the suitable accounting policy. However, Marai and Pavlović (2013) argue that other standards have no clear state on when the application of these judgments and estimates are within the parameters of accepted accounting principles. The relationship between the estimate and subsequent restatements can have an outcome of either positive or negative results. Changes in estimates are reported to result in less negative market reaction. On the other view "Accounting estimates often warrant more audit attention because they involve subjective factors and judgments, which make them susceptible to management bias" (Beaulieu et al., 2017). As such, agency theory assumes that people are self interested, thus creating conflict of interest between executive and shareholders (Yusuf, Yousaf and Saeed, 2018)

2.3.1.2 Accounting error

IAS 8 further mentions that all material errors of prior periods are to be corrected retrospectively, and restatements are mandatory if the last period error is practicable (Stainbank et al., 2019). The disclosure on financial statements informs investors that material misstatement has been found, and the financials should not be relied on until financial statements are restated. The investors and users of financial statements scrutinise these reports; therefore, they need to be amended in the event of any errors or material misrepresentation. When an error is identified, the company has to correct the error by issuing a new set of financial statements (Xu and Kong, 2019). The scope and nature of correcting a particular error direct the next step to be taken by the company (Thompson and McCoy, 2008).

Errors are classified as material or immaterial. Restated financials reflect corrections for errors related to warrants/ derivative financial instruments under IAS 39. This warrant offering was included in investment in associations, and no value was assigned to the warrants from the private placements (Thompson and McCoy, 2008). Errors may happen when preparing and presenting financial reports, and when an mistake is recognised, a rectification has to be initiated. Therefore, the extent and nature of the correction of a particular error directs the next step to be taken by the company. Errors are classified as material or immaterial. The former is a Big R material error; a company is required to correct a material error by restating previous filed financial statements. The latter is a "little r immaterial error to historicaly filed financial statements but material in aggregate to the current financial statements or immaterial error to present or historicaly filed financial statements" (Alsabah, 2021).

Qasem (2017) reported that omission, mathematical errors and typing errors are the greatest common reasons for restatements. Financial reporting wants the company to use estimates and assumptions; improper estimates result in recording improper amounts or the inappropriate usage of accounts (Presley and Abbott, 2013). The study conducted by Adams, Hayunga and Rasmussen (2017) on the real estate investment trusts found that a great variation of accounting matters cause restatements. The common issue is expense-related issues, for instance leases and depreciation. However, Xu and Kong (2019) maintained the view that material errors caused by accounting irregularity expose the company to litigation because restatements are a sign of unreliability.

2.3.1.3 Accounting irregularities and fraud

Xu and Kong (2019) stated that accounting errors are pure mistakes, and they are different from accounting fraud. The latter is an intentional error that is made of misrepresentation of financial information. In support of the former, Efendi, Srivastava and Swanson (2007) stated that the key differentiating aspect between fraud and error is to know whether the basic action that origins misstatement is unintentional or deliberate. Restatements caused by fraud have cost market participants more than 500 billion US dollars in the previous numerous years. The market participants anticipate corporate governance of the companies to warrant integrity and value of financial information. The fraud in financial reports is regarded as a severe danger to market participants' assurance in the published reports. Cooking the books has eroded the confidence of investors and the entire public in corporate America (Rezaee, 2005).

(Huang et al., 2018) have found that a majority of restatements are the results of corruption and fraud. Failure of corporate governance is found to be the reason of Steinhoff's downfall and meltdown. The company had to restate its statements due to the supervisory board having no clear idea of what was happening in the business (Rossouw and Styan, 2019). The latter is consistent with the JSE (2020) who reported that "Steinhoff Holdings limited have published their audited annual financial statements for the year 30 September 2017 (2017 AFS) on 7 May 2019, which contained restatements to previously published results to correct accounting irregularities, questionable transactions and prior period errors in accordance with IFR. These restatements extended over a number of years" (JSE, 2020).

The research conducted by Firth et al. (2011) found that companies with extraordinary debt or outstanding obligation and who propose to issue equity or shares are more probable to influence and manipulate company earnings. These companies will, after that, restate their financials in subsequent years. Richardson, Tuna and Wu (2002) presented the same view; they found strong evidence that restatement entities appear to be attempting to attract external funding at a lower cost. These companies were found to have raised additional cash from equity markets around the time of the assumed manipulation. The former and latter concur with Flanagan et al. (2008) who mentioned that desire of managers to receive favourable finance is amongst other factors that contribute to restatements. There are numerous possibilities of revenue and expenses being manipulated using accruals and deferrals for revenue expense using accounting policy (Mance and Katunar, 2012).

According to Alayemi (2015), accounting policies are rules, bases, principles, and procedures embraced in preparing and presenting financial statements. Mance and Katunar (2012) stated that not all changes in accounting policy are adopted to make financial statements more relevant and reliable, but they are also undertaken for accounting manipulation. Accounting researchers have realised that basics only describe a small segment of share price actions; lately they have revolved to the research of corporate chronicles. These narratives each provide valuable information to expand decision-making or provide biased information to mislead investors. The latter is used by the opportunists who misallocate capital and transfer wealth from shareholders to managers unfairly. Thus, this recommends that "corporate narrative documents contain reporting bias and investors are unable to assess this bias in the short term" (Merkl-Davies, Brennan and McLeay, 2011).

Accounting narrative can originate in various financial reports such as yearly reports, financial statements, academic textbooks, and official declarations by accounting bodies and legal judgements in relation to accounting matters. It is reported that most of the accounting chronicles in corporate reports are not subject to external audit; as such managers find a weakness to manipulate the information disclosed in those reports (Brennan and Merkl-Davies, 2013). Amongst other reasons that drive financial restatements, the “executive stock ownership, and stock options create incentives for managers to attempt to deceive investors and artificially inflate the stock price of their firm to their benefit” (Flanagan et al., 2008). Qasem et al. (2017) mentioned that the prime motive for misreporting the books is to blow up earnings. The motive to commit fraud might be because of a poor cash position to please customers. The methods used in presenting fraudulent reports are overstating revenue by inflating sales, understating expenses by capitalizng on some expenses, overstating assets by not recording account receivables and understating liabilities (McAnthony and Jindal, 2017).

An incentive for the company executive is found to be the motivation for individuals to initiate fraud or personal advancement achieved from committing fraud (Presley and Abbott, 2013). The former and latter concur with Hamid, Shafie, Othman, Hussin and Fadzil (2013), who reported that top management cook an entity’s books because of incentives; these activities result in financial statement fraud. Their study conducted in Malaysian listed companies found that managers use their positions or offices, former experience, and regulatory loopholes in their activities. A different view from Flanagan et al. (2008) stated that lack of solid governance and governance structures that are weak are linked with restatements. They further suggested that employing an outside financial expert on the company’s boards is likely to decrease the chances of restatements.

According to Rezaee (2005), frauds concerning financial reports involve the following activities:

- Falsification or manipulation of material financial transactions, source or supporting documents;
- Material deliberate misstatements, omissions, or misrepresentation of financial information on the financial reports;
- Intentional misapplication, misapprehension, and unlawful implementation of accounting standards, policies, principles, and methods that are employed to measure or recognise economic events and business transactions;

- Usage of hostile accounting techniques through illegitimate earnings management.

2.3.2 Market reaction towards financial restatements

The literature reveals that restatements indicate that the audit process has failed. Furthermore, restatements show the worth of accounting information missing trustworthiness and transparency, which surges fear and doubt of investors' future. Restatement by listed enterprises is not good update for shareholders or equity investors because these stakeholders utilise published financial reports to comprehend the financial position and recent operating conditions to calculate a firm's future (Mao, 2018). The announcement of restatements shows failure of financial reporting, which causes terrible consequences on individual investors and stock markets (Hamid et al., 2013).

Kothari (2001) says that it is fundamental that the enterprise's performance is summaried in its financial reports since these reports are the only input to markets' assessment of the company's future cash flows. In his study, he wanted to find the relationship between capital markets and financial statements, and he found a correlation between accounting performance measures and stock returns. Gordon, Henry, Peytcheva and Sun (2013) mentioned that re-issue related to fraud has a negative effect on abnormal returns. There is a substantial and positive connection between the amount of prior optional disclosure and abnormal returns when they are announced. The announcements mentioned in headlines are connected with a more negative market response at an announcement . The latter concurs with He and Chiang (2013), who found that abnormal returns on the days around announcements of restatements are negative on average.

Firth et al. (2011) reported that there are substantial damaging consequences to fraudulent financial statements. The companies that restated their financials experience negative abnormal stock returns, increased capital costs, and more substantial CEO turnover. The previous concurs with results reported by Flanagan et al. (2008), who stated that restatements result in a drop in the firm's market value and a rise in the cost of capital, as well as the loss of confidence from the investor. They further emphasised that even a slight percentage reduction in returns significantly impacts on shareholders' wealth over time.

Richardson et al., (2002) found evidence indicating a loss of shareholder value subsequent the announcement of the restatement. Palmrose et al. (2004) reported an undesirable -9% abnormal return over a 2-day announcement window for sampled 403 restatements announced. The significant number of negative returns is related to restatements involving fraud and decreasing reported income. While Callen et al. (2006) mentioned that the stocks in the market response to restatement changes as per the type of restatement. Researchers have pointed out that restatements cause a downward or adverse result on the stock market and bring the abnormal return rate to investors. Some studies found that the accumulated rate of return falls on the day of the announcement, and it lasts for a short time after the announcement (Xu and Kong, 2019).

Wu (2002) presented in his findings that the market responds negatively during a 3rdday price response window around the announcements of restatements. He also found that the downward pattern starts about six months preceding the restatement announcement and, there is persistent negative post-announcement implication for up third of a year. Previous studies reported a substantial negative abnormal market returns fluctuating between -05% to -12.3% for various types of restatements on an eight-day event window (Dutta et al., 2017). Researchers have pointed out that financial restatements cause a downward or adverse result on the stock market and bring the abnormal return rate to investors (Xu and Kong, 2019). Restatements due to material misstatements are regarded as a violation of the company's commitment to providing accurate and reliable financial statements (Huang et al., 2018).

According to Butar (2018), he observed that restating companies experienced a higher cost of capital, and there was an abnormal return for two days around restatements. Other studies reveal an adverse reaction to the stock price of restating companies (Butar, 2018). Jategaonkar, Lovata and Sierra (2012) reported that fraud and non-disclosures are predictors of significant adverse market reactions. They further mentioned that negative reaction to restatement is not severe when the firm's stock is transacted on the New York Stock Exchange (NYSE). This is because companies are scrutinised, so there is less surprise when a restatement is announced. When restatement results from the change in the interpretation of leasing pronouncement, the market shows no reaction.

Watson and Rossouw (2012) reported that it is doubtful whether an announcement of re-issue would give decent news when the management admits that they had inaccurate provident results previously. The study they conducted found that though financial report announcements have value-relevant information for investors, the market is not quick to react to the announcement. This is further supported by Du Toit and Vermaak (2014), who indicated that accountants and other staholders that use financial statements do not doubt the practicality of financial statements when they assess the financial health of an entity. In support of the former, Adams et al. (2017) found that an average negative market reaction for restatements is less than -1%.

2.4 Chapter summary

This current chapter presented the theoretical and conceptual outline that reinforced this study and an analysis of the applicable empirical literature. It discussed the theories and concepts employed and their significance to financial restatements and financial markets' reaction. The empirical research confirmed that the share price drops substantially after the announcement, and that results in a significantly negative abnormal return. Restatements result in drop in the firm's predictable prospect earnings and therefore surge in the cost of capital (Mao, 2018). The view form the investor's point states that the restatements indicate that published financial reports are unreliable. It was, furthermore, indicated that IAS 8 allows the entity to choose and change accounting guidelines, change in accounting estimates, and amendment of accounting errors and disclose thereafter. The causes of restatements were analysed and it was apparent that restatements due to fraud result in negative reactions from the markets.

The subsequent chapter discusses the research methodology and research design used to perfom this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The preceding chapter presented the theoretical and conceptual framework that supported this study and an analysis of the applicable empirical literature. The research includes the application of scientific methods and procedures. It is paramount to use relevant research methods and techniques to achieve accurate outcomes (Bougie and Sekaran, 2016). The goal of chapter three is to give an understanding and motivation of the research design and methodology adopted for in this study. The chapter further emphases on the methodology used in the process of conducting this research. It outlines the research objectives and converses study design, research paradigm, population and sampling, data collection, sources and procedure, validity and reliability, ethical considerations, and data analysis. The methodology in research compares, then explores, available different research methods. The latter is done to decide the information that can be produced by other research methods (Greener, 2011). To analyse the correlation between markets' reaction and restatements, the researcher includes statistical methods

3.2 Research design

The research design is an idea for scrutinising events of the projected investigation that will be conducted. This is a plan of how the author projects and proposes to conduct research. Therefore, it may be concluded that a design in research is the description of a plan that specifies how a researcher or an author proposes to conduct and analyse events (Tan, 2017). An explanatory research design was used, since the primary objective of the study was to examine the consequence of financial restatements on markets. The quantitative methods were adopted and IBM SPSS Statistics 27 software was selected and used for data analysis. This study is located within the quantitative research design in correlational studies because the researcher will measure variables, and understand and assess the statistical relationship between them; hence, the quantitative approach became relevant and was adopted over a qualitative approach.

The researcher aimed at trying to measure variables and generalising results to the entire population. The research design of this study involved gathering data from the Top 40 JSE listed companies, analysing the data and presenting results, drawing conclusions, and making recommendations. Smith (2017) mentions that the primary research question establishes the choice of research method that has to be used for the study to achieve its objectives. The observation and gathering of quantitative data offers a prospect to view the relations amongst different variables. Therefore, such studies use "correlations and regression-type techniques to analyse the level of variation in the dependent variables that resulted in the change in the independent variable" Smith (2017). This study used correlation analysis to examine the relations amongst financial restatements and market reaction.

3.3 Research paradigm

The exploration for this study was conducted within the framework of positivism because it uses quantitative (deductive approach) methods for attaining the best possible opportunity for responding to the research question. The ontology for this study assumed that there is one truth that can be found and aims at generalising the truth to the entire population. The epistemology for this study is objective because the researcher has no contact and does not influence the research. The study included an empirical investigation and a literature review. It commenced with a literature review, and to fulfilling objectives, the quantitative research techniques were used. The numerical or mathematical data were gathered and analysed to measure the connection and communication between variables (markets' reaction and financial restatement). The findings that were derived from the analysis were demonstrated statistically. The objective is to show a correct profile of the situation. Saunders et al. (2007) mentioned that a investigator should have a clear picture of the phenomena before collecting data.

3.4 Population and sampling

3.4.1 Population of the study

A population is a clear group of characteristics of units or elements. The population includes the total number of parts or pieces from which the investigator intends to conclude (Saunders, Lewis and Thornhill, 2007). Quantitative research targets collection of statistics by using valid and reliable methods from a sample that represents the respondents. Sekaran and Bougie (2019) mentioned that a population is a complete group of people, things, or events that attracts the interest of the investigator. The target population nominated for this empirical study involved the highest 40 companies registered on the JSE from 2007 to 2019 (13 years). The author selected these years because firstly, restatements are less frequent prior to 2007; secondly, this particular study began in 2020.

The JSE requires listed firms to correct and amend incomplete or misleading information (Watson and Rossouw, 2012). The targeted population is selected regardless of the industry of operation. Companies not registered on the JSE were excluded from the analysis. The quantitative method was adopted because it draws a large sample from the population. The secondary information was attained from the "Bloomberg database" for 2007 to 2019. The period 2007 was nominated to be the beginning point, and the top 40 companies were selected because the Top 40 index is the 40 largest firms on the JSE, that are ranked by market capitalisation.

3.4.2 Sampling

Sampling is explained as a practise that is employed to choose a small group from an entire population (Brynard, Brynard and Hanekom, 2006). The sample represents a group drawn from a population, and these results and outcomes can be generalised (Saunders et al., 2007). A sample is referred as a minor collection or group drawn from a big population to characterise a specified population. For this research, the population was all the Top 40 firms listed on the JSE between 2007 and 2019 that had to announce restatements. The "probability sampling is characterised by unsystematic nomination of items, while the non-probability sampling is grounded on convenient selection" (Sekaran and Bougie, 2019). This study applied non-probability sampling. The latter is defined as a sample where the selection of probability is unknown. Non-probability sampling has four basic types: convenience, snowball, quota sampling, and focus groups (Sekaran and Bougie, 2019).

Subsequently, the researcher planned to concentrate on the listed top 40, a purposive sampling method was chosen to choose companies for this study. The "purposive sampling technique is a non-probability sampling technique that relies on the judgement of the researcher when selecting units to be analysed" (Quinlan, 2011). The sample of this study is made of the highest 40 listed firms in JSE. The sample scope is nominated because of convenience and accessibility. These top 40 companies have been effectively used in many studies in South Africa (SA). Thus, the size of the sample was equivalent to the entire population of this study hence, the entire population was examined as the exploration sample. The subsequent table offers the summary of the research population and sample.

Table 3.1 Sample of the study

No.	Companies	Year
1	4Sight Holdings limited	2019
2	African Dawn Capital Limited	2019
3	Hulamin Limited	2019
4	Curro Holdings Limited	2019
5	Grindrod Bank Limited	2019
6	African Equity Empowerment Investments	2019
7	Royal Bafokeng Platinum Limited	2019
8	NET1 UEPS Technologies Incorporated	2018
9	Avior Capital Markets Holding Limited	2018
10	Resilient Reit Limited	2018
11	African Equity Empowerment Investments Limited	2018
12	Adcorp Holdings Limited	2018
13	AH-Vest Limited	2017
14	Steinhoff International holdings N.V	2017
15	Advanced Health Limited	2016
16	Alaris Holdings Limited	2015
17	Anchor Group Limited	2015
18	Labat Africa Limited	2015
19	Mine Restoration Investments Limited	2014
20	Sasol Limited	2014
21	Digicore Holdings Limited	2014
22	RACEC Group Limited	2012
23	Bauba Platinum Limited	2012
24	Trustco Group Holdings Limited	2012
25	Clover Industries Limited	2011
26	African Dawn Capital Limited	2010
27	Tradehold Limited	2009
28	Beige Holdings Limited	2008

29	AngloGold Ashanti Limited	2008
30	Wescoal Holdings Limited	2008
31	Astrapak Limited	2007
32	Merafe Resources Limited	2007
Total = 32 Events = 32 Observations =		

Source: Own creation

After the sampling process was concluded, the relevant data was collected. The following section give details on how data was gathered for the study

3.5 Data collection sources and procedure

The data that was used for this research was obtained from a secondary source. This secondary data is from already available documents. The secondary data sources were mainly obtained from "Bloomberg.com", company profiles, and general information. As indicated, the JSE SENS announcements, as well as the historical share data of the 40 listed enterprises on the JSE stock exchange, were used for the study. Announcements were used because of the IAS 8, as presently used by listed companies. Secondly, companies are required to issue their financials in a period of six months after year-end as per s30 of the Companies Act 71 of 2008. Lastly, according to listing requirements and regulation of the JSE Limited, "a listed company is required to publish a trading statement as soon as it becomes reasonably certain that financial results for the next period to be reported on will differ by 20% or more from the financial results for the previous corresponding period" (JSE Limited). Different reasons for restatements were nominated in measuring statistical relationships as follows: the window period was made of the market reactions, that is, 10 days before the Stock Exchange News Service (SENS) announcements, on the day of the announcement, and 10 days after the announcement.

3.5.1 Selection of companies

The information on restatements served as a variable to the imperial study. The information on restatements was obtained from the Bloomberg database, which is an accepted research database. The researcher assessed all JSE SENS announcements relating to restatements and the historical share prices of the Top 40 from 2007 to 2019, and the population of 32 events was pulled from the JSE SENS.

Table 3.1 shows the number or quantity of events, and the subsequent section specifies the procedure that was followed to select the relevant share prices.

3.5.2 Selection of share prices

The share price represents additional important variable in this research. The share prices that selected and used in the study were obtained from the Bloomberg.com databank. The researcher used a spreadsheet builder historical data table, and the last price (closing price) was selected to assess the share price movement. The first category of the share price was selected 10 days before the announcement. The second category of the share price was the day of the announcement. The last category of share price was selected 10 days after the announcement. In selecting these three categories of the share prices, the researcher considers that market partakers or participants respond to restatements' announcements instantly or later. This technique of share price nomination has been used with success by Watson and Coetzee (2012). This style is further supported by Morse, Raval, and Wingender jr (2011), they mentioned that a little event window is able to quantify the effect of a new event or experience on investment behaviour. The dates of announcements of restatements were sourced from SENS database.

3.6 Validity and reliability

Validity attempts to establish the variables that are measured by the instrument and the meaning of the results. The reality measures the uniformity and consistency of research instruments (Bless et al., 2006). Saunders et al. (2007) emphase that much devotion should be paid to reliability and validity; this is done to decrease the possibility of receiving the answer wrong. In this study reliability was considered because the anticipated results have to be repeatable and stable. Bell, Bell, Bryman and Harley (2018) added that validity is the essential criterion of research because it measures integrity. This concurs with Saunders et al. (2007), who mentioned that research data that fails to provide the researcher with the information required to answer a research question will result in invalid results. This study contains research questions which cover all aspects of the concept that is being measured. To protect the reliability of the information, this study depended on many different and renowned studies of financial reporting and of stock markets. To enhance the level of validity, several resources of evidence were necessary. As the study was dependent on JSE SENS announcements and Bloomberg spreadsheet builder for historical data, in this case, the level of bias and unreliable data was minimised. The researcher then coded data.

3.7 Ethical considerations

Research has to be performed ethically because research has an ethical impact on the participants used in the study (Greener, 2011). Ethics require that an action be taken responsibly and truthfully to display integrity (Adams, Khan, Raeside and White, 2007). The researcher did not anticipate any unethical issues during the conduct of this study. Firstly, all materials consulted were cited and referenced accordingly. Secondly, the role of all individuals that contributed to the conduct of this study was acknowledged. Lastly, since announcements relating to listed companies are published on JSE SENS and the share price historical data is available on Bloomberg, these records are considered public knowledge. Therefore, there were no ethical issues regarding their retrieval from Bloomberg and usage. The study did not require contributions from the research participants.

3.8 Data Analysis

In quantitative research, the investigator establishes a sense of a phenomenon by gathering and examining mathematical data (Adams et al., 2007). For this study, the following statistical methods were used:- IBM SPSS Statistics 27 (statistical software), descriptive statistics (frequencies and percentages) and inferential statistics (T-test and coefficient correlations), as well as presenting a statistical report. According to Field (2013), “Correlation coefficients describe the relationship between variables by indicating whether they are positively related, negatively related or unrelated to one another” Field (2013). The data were analysed to confirm that the objectives and primary goals of this event study were satisfied. The analysis of data was done as per the three main objectives of the study. This statistical test was chosen because the programme or software provides different formulae with a wide range of statistical analyses.

Correlation coefficients assess relation by giving a mark "between 1 and -1, where 1 represents the perfect positive correlation, and -1 represents the perfect negative correlation. T–Testing matches the mean scores attained when various tests are re-performed and it indicates if there are statistically significant dissimilarities between mean scores of data sets. If the result obtained shows $p<0.05$ it can be accepted that there is a significant difference in mean scores that exist and that difference did not occur by chance" (Pallant, 2013). The IBM SPSS Statistics 27, the statistics software, was used as the appropriate statistics package for the statistical method; SPSS allowed the researcher to attain all applicable statistical reports to be encompassed in Chapter Four.

It became important to code the collected data to attain meaningful analyses. The researcher coded the 32 observed companies as Co.1 to Co.30. According to (Allen, 2017) data coding includes the transformation of the collected information into a set of meaningful, consistent categories.

Objective 1: Frequency of financial restatements of the top 40 JSE listed companies

The number of observations was specified for statistical purposes and presented in the form of mean, mode, and frequency tables.

Objective 2: The causes of financial restatements of the top 40 JSE listed companies

The results were expresed in the form of mean, mode, median, frequency tables, cross-tabulations, percentages, and charts

Objective 3: The market reaction on financial restatements of the top 40 JSE listed companies

The statistical methods are appropriate to establish the effect and the impact and consequence of restatements on the stock market and identify the relationship of these variables. Similar studies have been conducted by Erasmus (2010) where he applies these selected statistical methods, that is, Mean, T-test, and Correlation coefficient

3.9 Summary

The aim of chapter three was to give a detailed view of the research design and research methodology used in the investigation, therefore addressing the objectives. The current chapter provided the research approach used to perform this investigation. The research objectives were stated, and the research design, research population, and sampling were debated. A detailed summary was presented for data analysis and presentation. The chapter outlined that this investigation used empirical information, also it depended on secondary data, and used mathematical information. Moreover, the chapter mentioned that quantitative approaches were used. The data set involved the share prices prior to the announcement, share prices on the actual day of the announcement and, share prices subsequent to the announcement. The secondary data was gathered from Bloomberg.com and SENS databanks. The gathered data were scrutinised by using the IBM SPSS Statistics 27 software package. The legitimacy and trustworthiness of the data were recognised and lastly, the chapter showed that this emprial investigation was conducted on an ethical basis.

The next chapter presents results analyses, and discusses the data in detail.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULTS

4.1 Introduction

The preceding chapter presented the research methodology and research design used to conduct the study. This current chapter provides the analysis of the raw data that was obtained from the Bloomberg.com record. It commences with a presentation of raw results and follows with the explanation of descriptive and correlation summaries. The share prices provide a link between new knowledge and the market reaction. The "efficient market hypothesis mentions that market prices efficiently reflect the entire information or the news that is available about stocks, and they adjust immediately when new information is released" (Du, 2021). To measure restatements, IAS8 is an approved principle for choosing and changing accounting policies, changing accounting estimates, and correcting errors (Stainbank et al., 2019). Therefore, the restatement is a revision of one or more of the entity's previous financial statements; furthermore, "a listed company has to publish a trading statement as soon as it becomes reasonably certain that financial results for the next period to be reported on will differ by 20% or more from the financial results for the previous corresponding period" (JSE Limited). .

This study aims at examining the causes of financial restatements of the listed top 40 companies in SA and establishing the markets' reaction. The aim is reinforced by the of objectives presented in Chapter One par 1.4.2. This chapter attempts to determine the market reaction after the announcements of restatements by fulfilling the empirical objectives listed in Chapter One par 1.4.2. The experimental objectives are accomplished over the use of quantitative research approaches. The following numerical techniques are used in this chapter:

- Frequency tables to establish the regularity of events
- Correlation modeling to compute the Pearson product-moment correlation coefficient.
- Paired t-testing to compare means from the same group at different times and statistical significance of correlation coefficients attained.

The selected statistical methods are appropriate to establish the impact and consequence of restatements on the stock market and identify the relationship of these variables. Similar studies have been conducted by Erasmus (2010) where he applies these selected statistical methods i.e. frequency tables, T-test, Correlation. Statistical information was attained by utilising the software package (IBM SPSS Statistics 27) and was used to the highest 40 JSE listed firms as acknowledged in the preceding Chapter Three, Table 3.1. A reasonable quantity of the observertion were encompassed in the drawn sample (n = 32) for the years 2007 to 2019. The observed sample was summarized and highlighted in Chapter Three, Table 3.1.

4.2 Companies included in the population

It was stated in the previous chapter that outlined the research methodology techniques Chapter Three, that the population of this study contained the Top40 JSE listed enterprises. A sample of thirty-two companies is presented in Table 4.1 below.

Table 4.1 Sample of the study

No.	Companies	Year
1	4Sight holdings limited	2019
2	African Dawn Capital Limited	2019
3	Hulamin Limited	2019
4	Curro Holdings Limited	2019
5	Grindrod Bank Limited	2019
6	African Equity Empowerment Investments	2019
7	Royal Bafokeng Platinum Limited	2019
8	NET1 UEPS Technologies Incorporated	2018
9	Avior Capital Markets Holding Limited	2018
10	Resilient Reit Limited	2018
11	African Equity Empowerment Investments Limited	2018
12	Adcorp Holdings Limited	2018
13	AH-Vest Limited	2017
14	Steinhoff International Holdings N.V	2017
15	Advanced Health Limited	2016
16	Alaris Holdings Limited	2015
17	Anchor Group Limited	2015
18	Labat Africa Limited	2015

19	Mine Restoration Investments Limited	2014
20	Sasol Limited	2014
21	Digicore Holdings Limited	2014
22	RACEC Group Limited	2012
23	Bauba Platinum Limited	2012
24	Trustco Group Holdings Limited	2012
25	Clover Industries Limited	2011
26	African Dawn Capital Limited	2010
27	Tradehold Limited	2009
28	Beige Holdings Limited	2008
29	AngloGold Ashanti Limited	2008
30	Wescoal Holdings Limited	2008
31	Astrapak Limited	2007
32	Merafe Resources Limited	2007
Total = 32 Events = 32 Observations =		

Source: Own creation

4.3 Analysis of Data and The Empirical research findings

Empirical research methods are acceptable when they are supported by the facts (Bless et al., 2006). To fulfill the purpose and goal of this investigation, the association among share price behaviours and the announcement of the restatement was observed to provide a great detail on the phenomenon that the announcement influences share prices. The study was conducted to answer the reach objectives as outlined in Section1.4 in Chapter One.

Objective 1: To identify the frequency of financial restatements of the top 40 JSE listed companies

To fulfil objective one, statistical analysis is demonstrated and interpreted. Table 4.2 indicates the number of observations and frequency of restatements per individual year. The number of observations was indicated for statistical purposes and presented in a table that demonstrates frequency, percentage, and cumulative percentage. Table 4.2 indicates events ranging from one to seven events per year, 2019 being the year that experienced the most frequencies i.e. seven restatements. This significant number is translated to 21.9% of the entire sample of thirty-two events. Years 2009, 2010, 2011, and 2016 experienced a single event each, which constituted a combined figure of 12.4% of the sample. Years 2007 and 2017 experienced two events each.

Years 2008, 2012, 2014, and 2015 experienced three events each. The trend of restatements appeared to rise significantly from five to seven events in 2018 and 2017 respectively. In 2013 there were no restatements reported. The mode is found to be one and three; these are values that appeared frequently in the observed dataset.

Table 4.2 Frequency of restatements per year

N= 32					
		Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
Valid	2007	2	6.3	6.3	6.3
	2008	3	9.4	9.4	15.6
	2009	1	3.1	3.1	18.8
	2010	1	3.1	3.1	21.9
	2011	1	3.1	3.1	25.0
	2012	3	9.4	9.4	34.4
	2014	3	9.4	9.4	43.8
	2015	3	9.4	9.4	53.1
	2016	1	3.1	3.1	56.3
	2017	2	6.3	6.3	62.5
	2018	5	15.6	15.6	78.1
	2019	7	21.9	21.9	100.0
	Total	**N = 32**	**100.0**	**100.0**	
Mode = 1 and 3					

Source: Own creation

Objective 2: To investigate the causes of financial restatements of the top 40 JSE listed companies

To fulfil objective two, statistical analysis is demonstrated and interpreted. The causes of restatements and cross-tabulations which have a combination of prices and changes in share prices were performed and presented as frequency tables, percentages, and charts. According to Xu and Kong (2019), the restating of financials is caused by different reasons; others may be regarded internationally.

From Table 4.3 it is apparent that a significant number of restatements were due to accounting errors i.e. twenty-five events which constitute 78.14% of the entire sample of thirty-two events. The latter is consistent with Qasem et al. (2017) who reported that omission, calculation errors and typing errors are the greatest frequent reasons for restatements. The restatements that are caused by the adoption of new standards, accounting irregularities, and a combination of accounting error and adoption of accounting standards were found to be two events each which constitutes a combined figure of 18.75% of the sample. When change happens, the firm has to disclose the change by way of a note on financial statements because a change can affect net income or stockholders equity and impact working capital (Bariyima and Loveday, 2014). While the change in accounting policy exhibited only 3.11%. Regarding the data analyses from Table 4.3, Xu and Kong (2019) state that accounting errors are pure mistakes, and they are different from accounting irregularities. Hence, Efendi et al. (2007) have a strong view that accounting irregularities are intentional errors that are made to misrepresent financial information.

Table 4.3 Causes of restatements

N = 32					
		Frequency	**Percent %**	**Valid Percent %**	**Cumulative Percent %**
Valid	Accounting error	25	78.14	78.14	78.14
	Adoption of new standard/s	2	6.25	6.25	84.39
	Accounting irregularities	2	6.25	6.25	90.64
	Accounting error and adoption of standards	2	6.25	6.25	96.89
	Change in Accounting policy	1	3.11	3.11	100.0
	Total	**32**	**100.0**	**100.0**	

Source: Own creation

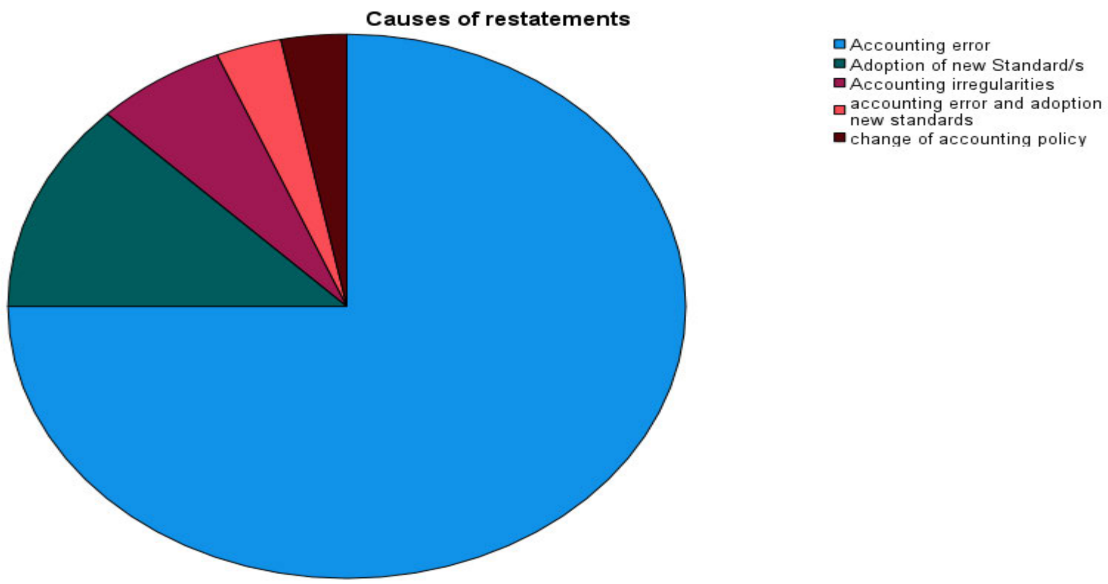

Figure 4.1: Causes of restatements
Source: Own creation

To fulfil objective two further, another analysis was performed to determine the causes of restatements against the observed years; hence, Table 4.4 indicates a cross-tabulation of observed years against the causes of financial statements. It became apparent that 2019 experienced most restatements which represent 18.75% of the entire sample. These restatements range between the correction of an accounting error and the adoption of new standards. However, in 2018 significant number of five restatements due to accounting errors were reported. The year 2008 reported two events of accounting errors and one event being the accounting irregularities. 2007 reported one event of accounting errors and one event of accounting irregularities. With reference to analyses from Table 4.4, it is indicated that 2019 shows to be the year that had the most and the various events, while the years 2009, 2010, 2011, and 2016 exhibited the least activities i.e. one event each.

Table 4.4 Cross-tabulation: Years and causes of restatements

N = 32							
		Causes of restatements					**Total**
		Accounting error	**Adoption of new Standard/s**	**Accounting irregularities**	**Accounting error and adoption of standards**	**Change in Accounting policy**	
Years	2007	2	0	0	0	0	**2**
	2008	2	0	1	0	0	**3**
	2009	1	0	0	0	0	**1**
	2010	1	0	0	0	0	**1**
	2011	1	0	0	0	0	**1**
	2012	3	0	0	0	0	**3**
	2014	3	0	0	1	0	**4**
	2015	3	0	0	0	0	**3**
	2016	0	0	0	0	1	**1**
	2017	1	0	1	0	0	**2**
	2018	5	0	0	0	0	**5**
	2019	3	2	0	1	0	**6**
Total		**25**	**2**	**2**	**2**	**1**	**32**

Source: Own creation

Objective 3: To examine the market reaction on financial restatements of the top 40 JSE listed companies

To fulfil objective three, cross-tabulation shown in Table 4.5 was performed to establish the association between causes of restatements and share price movement. The window price made by the share price movement was separated into three categories. The first category of the share price was the 10th day (t=-10) before the announcement. The second category of the share price was the actual day (t=0) of the announcement. The last category of share price was the 10th day (t=10) after the announcement. Table 4.5 indicates thirty observations. The reason for the reduced number of observations from thirty-two to thirty was due to the missing data of the share prices of two companies. The share price data for these particular two companies was not enough to analyse the window period. From Table 4.5 it is indicated that only twelve companies experienced a share price decline after the announcement, which constitutes 40% of the sample.

Cross tabulation in Table 4.5 demonstrates the date before the event (t=-10), on the event day (t=0), and after the event (t=10). A combination of an accounting error and the adoption of a new standard indicates different share price movements. Co.19 shows that the share price on day t0 declines, but picks up at t10 and rises above t0 but remains below t-10. But different results are exhibited by Co.1; the share price keeps on rising from t-10 to t0, and t10 remains above both categories. The share prices for a combination of an accounting error and adoption of a new standard indicate that share prices increase after the announcement.

Table 4.5 indicates that the adoption of the new standard shows the same results for both observations (Co.2 and Co.3). The price declines at t0, and rises at t10 but remains below t-10. The share price of Co.2 experienced a decline of 15.53% on the event day but the prices increased by 4% on the 10^{th} day after the announcement. From Table 4.5 it is apparent that accounting errors are dominating the causes of financial restatements. The table shows that most companies experienced a rise in share prices after the announcement i.e. twelve companies out of twenty-three companies, which constitutes 52.17% of the accounting error observations. However, this difference is greater with a small margin. A mixed reaction is exhibited if t-10 is introduced to the analyses; for instance, in Co.4 the share prices keep on declining until t10, while Co.6 share price declines in t0 and rises in t10 but remains below t-10. Furthermore, the Co.20 share price keeps on growing on t0 and t10. However, Co.30 exhibits an increase of share price above t-10 by 2.6%. In Co. 8 the share price remained the same after the event. On the contrary Co.24 exhibited a substantial growth of 24.24% at t10. Although the direction is unclear between negative and positive slope, nevertheless, the data confirms that markets react to the announcement of restatements. The unclear pattern is justified by findings by Wu(2002) who found that the market responds negatively during a 3^{rd}-day price response window around the announcements of restatements. He also found that the downward pattern starts about six months preceding the restatement announcement and, there is a persistent adverse post-announcement drift for up to four months.

Table 4.5 indicates that restatements due to accounting irregularities result in a significant negative reaction from the markets. The prices take a downward pattern after the announcement. Co. 13 and Co.26 exhibit that prices decline after the announcement and they remain below t0 by -43.95% and -15.31% respectively. The latter is concurs with Jategaonkar et al. (2012) reported that fraud and non-disclosures are predictors of significant adverse market reaction.

Table 4.5 Cross-tabulation: Causes of restatements and share prices

N = 30				
	Causes of financial restatements	**Share price: Category. T =-10**	**Share price: Category2. T =0**	**Share price: Category 3. T =10**
Co.1	Accounting error and adoption of a new standard	R 14.00	R 21.00	R 34.00
Co.2	Adoption of a new standard	R 234.00	R 200.00	R 208.00
Co.3	Adoption of a new standard	R 2 332.73	R 1 771.69	R 2 135.87
Co.4	Accounting error	R 780.00	R 720.00	R 700.00
Co.5	Accounting error	R 250.00	R 215.00	R 255.00
Co.6	Accounting error	R 2 992.09	R 2 940.42	R 3 500.00
Co.7	Accounting error	R 10 305.00	R 5 054.00	R 6 500.00
Co.8	Accounting error	R 70.00	R 74.00	R 74.00
Co.9	Accounting error	R 5 900.00	R 5 890.00	R 5 951.00
Co.10	Accounting error	R 550.00	R 550.00	R 650.00
Co.11	Accounting error	R 1 691.00	R 1 700.00	R 1 750.00
Co.12	Accounting error	R 30.00	R 30.00	R 29.00
Co.13	Accounting irregularities	R 5 626.00	R 892.00	R 500.00
Co.14	Change in accounting policy	R 205.00	R 175.00	R 185.00
Co.15	Accounting error	R 210.00	R 212.00	R 209.00
Co.16	Accounting error	R 1 128.00	R 1 079.00	R 1020.00
Co.17	Accounting error	R 12.00	R 13.00	R 8.00
Co.18	Accounting error	R 11.00	R 10.00	R 11.00
Co.19	Accounting error and adoption of a new standard	R 53 800.00	R 55 396.00	R 57 794.00
Co.20	Accounting error	R 180.00	R 205.00	R 210.00
Co.21	Accounting error	R 52.00	R 46.00	R 48.00
Co.22	Accounting error	R 142.06	R 191.05	R 131.29
Co.23	Accounting error	R 116.00	R 120.00	R 115.00
Co.24	Accounting error	R 1 158.98	R 913.13	R 878.01
Co.25	Accounting error	R 471.14	R 471.14	R 405.18
Co.26	Accounting irregularities	R 10.98	R 10.19	R 8.63
Co.27	Accounting error	R 19 300.00	R 19 200.00	R 19 899.00
Co.28	Accounting error	R 150.00	R 115.00	R 90.00
Co.29	Accounting error	R 1006.65	R 888.75	R 906.89
Co.30	Accounting error	R 192.00	R 191.00	R 197.00

Source: Own creation

To fulfil objective three further, statistical analysis is demonstrated and interpreted. The number of observations was indicated for statistical purposes and presented in the form of the following; share price pre- and post-announcement mean, T-test, and Pearson correlation. The statistical significance of the paired, two-tailed T-test is significant at the 5% level. Once the paired, two-tail T-test was applied to the population it was then possible to establish the statistical significance of each range. The correlations and association for the upper 40 JSE listed firms from 2019 to 2007 are expressed and intepreted in Tables 4.6 to 4.10 for the conclusion to be drawn from the data. The correlations were performed and measured, and a Pearson correlation coefficient was established. It became important to adopt a theory by Pallant (2013) therefore, when a correlation coefficient is measured, is has to be inteprepreted, therefore, it is interpreted as shown by Table 4.6:

Table 4.6: Interpretation of correlation coefficients

Range	Interpretation
(- / +) 0.9 to1	Strong positive/negative correlation
(- / +) 0.4 to 0.8	Medium positive / negative correlation
(- /+) 0.1 to 0.3	Week positive / negative correlation
0	No correlation

Source: Own creation based on theory from Pallant (2013)

When the Pearson coefficient had been calculated in the study paired t-test was applied. The t-test indicated “whether differences between correlation measures were significant, and significance is obtained if $p < 0.05$” (Pallant, 2013). Tables 4.7 to 4.11 indicate thirty observations, the reason for the reduced number of observations from thirty-two to thirty was due to the missing data of the share prices of two companies.

Table 4.7 examines data for 2019 and 2018, and the share price movement experienced an average increase of 5.03% from the observation (n=11). A statistical significance is observed from the data set in Table 4.7 and it is observed that the relationship between a share price movement and the event is significant. Six out of eleven observations show an increase in share prices after the announcement, Co.1 being the most substantial with a 73.75% mean change. The other five observations indicate a shrink in share prices, while Co.7 shows a substantial decline of -29.42% mean or average variation in the share price after the event. The average on the mean percentage for all eleven observations indicates that the share prices increased by 5.03% after the announcement. These variations were found to be statistically significant at the 5% ($p < 0.05$) level when the p-value was calculated under the T-test. The changes are found to be in both years observed, i.e. 2019 and 2018, while Co.2, Co.5, Co.8, and Co.9 ($p = 0.11$, $p = 0.248$, $p = 0.168$, and $p =.073$ respectively) show an insignificant relationship to the change in share prices after the announcement.

According to data presented in Table 4.6, the correlations range between weak, medium, and strong negative correlations while Co.3 is the strongest by -0.909. The medium positive correlation is found in only three observations, i.e. Co.1 and Co.4 (r=-0.559 and r=.-0468 respectively). Co.10 indicated a weak correlation of r=-0.219, while Co.8 shows no correlation. It is, therefore, concluded that share prices in 2019 and 2018 fluctuated after the announcement. These results are concur with the results of Flanagan et al. (2008), stated that restatements result in a drop in the firm's market value and the loss of confidence from the investor. However, since it is observed that prices were moving in different directions (decrease and increase) it became important to reject the hyphothesis of the well organised market. This is because the efficient or well organised market is a “market in which security prices at any time fully reflect all available information” (Watson and Rossouw, 2012). The inefficient market shows the opposite of an efficient market; the prices in the inefficient market deviate from intrinsic prices by huge margins; securities are over and underpriced (Moles et al., 2011).

After investigating outcomes for 2019 and 2018, the following section proceeds to examine the research findings for 2017 and 2016.

Table 4.7: Correlation findings for 2019 and 2018

N = 11							
	Year	**Share prices**				**P-value (T-Test)**	**Pearson correlation (R)**
		Pre-announcement mean	**Post-announcement mean**	**Mean change**	**Mean change %**		
Co1	2019	16	27.80	11.8	73.75%	**.001***	.559
Co2	2019	221	204	-17	-7.69%	.11	-.504
Co3	2019	2 226.60	1 831	-395.6	-17.77%	**.001***	-.909
Co4	2019	760.40	723.60	-36.8	-4.84%	**.001***	.468
Co5	2019	223.90	242.90	19	8.49%	.248	-.115
Co6	2019	2 989.30	3 277.90	288.6	9.65%	**.001***	-.367
Co7	2018	9 775	6 899.60	-2875.4	-29.42%	**.001***	.012
Co8	2018	73.2	74	0.8	1.09%	.168	.[a]
Co9.	2018	5 767.40	5 693.40	-74	-1.28%	.073	-.590
Co10.	2018	548.50	648.90	100.4	18.30%	**.001***	.219
Co11	2018	1 692.50	1 778	85.5	5.05%	.001	-.0.14
Average					5.03%		

*p<0.05

Source: Own creation

Table 4.8 examines data for 2017 and 2016 share price movement which experienced a significant average decline of -27.94% from the observed data set (n=3). All companies observed experienced a decline in the share price after the announcement of restatement of these companies with Co.13 being the company that experienced the highest decline of -79.33%. A statistical significance is observed from the set of data in Table 4.8 and it is observed that a relationship between share price movement and the event is significant. The average percentage within the observed period of 2017 and 2016 indicates that the prices dropped by -27.94% after the announcement. These variations were found to be statistically significant at the 5% ($p < 0.05$) level when the p-value was computed or calculated under the T-test. The changes are found to be substantial in both years 2017 and 2016 as the following results are presented: p=.015, p=.0.08, and p=.0.002, for Co.12, Co.13, and Co.14 respectively.

The correlations indicate a medium positive correlation of r=0.835 and r=0.462, while Co.12 shows no correlation. It is, therefore, concluded that share prices in 2017 and 2016 dropped drastically after the announcement. These outcomes are consistent with the conclusions of Flanagan et al. (2008), they stated that restatements result in a drop in the firm's market value and the loss of confidence from the investor. The reason for the latter is that the announcement of restatements shows failure of financial reporting, which causes terrible consequences on individual investors and stock markets (Hamid et al., 2013)

After investigating outcomes for 2017 and 2016, the following segment continues to examine the research results for 2015 and 2014.

Table 4.8: Correlation findings for 2017 and 2016

N = 3							
	Year	**Share prices**				**P-value (T-Test)**	**Pearson correlation (R)**
		Pre-announcement mean	**Post-announcement mean**	**Mean change**	**Mean change %**		
Co12	2017	30	29.50	-0.5	-1.7%	**.015***	.[a]
Co13	2017	2 724.9	563.20	-2 161.7	-79.33%	**.008***	.835
Co14	2016	199.7	194.10	-5.6	-2.80%	**.002***	.462
Average					-27.94%		

*p<0.05

Source: Own creation

Table 4.9 examines data for 2015 and 2014 share price movement which experienced an average increase of 1.02% from the observed data (n=6). A statistical significance is identified from the set of data in Table 4.9 and it is observed that a relationship between share price movement and the event is significant. Three out of six observations show a significant increase in share prices after the announcement with Co.20 being the most substantial by 23.11%. The other three observations indicate a shrink in share prices, while Co.17 showed a substantial decline of -15.25% in the share price after the announcement. The results present a clear line between both years since 2015 shows a share price decline only and 2015 shows a share price growth only. The overall average percentage indicates that the prices increased by

1.02% after the announcement, these changes were found to be significant at the 5% ($P < 0.05$) level when the p-value was calculated under the T-test. The changes are found to be significant in both years 2015 and 2014 for Co.16, Co.17, Co.19, and Co.20 i.e. $p = 0.001$, $p = .010$, $p = 0.001$, and $p = 0.001$ respectively, while Co15 and Co.18 show an insignificant relationship to the change in share prices after the announcement.

According to the data set from Table 4.9, the correlations range between weak and medium positive correlation with Co.17 being the weakest by r=0.188. The medium negative correlation is found in only two observations, i.e. Co.15 and Co.20, (r=0-.643, and r= 0-.608 respectively). It is, therefore, concluded that share prices fluctuated after the announcement for the period 2015 and 2014. These outcomes agree with those of Palmrose et al. (2004), they reported a adverse -9% abnormal return over a 2-day announcement window. However, since it is observed that prices were moving in different directions (decrease and increase) it became important to reject the efficient market hypothesis, as the hypothesis states that market prices efficiently exhibit all information or the news that is available about stocks, and they adjust immediately when new information is released. The market is found to respond to bad news, which strongly affects the stock market rather than good news (Du, 2021).

After investigating outcomes for 2015 and 2014, the following section continues to explore the research results for 2012 and 2010.

Table 4.9: Correlation findings for 2015 and 2014

N = 6							
	Year	**Share prices**				**P-value (T-Test)**	**Pearson correlation (R)**
		Pre-announcement mean	**Post-announcement mean**	**Mean change**	**Mean Change %**		
Co15	2015	210.6	206.80	-3.8	-1.8%	.144	-.643
Co.16	2015	1093	1 021.90	-71.10	-6.51%	*	.618
Co17	2015	11.80	10	-1.8	-15.25%	**.010***	.188
Co18	2014	10.10	10.30	0.2	1.98%	.443	.203
Co19	2014	54 743.50	57 264.30	2 520.80	4.60%	**.001***	.502
Co20	2014	177.40	218.40	41	23.11%	**.001***	-.608
Average					1.02		

*p<0.50

Source: Own creation

Table 4.10 examines data for 2012 and 2010. The share price movement experienced an average decrease of -5.16% from four observations. The results indicate an insignificant relationship except for Co.24 which exhibited p=0.001. Three out of four companies experienced a decline of share prices after the announcement with Co.24 being the most substantial with a decline of 18.79% mean change. Only Co.21 experienced a mean increase of 3.64% of the share price after the announcement. The average percentage indicates that the prices dropped by -5.16% after the announcement. These changes were found to be insignificant at the 5% ($P < 0.05$) level when the p-value was calculated under the T-test. The changes were found to be insignificant for Co. 21, Co.22, and Co.23 ($p = 0.311$, $p = 0.465$, and $p = 0.954$, respectively, showing no significant relationship to the change in share prices after the announcement. According to the data set from Table 4.6, weak negative correlations are observed of $r=-0.253$, $r=-0.109$, and $r=-0.379$ for Co.21, Co.22, and Co.23 respectively. A weak positive correlation of $r=.108$ is found for Co.24. It is, therefore, concluded that share prices declined after the announcement during the observed periods of 2012 and 2010. These results are consistent with those of Wu (2002) who presented in his findings that the market responds negatively during a 3rd-day price response window around the announcements of restatements.

After investigating outcomes for 2012 and 2010, the following segment continues to explore the research findings for 2008 and 2007.

Table 4.10: Correlation findings for 2012 and 2010

N = 4							
	Year	**Share prices**				**P-value (T-Test)**	**Pearson correlation (R)**
		Pre-announcement mean	**Post - announcement mean**	**Mean change**	**Mean Change %**		
Co21	2012	46.7	48.4	1.7	3.64%	.311	-.253
Co22	2012	146.20	138.30	-7.90	-5.40%	.465	-.109
Co23	2012	118.20	118.10	-0.10	-0.08%	.954	-.379
Co24	2010	1102.70	895.50	-207.20	-18.79%	**.001***	.108
Average					-5.16%		

*p<0.50

Source: Own creation

Table 4.11 examines data for 2008 and 2007. The share price movement indicated an average decline of -10.68% from the observed data of six years. A statistical significance is observed from the data in Table 4.6 and it is observed that the relationship between a share price movement and the event is significant. Five out of six companies show a decrease in share prices after the announcement with Co.28 being the most affected by the -26.35% mean change. Co.30 experienced an increase of 3.89% mean change in the share price after the announcement. Concerning all observations, the average percentage indicates that the prices decreased by -10.68% after the announcement, and these changes were found to be statistically significant at the 5% ($P < 0.05$) level when the p-value was calculated under the T-test. The changes were found to be statistically significant in both years 2007 and 2008 i.e. $p = 0.013$, $p = 0.002$, $p = 0.001$, $p = 0.001$, and $p = 0.001$.

According to the data set from Table 4.11, the correlations range between a weak, medium, and strong negative correlation with Co.26, Co.27, Co.28, Co.29, and Co.30 respectively. It was not possible to compute a correlation and t for Co.25 because the share prices 10 days before the announcement remained the same, as well as 10 days after the announcement when the prices also remained the same.

A weak negative correlation is found in three observations i.e. r=-0.498, r=-0.258, and r=-0.184 for Co.27, Co.29, and Co.30. While Co.26 and Co28 show a weak and medium positive correlation of r=0.105 and r =0.864 respectively. It is, therefore, concluded that share prices declined after the announcement. These results are consistent with those of Xu and Kong (2019), who mentioned that re-issue of financials have a downward or adverse consequence on the stock market

Table 4.11: Correlation findings for 2008 and 2007

N = 6							
	Year	**Share prices**				**P-value (T-Test)**	**Pearson correlation (R)**
		Pre-announcement mean	**Post - announcement mean**	**Mean change**	**Mean Change %**		
Co25	2009	471.14	405.18	-65.96	-14%	Correlation and t cannot be computed because the standard error of the difference is 0	
Co26	2008	10.80	9.70	-1.10	-10.19%	**.013***	0.105
Co27	2008	19 860.60	17 516	-2 344.60	-11.81%	**.002***	-.498
Co28	2008	135.10	99.50	-35.60	-26.35%	**.001***	.864
Co29	2007	963.80	909.70	-54.10	-5.61%	**.001***	-.258
Co30	2007	187.70	195	7.30	3.89%	**.001***	-.184
Average					-10.68%		

*p<0.05

Source: Own creation

From these interpretations and analyses, it is presented that the relationship and association between share prices announcements is significant at $p < 0.05$ for most of the observations. The strength of the relationship was found to be ranging from weak, medium, and strong with both positive and negative coefficient correlations. A substantial decline in share prices was observed in the grouped data and two groups were found to present a considerable decline of -27.97% and -10.68% for 2017-2016 and 2008-2007 respectively.

4.4 Summary

The purpose of this chapter was to present experimental research outcomes and results to fulfill the empirical purposes of the study. The experiential objectives were fulfilled by presenting data on the frequency tables, cross-tabulations, correlation analysis, and T-test analyses on correlations were applied to the collected data which were analysed per year from 2007 to 2019. Chapter Four has presented the investigation outcomes and analysis to evaluate the market reactions after the announcement of financial restatements. Through the utilisation of nominated empirical research methods, it was found that the most common cause of financial restatements is the accounting error, while the modification of accounting policy was found to be the least common cause. The analysis exhibited that 2019 is the period that most events and different events were experienced.

Furthermore, the analyses based on three categories that selected three prices only (t-10, t0, and t10) from the window period, indicated that companies slightly above half the sample experienced an increase of share price after the announcement found a positive reaction on the 10th day after the announcement. However, if all days within the window period (all 10 days prior to the event and all 10 days post the event) were included in the calculation the overall calculation indicated that companies experienced an average decline of -7.55% after the announcement. The results further indicate that share prices continued to decline after the announcement. The change in the price of the share price found to be substantial; therefore, it was proven that the outcomes and outcomes of this research are comparable to those of the various of historical literature that was discussed in the literature review. The latter is confirmed by Hamid et al. (2013) who found that the announcement of restatements denotes failure of financial reporting, which causes terrible consequences on individual investors and stock markets.

In the subsequent final chapter, the study presents financial conclusions, a summary of key findings and limitations of the study, and recommendations are made.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The preceding chapter presented, discussed, and analysed the results. This chapter presents responses to the research questions that were stated in Chapter One. The companies are mandated to issue restatements if previously published financial statements are found to be misrepresenting the stakeholders. The study focused on market reaction after the announcement because excellent research in accounting literature has reported financial restatements due to financial reporting irregularities (Thompson and McCoy, 2008). However, the reaction of investors to financial restatements is largely unexplored. As a result, a limited local research exists in this area the following question arises: How do markets react to financial restatements of the Top 40 JSE listed companies?

For this study to answer the research question, the objectives were recognised. This final chapter will show how each objective was fulfiled to respond to the research question. The chapter will represent a summary and key findings, recommendations, limitations, suggestions for further research, and conclusion.

5.2 Summary of the study and key findings

The study investigated the causes of financial restatements within the JSE listed top 40 companies in South Africa and established the markets' reaction. The theories underpinning financial statements and theoretical framework included the conceptual framework for financial reporting, a consistency concept for financial statements and a theory of stock market efficiency. The empirical literature included causes of financial restatements and market reactions towards restatements. To accomplish the research objectives, the study adopted statistical methods to analyse the relationship between restatements and market reactions. The statistical methods applied were frequency, Correlation coefficient, and paired t-testing. Bloomberg.com was utilised to access secondary data of the top 40 JSE listed firms. The secondary data collected that was covered thirteen years from 2007 to 2019.

Objective 1: To identify the frequency of financial restatements of the top 40 JSE listed companies

The degree of restatements was measured using frequency tables. According to the first objective, the results show that there was a total of thirty-two restatements over a period of thirteen years. 2019 was the period that most restatements were reported, this significant number constitutes 18.75% of the period of thirteen years and an entire sample of thirty-two events, while the period of 2009, 2010, 2011, and 2016 experienced the least events of one event each. The period 2007 and 2017 experienced two events each. These results support those of Chi and Sun(2014), who mentioned that there has been a rapid growth of financial restatements. On the contrary, no restatements were reported for the year 2013.

Objective 2: To investigate the causes of financial restatements of the top 40 JSE listings

Causes of restatements were found to be the correction of accounting errors, adoption of a new standard, accounting irregularities, and change in accounting policy. A substantial number of restatements were due to accounting errors i.e. twenty-five events which constitute 78.14% of the entire sample of thirty-two events. The change in accounting policy was the least cause of financial restatement; it represented 3.11% of the entire sample. The former and latter concur with the conclusions by Stainbank et al. (2019), who mentioned that IAS 8 is an approved principle for choosing and changing accounting policies, changing accounting estimates, and correcting accounting errors. Further to the findings relating to objective two, it was observed that the period 2018 had the most number of restatements due to accounting errors.

Objective 3: To examine market reaction on financial restatements of top 40 JSE listed companies

This objective examines market reaction. The restatements due to accounting error exhibited mixed results; although results gravitate towards the positive, the negative percentage is concerning since positive results are greater with a small margin. The analyses based on three categories that selected three prices only (t-10, t0, and t10) the window period indicated that companies slightly above half the sample experienced an increase in share price after the announcement found a positive reaction on the 10^{th} day after the announcement. These positive results are greater with a small margin as well. The restatements that are due to accounting irregularities indicated a substantial decline in share price after the announcement. These conclusions are consistent with those of Gordon et al. (2013), who established that re-issue related to fraud has a negative effect on abnormal returns. When all days within the window period (all 10 days before the event and all 10 days after the event) were included in the calculation the overall calculation indicated that companies experienced an average decline of -7.55% after the announcement. The data confirms that markets react to the announcement of restatements and they react negatively. A substantial number of companies exhibited a decline in share price after the announcement. Some companies showed a sharp decline from the day of the announcement and others showed insignificant share growth. These outcomes support the discoveries of Palmrose et al. (2004), who found a -9% abnormal return over a 2-day announcement window for a sample of 403 restatements declared.

Furthermore, empirical findings submitted that the association between share prices announcements is significant at $P < 0.05$ for the majority of the observations. The strength of the relationship was found to be ranging from weak, medium, and strong with both positive and negative coefficient correlations. A substantial decline in share prices is observed in the grouped data and two groups are found to present a great decline in share prices.

5.3 Recommendations

The research findings in Chapter Four put forward the following:

- Thirty-two events were experienced within a period of thirteen years;
- Accounting error was found to be the most common cause of financial restatements, while the change in accounting policy showed to be the least common cause of restatements;
- Entities experienced a negative market response after the announcement of restatements especially those restatements relating to correction of error and accounting irregularities;
- The relationship between share prices announcements is significant at $P < 0.05$ for the majority of the observations;

- The strength of the relationship was found to be ranging from weak, medium, and strong with both positive and negative coefficient correlations.

Grounded on the previous listed results and conclusions, the subsequent recommendations are made

- Investors should consider SENS announcement when making investment decisions and they should also allow a responsible window period to access share price behaviours;
- Managers are advised to look for sources of finance if the entity is experiencing weak cash inflows instead of misstating financial statements to present misleading financials that show a sound financial position.

5.4 Limitations

The limitations and shortcomings of the study were recognized and can be expressed as follows:

- The study measured the statistical associations between the highest 40 JSE listed firms. The generalising of the outcome and results to other listed firms is, therefore, limited;
- The study observed thirteen years of published financial announcements and information. Empirical outcomes and findings might be different if financial announcements and informations were to be analysed for lengthier and extended periods;
- The categories of share prices were used to generalise the market reaction and a window period of 10 days prior to the announcement and 10 days post the announcement. The findings could be altered if the window period was longer because according to Wu (2002), the downward pattern starts about six months preceding the restatement announcement and there is persistent negative post announcement slow movement for up to four months.

5.5 Suggestions for further research

While the outcomes of this research exhibit some evidence of the negative impact and consequence of the restatement on the price of the share, the succeeding areas of further research have been recognised:

- The empirical findings of this study indicate that the share price starts declining a few days before the announcement. Therefore, a study could be conducted to test the insider trading concept;
- Duplicate this study and test all JSE listed firms for the period of 2007 to 2019 and detect whether comparable findings are obtained;
- Duplicate this study and extend the window period;
- Conduct a same investigation on the highest 40 JSE listed firms that falls on another time frame which is larger than this of this study

5.6 Conclusion

The aim of this chapter (final chapter) was to offer an outline of the investigation and express how each objectives was attained. Recommendations for further research were presented by the researcher. The limitations of the study were also acknowledged. The objectives of the study were identified. After the statistical methods mentioned in Chapter Three, the objectives were empirically fulfilled through statistical demonstration provided in Chapter Four. Therefore empirical findings indicated that markets react to restatements announcements; furthermore, the findings presented a negativeand adverse market response to the announcement of restatements. These outcomes are supported by Flanagan et al. (2008), who stated that restatements result in a decrease in the company's market value and a rise in the cost that an entity has to pay for sourcing capital, and the loss of confidence from the investor.

The cross-tabulation from Table 4.5 indicates that accounting irregularities have a damaging and negative consequence on the share price. The outcomes and findings of the study agree with those of Gordon et al. (2013), who found that re-issue related to fraud has a adverse effect on abnormal returns. The announcements mentioned in the headlines are related with a more negative market reaction at an announcement. As the study is conluded and the findings have been expressed, therefore, it can be submitted that restatements have the extreme negative consequence on the share price of the upper 40 JSE listed companies after the announcement day. These findings will be useful to companies when they prepare financial statements, and to the investors when they make an investment decision

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APPENDICES

APPENDIX A:
ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

14 October 2020

Miss Nomthandazo Consolatrix Jwara (210540234)
School Of Acc Economics&Fin
Westville

Dear Miss Nomthandazo Consolatrix Jwara,

Protocol reference number: 00008419
Project title: Markets reaction to financial restatements of the top 40 JSE listed companies

Exemption from Ethics Review

In response to your application received on 12 October 2020, your school has indicated that the protocol has been granted **EXEMPTION FROM ETHICS REVIEW.**

Any alteration/s to the exempted research protocol, e.g., Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through an amendment/modification prior to its implementation. The original exemption number must be cited.

For any changes that could result in potential risk, an ethics application including the proposed amendments must be submitted to the relevant UKZN Research Ethics Committee. The original exemption number must be cited.

In case you have further queries, please quote the above reference number.

PLEASE NOTE:
Research data should be securely stored in the discipline/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours sincerely,

[redacted] 14 October 2020

Prof Josue Mbonigaba
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