THE RELATIONSHIP BETWEEN FINANCIAL REPORTING QUALITY AND FIRM VALUE OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This research project is my original work and it has not been presented and submitted to any

in university or college for examination.

Signed……………………   Date: …………………………

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D63/11191/2018

This research project has been submitted for examination with the authority and approval as

the university supervisor.

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DEDICATION

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ABBREVIATIONS

CMA   Capital Markets Authority of Kenya

EM   Earnings Management

FR   Financial Reporting

FRQ   Financial Reporting Quality

IASB   International Accounting Standards Board

IASC   International Accounting Standards Committee

ICPAK   Institute of Certified Public Accountants of Kenya

IFRS   International Financial Reporting Standards

NSE   Nairobi Securities Exchange

SMEs   Small and Medium Enterprises

ABSTRACT

The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. Consequently, the effect of quality of FR on the successive performance of a company is one of the biggest questions that arise on how the market values this perceived higher quality. It has been established that organizations having quality financial information have a relatively higher subsequent value because the market positively evaluates those organizations that have a higher commitment of issuing quality financial information to the shareholders as well as other stakeholders, targeting reduction or avoidance of information asymmetries amongst the participants in the market The objective of this research is to establish the effect of financial reporting quality on the value of firms listed at the Nairobi Securities Exchange. It also aimed at reviewing the increasing body of theoretical and empirical studies that have endeavoured to examine the range of magnitude and effects of the financial reporting quality on the corporate value. The target population was all the listed firms at the Nairobi Securities Exchange. Secondary sources of data were employed. Panel data was utilized, data was collected for several units of analysis over a varying time periods. The research employed inferential statistics, which included correlation analysis and panel multiple linear regression equation with the technique of estimation being Ordinary Least Squares (OLS) and so as to establish the relationship of the financial reporting quality on corporate value. Firm size was incorporated in the study as the control variable. The study findings were that firm size has a significant negative association with firm value ($r = -0.3054(p=0.000<0.05)$). Additional findings were that that FRQ, with the control effect of firm size, has a significant effect ($Prob>F=0.0018$) on the firm size of listed firms and thus, it can be utilized to significantly predict the firm value. The final findings were that only accrual quality and firm size had a significant relationship with firm value. They both had negative significant relationships with firm value. The constant ($\alpha = 49.93712$) implies that when there is no accruals quality and firm size is equal to zero, the firm value is 49.93712**.** The beta for accruals quality ($B_{1it}= 1.027508$) implies that when accruals quality increases by one unit, there is a decrease in firm value by 1.027508 units. In addition, the beta for firm size ($B_{2it}= 2.893666$) implies that when firm size increases by one unit, there is a decrease in firm value by 2.893666 units. Policy recommendations are made to the CMA and NSE, and by extension, the National Treasury, to formulate and enforce rules and regulations on financial reporting quality to boost the capital markets and in extension, the financial system, to mitigate collapse of listed companies and ensure lack of stability in value of financial securities issued in the capital markets. Further recommendations are made to firm management and consultants to implement accrual quality in order to boost firm value. Recommendations were also made to other stakeholders like investment banks, equity analysts, and individual investors should search for firms with accrual quality to invest or recommend to invest because organizations with better accrual quality have lower cost of capital, that additionally may influence the value of a firm.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Market agent's attention has been drawn to value of Financial Reporting (FR) together with their primary sources of understanding of organization approach as a result of the business and markets globalization, expansion and the increased need for transparency and information by the shareholders, community among other stakeholders (Claessens & Fan, 2002). According to Jonas and Blanchet (200), FR is not just the ultimate output; its quality relies upon all the part, inclusive of the company's transactions disclosure, choosing, and implementation of bookkeeping strategies together with the understanding of the decisions undertaken. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder.

Consequently, the effect of quality of FR on the successive performance of a company is one of the biggest questions that arise on how the market values this perceived higher quality. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. It has been established that organizations having quality financial information have a relatively higher subsequent value because the market positively evaluates those organizations that have a higher commitment of issuing quality financial information to the shareholders as well as other stakeholders, targeting reduction or avoidance of information asymmetries amongst the participants in the market (Bushman & Smith, 2001; Bens et al., 2002; Gunny, 2005;García-Lara et al., 2010; Ahmed and Duellmand, 2011).

The key theory anchoring this study is the Agency Theory initially explored by Alchian and Demsetz (1972) and adavanced by Jensen and Meckling (1976). Its foundation in economic theory defines it as the contractual relationship between two parties being the principal and agent creating the situation where an agent works on behalf of a principal. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. The other theory anchoring this study is the stakeholder theory empirically developed by Freeman (1984). The theory focuses on how executives attempt to maximize stakeholders' value and their contractual obligations to the owners of firm. The theory also recognizes the groups who are the stakeholders of the company by describing and recommending the approaches through which executives can extend the deserved honour to the benefit of those groups.

According to Mutai (2014), the International Financial Reporting Standards (IFRS) adoption of companies stated in Nairobi Securities Exchange assisted at reducing barriers to trading across borders of securities through making sure that the company accounts are easily reliable, transparent, and comparable. It has been established that organizations having quality financial information have a relatively higher subsequent value because the market positively evaluates those organizations that have a higher commitment of issuing quality financial information to the shareholders. Therefore, the company reduces the cost of raising capital and also enhances the growth and become more competitive. Although, the response to IFRS globally and locally has been commendable, it is faced by myriad of challenges mostly for small and medium enterprises where the administrative cost of preparing and auditing individual company accounts increases. IFRS also requires listed companies to

disclose their financial reports, which are causing a disadvantage as compared to companies that do not follow strict rules competitively.

1.1.1 Financial Reporting Quality

There has been a lot of evolution of FR from being viewed as merely recording of financial transactions or the normal activities of bookkeeping. Nowadays, it is considered as an important tool in the management of an organization under the improved principles of corporate governance (Uwuigbe *et al.,* 2017). The high quality FR refers to the generation of financial information that is free of errors either omission, misstatement or biases. As per the agency theory view, Dang (2011) contends that audited financials are a mechanism for monitoring and giving guarantee to the financial information users. It has been established that organizations having quality financial information have a relatively higher subsequent value because the market positively evaluates those organizations that have a higher commitment of issuing quality financial information to the shareholders. The financial statement of any organization as stated by IFRS ought to have the required qualitative attributes, that include, faithful representation, relevance, timeliness, verifiability, comparability and understandable (Yuri et al., 2011; IASB, 2015).

FR has always been considered as the critical determinant for investment decision making of shareholders and other stakeholders of a firm in considering returns that has been made. The influence of chief executive officers and board of directors has been affecting the quality FR. The quality financial reports create the efficiency and effectiveness of resource allocation in the listed companies. The quality of financial statements is very significant to the users who need them for making both investments and economic decisions. The value of quality of financial reports is considered if they could accurately disclose the true economic natures of

the firm in forms of relevance, faithful representation, understand ability, comparability, timeliness and verifiability so that they can be simply understood (IASB, 2015). The Financial Reporting Quality (FRQ) will help the investors and other shareholders in making the investment, financing and resource allocation decisions (Dang, 2011).

Quality of FR in this context will be in terms of; earnings management, accounting conservatism, and accruals quality. Earnings management can entail corporate managers increasing their prevailing earnings at the cost of the economic values of the organization. Thus, so as to attain a particular target of earnings, managers can delay till end of the year so as to use discretionary accruals to manipulate the earning reported (Oktorina & Hutagaol, 2008). It has been established that organizations having quality financial information have a relatively higher subsequent value because the market positively evaluates those organizations that have a higher commitment of issuing quality financial information to the shareholders The measure for earnings management utilizing discretionary accruals will be the net income subtracted by net cash flow from operations (IASB, 2015). Accounting conservatism suggests incorporating of financial losses into the bookkeeping wages more timely that of monetary advantages. Organization value of equity is the reduced worth of the shareholder's wages referred to as net revenue. Its measure is net income scaled by the lagged marketplace price of equity (Khan & Watts, 2009). Accruals quality is the shift in working capital accumulations yearly and its measure is the percentage change in the cumulative values of accounts receivables (Ball & Shivakumar, 2006).

1.1.2 Firm Value

According to Leland and Toft (1991) the term refers to the worth of its possessions plus the tax benefits value as a result of debt less the bankruptcy cost value related to its debt.

Therefore, the worth of an organization encompasses equity together with long-term debt. Equity comprises of share capital paid up, share premium, retained earnings, or excess and reverses. Modigliani (1980) states that the firm value comprises of combination of its equity together with debt and this is solely dependent of the revenue flow that its properties generate. Organization value of equity is the reduced worth of the shareholder's wages referred to as net revenue. For instance, the net income divided by the expected tariff of return on equity. To obtain the net income, interest on debt is subtracted from the net operating income. Firms' worth of debt in contrast is the reduced value of interest on debt.

The main goal of managing organizational funds is accomplishing the objective of shareholder wealth maximization. Market value can be used to measure the performance of publicly listed firms since it requires information on the current stock prices. Shareholders wealth, which is synonymous with firm value, it factors in all the benefits that a firm derives in the future be it short-term or long-term. It has developed to be one of the leading African Exchanges and more even it acts as an iconic trading facility not only to local investors but also international investors who aims of gaining entrance to the economic growth of Kenya and Africa at large.Market value can be used to measure the performance of publicly listed firms since it requires information on the current stock prices. This gets rid of the challenge of approximating the time lag between implementation and increased productivity or profitability. Organization value of equity is the reduced worth of the shareholder's wages referred to as net revenue. Other accounting ratios like the price to earnings ratio (P/E) ratio and marketplace-to-book value ratio suffer from a number of flaws in that accounting rules change, shifted reported earnings without any real change in the underlying business. Additionally, the numerous loopholes in accounting ease the ability of executives to

misinform investors (Cheng, Liu & Tzeng, 2011; Boyd, 2010; Chowdhury & Chowdhury, 2010; McConnel & Servaes, 1990).

The value of a firm can be determined via various measures for instance the Tobin's Q ratio and the firm market share price. Other firm value variations are related with changes in variables such as firm size, price earnings ratio, dividend coverage proportion, book value per share, dividend payout proportion, earning per share, and dividend per share (Tobin, 1969; Wilcox, 1984; Downs, 1991; Sharma, 2011; Gordon, 1963). The current study will utilize Tobin's Q ratio as the degree of organization worth. Tobin's Q ratio is the proportion of market value of firms' resources as represented by the marketplace value of the firms' unsettled stock together with debt, distributed by the standby cost of the organization's assets, which is the book price (Tobin, 1969).

1.1.3 Financial Reporting Quality and Firm Value

According to García-Lara et al. (2010) quality FR improves the value of an organization based on transparency, reduces cost of preparation, makes investment decision efficient, reduces capital cost, enhances comparability, reduces the necessity for additional info, enlarge the fiscal report disclosure together with enhances reliability, relevance, understandability, measurement and recognition.

Ahmed & Duellmand (2011) opine that the decision of the manager coupled with his discretional behaviour influences the corporate value via the strategic management process. Organization value of equity is the reduced worth of the shareholder's wages referred to as net revenue. Therefore, it is important to have knowledge about the corporate strategy,

accounting policies and the behaviour, actions and decisions of the manager among others so as to highpoint together with establish the grounds of the firm presentation.

Lambert et al. (2007) in their study discovered that the worth of bookkeeping data has the ability of influencing the price of capital directly together with indirectly through affecting the perception of the market players regarding circulation of forthcoming cash flows together with directly by interfering with the actual decision which can change the dissemination of coming cash flows. As per Chen et al. (2011) who discovered that in private firms, FRQ influences their asset efficacy in developing marketplaces together with the influence improves bank finances plus reduces enticements to diminish earnings for the purposes of tax evasion.

Duarte, Irina, and Azevedo (2015) reviewed the nexus between firm value and FRQ. Through Meta analysis, results of study revealed that FRQ does not only enhance performance, but it also minimizes level of information asymmetry. Even though there is need for FRQ, it is limited in its relevance since despite addressing institutional related issues it falls short handling both real and economic rationally based issues which cannot be left to accounting principles only.

Naghshbandi and Ombati (2014) investigated issues, challenges affecting FRQ in Kenya. They argued that their adoption has been inhibited by skill and competence levels in developing economies, perception from developing countries that they are European or politically mitigated, different levels of compliance and regulatory policies, cultural and structural differences and ownership structures of various business enterprises. Although,

these challenges may lead to slowness in adoption of IFRS the anticipated benefits in regard to voluntary and mandatory disclosure triggers higher acceptance levels.

King'wara (2015) carried out another Kenyan perspective on the effect of FRQ on value. In the study, a sample of listed companies from 1994 to 2003 was drawn in exclusion of both banking and insurance companies. A comparative analysis was carried out before and after implementation of IFRS and the findings revealed that FRQ had a significant influence on value. However, firms listed in the banking and insurance sector were excluded.

1.1.4 Nairobi Securities Exchange

In 1954, the Nairobi Securities Exchange (NSE) was founded by stockbrokers as a charitable association and was given the responsibilities to regulate the trading activities and also develop the securities market. It has developed to be one of the leading African Exchanges and more even it acts as an iconic trading facility not only to local investors but also international investors who aims of gaining entrance to the economic growth of Kenya and Africa at large. It focuses on variable and fixed income securities. It has 64 listed companies, an Income Real Estate Investment Trust (I-REIT), an Exchange Traded Fund (ETF) and a futures derivatives market (CMA, 2016).

The exchange plays a vital role in the Kenyan economy through promoting savings and investments and also assisting both local and foreign companies obtain cost effective capital. The Kenyan Capital Markets Authority is the regulator of NSE. The Authority is a member of the World Federation of Exchange and it is the founding member of both East African Securities Exchanges (EASEA) and African Securities Exchange Association (ASEA). NSE is also a member of the Association of Futures Market together with being a partner exchange

in the United Nation-led sustainable stock exchanges initiative (Mutai, 2014). From 1950s when the NSE started operation of organized stock markets there has been a tremendous growth in the stock market over the years both in terms of the services and product offered and the number of listed firms in the exchange with the current number of listed frims being over sixty firms (CMA, 2016).

The registered Institute of Certified Public Accountants of Kenya (ICPAK) introduced the FR standards in 1998. This standard was to be operational for all financial statements periods beginning 1st January 1999. Kenya national accounting standard includes both the fill IFRS and the IFRS for Small and Medium Enterprises (SMEs). Different governmental regulatory bodies such as Central Bank of Kenya (CBK) issues regulations that have incorporated the requirements on how to use IFRS. Other institutions issuing similar regulations includes; Insurance regulatory Authority of Kenya (IRA), Retirement Benefits Authority (RBA) and the CMA. Moreover, the NSE, on publication of company's rules, uses these accounting standards (Hoti & Nuhiu, 2011).

The IFRS adoption in Kenya is was implemented in phases. Between 1973 & 2000, the International Accounting Standards Committee introduced 41 bookkeeping principles. At the end of the period, the International Accounting Standards Board (IASB) replaced IASC. The incoming board was aimed at enhancing and filtering the accounting standards for a period of 8 years starting from 2000 to 2008 there was a significant reduction of the accounting standards from 41 standards to 28 by end of 2008. Primarily these standards are geared towards providing reliable, relevant, and timely for corporation investors and creditors in accordance to the IASB's accounting framework. It is a mandatory requirement for companies listed in the NSE to be IFRS compliant. Other than listed companies there is a set

of other specific IFRS designed for SMEs. These development coupled by lack of the literature regarding the effects of IFRS, having been made mandatory for use in reporting by the listed companies (Mutai, 2014). Thus, this study aimed to establish whether there is evidence to suggest improvement in quality of financial reports and how it impacts on firm value.

1.2 Research Problem

As the agency theory, by Jensen and Meckling (1976) posits, the principle (shareholders) and agents (managers) do have different kind of information. Managers are in charge of running the daily affairs of the investment made by the shareholders in expectation of pay while on other hand shareholder provide finance and expected return on their investment. In pursuit of these goals, conflict of interest may arise and since managers possession more information about the company they are at advantage (Tarus & Omandi, 2013). Lack of full disclosure on the activities of the company has left shareholder at risk of manipulated earnings as recently witnessed in with rising cases of scandals, frauds, suspension, and even delisting (Tarus & Omandi, 2013). Investors require useful information to make informed decisions. In most cases, the investors rely on figures and estimates in making decision about whether to invest in a company resulting in rational allocation of their funds (Lambert et al., 2007). This information is found in financial statements, which this study seeks to focus much on with respect to how reporting quality influences the worth of companies listed at the Nairobi Securities Exchange.

Financial reports are of importance to an organization since it gives the projection of how the company will perform; a positive financials report provides confidence to investors hence this influence moments of share price upwards, while a firm under financial distress will

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influence its share price to a downward trend hence resulting to low returns to investors (Lambert et al., 2007). In Kenya, a concern has been raised about the listed firms pertaining their governance as these firms have been portrayed to be having many cases of mismanagement, corruption, bailouts by government or subsidizing on collapsing firms such as Uchumi, Mumias Sugar and Kenya Airways. It has developed to be one of the leading African Exchanges and more even it acts as an iconic trading facility not only to local investors but also international investors who aims of gaining entrance to the economic growth of Kenya and Africa at large. The companies have experienced fraud and other cases associated with corruption among other which has found them in the media lime light for the bad reasons. This can be associated to the non-disclosure or maybe inadequate disclosure of the firm's performance, in summary, not adhering to FR standards. Most of the efforts towards reviving of these collapsing firms to regain their profitability have concentrated of the financial restructuring. Though, practitioners and managers continue to lack appropriate guidance for attainment of optimal financing decisions (Kibet, 2015). This circumstance has resulted to loss of both the confidence and wealth of investors in the stock market. Quality FR still is yet to be addressed resulting to collapsing again of firms for example Mumias Sugar, Kenya Airways, Uchumi, National bank and Eveready (KNBS, 2017).

Numerous researches have been carried out to investigate the phenomenon of the association amongst quality FR together with organization value. Globally, Ferrero (2014) did an investigation on the effect of quality FR on firm value. Quality reporting was operationalized as earnings quality, conservatism, and accruals quality while corporate value was indicated by the market to book ratio. The study adopted panel study design and a sample of 1960 non-fiscal listed organizations in 25 countries in 2002 to 2008 were considered. Regression analysis through Generalised methods Moments (GMM) showed a positive relationship

which was significant between FRQ and corporate value. This study presents a conceptual gap because it uses a different measure for firm value. Morris, Susilowati and Gray (2012) conducted an Asian comparative analysis on the case for and against quality FR and firm value. Simple random sampling was used to draw 262 companies which were listed in eight Asian countries. Amongst those selected some countries had adopted quality FR while the rest had not. Secondary data was collected through use of a customised 441 items check list for quality FR. The study was carried out in the periods 2002 to 2007. Results of the study revealed that quality FR improved performance which did not only differ with time but also varied across the countries under investigation. These studies present a contextual gap because they were not conducted in the Kenyan context. This study also presents a conceptual gap because they used variables varying from the ones employed in the current study.

Locally, Naghshbandi and Ombati (2014) investigated issues and challenges affecting FRQ in Kenya. They argued that their adoption has been inhibited by skill and competence levels in developing economies, perception from developing countries that are European or politically mitigated, different levels of compliance and regulatory policies, cultural and structural differences and ownership structures of various business enterprises. Although, these challenges may lead to slowness in adoption of IFRS the anticipated benefits in regard to voluntary and mandatory disclosure triggers higher acceptance levels. This study presents a conceptual gap because it endeavoured to seek the challenges facing FR but not addressing the effect of quality FR on firm value. King'wara (2015) investigated the influence of FRQ on worth. In the study, a selected number of listed companies from 1994 to 2003 was drawn in exclusion of both banking and insurance companies. A comparative analysis was carried out before and after implementation of IFRS and the findings revealed that FRQ had a

significant influence on value. However, companies which were listed in the banking and insurance sector were excluded. These studies present a contextual gap because not all firms named at the NSE were used as the populace in the research and thus the findings can vary if the excluded sectors are included.

The researches done in association to the relationship between FRQ and firm value focuses have utilized different variables to the variables to be used in the current study. Also, majority of the studies have utilized qualitative measures of financial reporting quality while the current study will utilize quantitative measures. Accordingly, there was a need for a study that utilizes quantitative financial reporting quality measures. Consequently, this research sought to fill the research gaps and answer the research question: what is the influence of financial reporting quality on the value of companies listed at the Nairobi Securities Exchange?

1.3 Research Objectives

The aim of this research was to establish the effect of financial reporting quality on the value of firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

The research will be beneficial to many shareholders ranging from scholars, researchers, government and its agencies, manager of listed firms, lawmakers, stock market official and many others. Additionally, this study will contribute much to the current knowledge body and aid in predicting firm value basing on FRQ. More so, other scholar may use this study in future to reference their work. The study will also contribute in enlarging the breadth as well

as quality of the research works and publications. Findings from the study will be of assistance in furtherance of the knowledge base on the study parameters

The study will be of great value in policy formulation. The financial markets regulator, CMA will find the study discerning as the relationship between FRQ and firm value will be studied and will give insight on how to stimulate the performance of listed companies. The CMA can put in place policy drafts and guidelines aiming to boost capital markets. With the helpful insight by this study, such policy drafts and guidelines will be of enhanced relevance and quality. Legislators and policy makers as well can gain from the study which will be useful when they are drafting polices and amending the policies. With good policy drafts and regulatory framework, the quality of policies and legislations will be assured.

Financial analyst mostly performs due diligence and background check on their investment targets. Henceforth, this study will offer them immeasurable insights, which will help them when advising their clients. In addition, financial analyst usually carries out in house research studies; with the assistance of the study findings, those kinds of researches will be improved. They would be able to estimate firm value by using FRQ. Thus, they will consider FRQ in their analyses. The study will also inform the management of listed firms, as well as other managers in general, to increase the quality of their FR in order to boost the value of the respective companies they are managing.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The section reviews the theoretical review, quality of financial reporting measures, empirical literature, summary of the literature review, together with the conceptual framework.

2.2 Theoretical Review

The effect of quality FR on the value of the listed companies is stressed by different theoretical views as discussed below. The agency theory, stakeholder, and the signalling theory will give the in-depth understanding about the theoretical framework of agent and principal relationship.

2.2.1 Agency Theory

The theory was initially explored by Alchian and Demsetz (1972) and adavanced by Jensen and Meckling (1976). Its foundation in economic theory defines it as the contractual relationship between two parties being the principal and agent creating the situation where an agent works on behalf of a principal. The absolute responsibility of running and managing the organisation as per the set standards falls directly on the chief executives (Mitnick, 2013). Jensen and Meckling (1976) provide the formal analysis about the agency problem and refers to the agency relationship as a contractual agreement where one of the party is the principal legitimately contracts with another party who is the agency to execute and deliver some professional services on his/her behalf by delegating the authority to make decisions to the senior managers. In real life situation, shareholders of listed companies always delegate the power and authority to make decisions to the board of directors, who then passes the same powers and authority to the CEO.

Jensen and Meckling (1976) stress that when two parties to an agency relationship are maximising the value, there must be any ground to hold that the chief executives would fail to perform their contractual obligations to the best interests of the shareholders. The shareholders can mitigate these conflicts of interests by scheming the appropriate executive remunerations for the agents in order to reduce the unethical and harmful activities of the agents. Moreover, in different circumstances it may remunerate the agents to spend financial funds to ensure they would not tolerate any decisions which would cause the devastating effects on the principals or to make sure that the principals would be compensated if the agents take such harmful actions. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. But, it is generally impossible for the owners or the executive staff at zero cost to ensure that the management will make optimal decisions from the viewpoint of the shareholders. Moldoveanu and Martin (2001) also observe that agency problems may exist in two unique ways such as the failure of managerial competence and the failure of managerial integrity. In one hand, failure of managerial competence means to unwise errors committed in carrying out the managerial obligations. This emanates from disadvantageous selections in a situation where the principals would not assure if the agents accurately represent their managerial capacity to do the work that they are contractually hired and compensated for. On the other hand, failure of managerial integrity refers to wishful conduct on the part of agents that mitigates the value of the assets of firm. This problem arises from moral risks which display the traditional incentive problem.

The theory links to this study because FRQ aims at reducing barriers to trading across borders of securities by making sure that the company accounts are easily reliable, transparent, and

comparable. Therefore, the company reduces the cost of raising capital and also improves the growth and become more competitive. This will in turn boost the firm value.

2.2.2 Stakeholder Theory

Freeman (1984) empirically developed this stakeholder theory. Theory focuses on how executives attempt to maximize stakeholders' value and their contractual obligations to the owners of firm. The theory also recognizes the groups who are the stakeholders of the company by describing and recommending the approaches through which executives can extend the deserved honour to the benefit of those groups (Hassan, 2012).

According to Freeman (2010), the stakeholder theory endeavours to take care of the principle, which actually matters. No matter what the ultimate goal of firm is, chief executives are anticipated to always work towards satisfying the competing interests of the stakeholders that are either positively or adversely affected by their actions and inactions. One of the financial objectives of business organizations is the maximization of wealth of stakeholders. Additionally, different circumstances it may remunerate the agents to spend financial funds to ensure they would not tolerate any decisions which would cause the devastating effects on the principals or to make sure that the principals would be compensated if the agents take such harmful actions. This objective can be accomplished by producing of superior products of high quality and delivering top notch services for customers. This value maximization process can be evident through effective and efficient operational processes and enhanced corporate goodwill. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. The theory also stresses that the financial success of the company extensively relies on how it maintains its

association with different stakeholders (Elijido-Ten, 2009). Executives are fully aware that failure to maximize the value of stakeholders would definitely bring about the withdrawal of support and investment from the stakeholders. Therefore, for a company to be a going concern in its full operational capability and capacity, the financial support of stakeholders is very vital. This is the main reason why chief executives will choose to publish the higher quality financial information voluntarily to their stakeholders in order to motivate them to make the informed investment, financial and social business decisions.

The theory links to this study because FRQ aims at reducing barriers to trading across borders of securities by making sure that the company accounts are easily reliable, transparent, and comparable. Therefore, the company reduces the cost of raising capital and also improves the growth and become more competitive. This will in turn boost the firm value.

2.2.3 Signaling Effect Theory

Signalling theory advanced by Ross (1977), explains behaviour where there is provision of information between two parties such as individuals and organizations. It involves business ventures communicating to potential investors based on value and commitment signal, which reflects the value of the firm. The communication presented is significant to potential investors in making rational investment decision (Busenitz et al, 2005). According to Bhattacharya and Dittmar (2001), investors put money where the mouth is and the signalling mechanism is an important guide in making such crucial investment decisions. Ou and Penman (1989) confirmed that financial ratios generated from financial statements can perfectly forecast future changes in earnings, and the same information can be applied in predicting the future returns. Signals forecast variation in earnings and future revisions in the predictions by analysts on the earnings (Abarbanell & Bushee, 1998).

If there is an occurrence of signalling within a company, that would increase the earnings, but if it is revealed there were accounting errors, a product recall or a scandal, the earning would be adversely affected. Therefore, signalling could mean there will be higher earnings in the future or even higher stock price for a company. However, it does not guarantee occurrence of a negative event either before or after the release of earnings (Bhattacharya & Dittmar, 2001). Poterba and Summers (1983) documented testing of the signaling theory. They opined that stock prices have a habit of increasing when a firm releases its financial statements, posting good results announces an increment in dividend pay-outs, which results to increase its value and its value, falls when it posts negative results because dividends are to be reduced. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. The research concluded existence of an insignificant difference amongst the hypothesis that a financial report that conveys good results and consequently an increased dividend bears good news and the hypothesis that a financial report that conveys negative results and consequently a decreased dividend is bad news for investors.

The theory links to this study because FR entails firms communicating to potential investors based on value and commitment signal, which reflects the value of the firm. Thus, if it turns out that the company had poor FRQ and actually had a scandal, a product recall or accounting errors, earning would be adversely affected and the value of the firm could decline drastically.

2.3 Quality Financial Reporting Measures

This section will elaborate on the various measures of FRQ. These are: earnings management, accruals quality, and accounting conservatism.

2.3.1 Earnings Management

The firm value is associated with Earnings Management (EM) negatively (Dechow & Dichev, 2002). When the degree of EM is higher it is related to lower quality of information. EM is applied in misrepresenting the actual firm's performance and analysts acts as the outside monitors to the management. Increasing firm value could be one of the incentives for managers to undertake these unethical practises, that are only applicable in the short term as in the longer period the marker corrects these devious firms together with being subjected to inferior business presentation as per Rangan (1998).

As indicated by further EM research, earning releases of analyst shows the earning management practices, therefore those firms which have an improved firm value have enhance and higher earnings releases. Thus, a negative link was found between earnings management and subsequent profitability (Louis, 2004). The findings of this study concurs with the prior findings by Rangan (1998) that indicates that in the beginning the market overvalues and anticipate better returns from firms which manipulates their results, though in the long-term the profitability and performance of such firms' declines when those kind of unethical practices are identified. Thus, those firms are penalized upon identification of the unethical practices, which in turn result to the stock price performing poorly. Similarly, Bens et al. (2002) revealed that firms having enhanced value wages, and organizations that are not involved in actual earning managements through minimizing the expense of Research and Development (R&D), enjoy increase succeeding profitability.

Jo and Kim (2007) did an analysis of the linkage amongst EM, disclosure of information and the succeeding value of the firm. They found out that higher levels of EM are related to lesser information revelation plus henceforth a lesser value of information and lower subsequent presentation. Consequently, when a firm's financial statement discloses a bigger information volume, its mean that the EM trend is lower and the performance is better which is in agreement with the contention by Tu (2012), who contends that greater information transparency, which is a quality needed for improved FRQ, the likelihood to oversee earning is lower. As per Gunny (2005) investigated the negative influence that EM posed on the future firms performance by conducting a scrutiny of economic penalties of four kinds of real earning management. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. The results of the study brought to light that EM, that is, cash flows and operating performance since EM influences the future of current income, affected the subsequent Return on Assets (ROA). EM is associated with an increase in information asymmetries, which affects the cost of capital. Hence, firms that have better FRQ incurs lower cost of capital that in turn may have an influence on the worth of a company (Bhattacharya et al., 2003; Francis et al., 2008).

2.3.2 Accounting Conservatism

Accounting conservatism suggests incorporating of financial losses into the bookkeeping earnings more timely that of monetary gains as per Ball et al. (200). As per García-Lara et al. (2010) together with Ahmed and Duellmand (2011) revealed accounting conservatism is positively related to the future profitability as a result of enhance investment efficiency. Better performing projects which increases future performance are more profitable and accounting conservatism is being used an incentive to manager so as to promote such

projects. In the meantime, Ahmed and Duellmand (2011) found out that traditional firms have restored forthcoming cost-effectiveness as a result of them investing in projects which are more effective.

Bushman and Smith (2001) similarly found out that firms having higher accounting conservatisms tend to promote investment decisions that are profitable and this consequently lead to the corporate performance increasing. In the same way Rajgopal and Venkatachalam (2011), applying the Dechow together with the Dichev's (2002) model so as to compute the value of a firm, discovered that the changes in accounting conservatism over the last decades is positively related to increasing idiosyncratic return volatility. Their findings agreed with those of Francis et al. (2005), applied accounting conservatism to represent FRQ and found that it is related with expected returns.

2.3.3 Accruals Quality

The quality of accrual is established by matching the past, present together with the future cash flow procedures with accruals as per Garrett et al. (2012). When the information presented to the market and investors is authentic and do not contain any error or bias whether deliberately or otherwise (Lu et al., 2012), then at that time the accrual quality is considered to have been attained and this therefore enlarge the quality and scope of the information reported and make sure that all stakeholders are informed fully as per Hope et al.(2012). Similarly, likewise with the different FRQ events, organizations are relied upon to report increasingly credible information, liberated from errors and bias, appreciate improved corporate presentation, enabling the marketplace to distinguish these firms and evaluate their moral doings. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing

amongst the investors, management, regulators amongst other stakeholder. Additionally, an area that has been deeply been investigated in the past is the effect of accrual on external financing. Subsequently, a few investigators have deliberated that accrual worth is related to a reduction in data asymmetries that impacts the cost of capital. Accordingly, organizations with better accrual quality have lower cost of assets, which additionally may influence the value of a firm (Bhattacharya et al., 2003; Francis et al. 2008).

2.3.4 Firm Size

Firm size is the scale of a business entity's operations (Ehikioya, 2009). There are mainly three company size processes which are; total assets, market value together with sale of equity. The named measures are the commonly used firm size proxies in empirical corporate money study (Guest, 2008). Some characteristics of a firm, for instance, leverage and firm size are related with firm value (Dogan, 2013). Amongst other attributes of a firm, Firm size is the one that is constantly perceived as related to firm value. Large firms are normally considered to have the capability of exploiting both the economies of scale and scope, ability to diversify and more so being greatly formalized in aspect of procedures. Because big firms have a larger capital resource compared to small firms, they can always grasp any profitable opportunity that may arise (Ehikioya, 2009).

From another point of view, bigger firms due to their bigger firm size incline to have organizational rigidity and therefore there are many bureaucratic hindrances that unnecessary, which may lead to loss of profitable opportunities that required more urgent attention and this can make large firm to be less profitable compared to small ones with simple decision making and this can adversely affect the large firms performance negatively (Goddard et al., 2005; Banchuenvijit, 2012). According to these arguments, firm size is anticipated to be a

significant predictor for firm value. However, the connection amongst firm size and performance has varying evidence. For instance, Amran and Ahmad (2009), Coleman and Biekpe (2006), and Hossain et al (2001), established an inverse association amongst firm size and performance. On the contrary, Haniffa and Hudaib (2006), Ehikioya (2009) and Guest (2008), revealed an optimistic association amongst the firm size together with organization performance. Belkhir (2009) and Ehikioya (2009) measure company size by implementing natural logarithm of total assets.

2.4 Empirical Review

FRQ is an area that has been studied globally and locally as well, some researcher have noted some of it advantages for example its contribution in reduction of information risk, its positive effects from a financial perceptive and improvement of liquidity as per Lambert et al.(2007). More so the data contained in the fiscal reports is quite important more so when it comes to debt contracting (Costello & Wittenberg-Moerman, 2011).

Ferrero (2014) carried out global literature on the nexus between firm value and FRQ. Quality reporting was operationalized as earnings quality, conservatism and accruals quality while firm value was indicated by the market to book ratio. The study adopted panel study design and a sample size of 1960 non- momentary listed companies in 25 countries in 2002 to 2008 were considered. Regression analysis through Generalised methods Moments (GMM) showed a positive relationship, which was significant between FRQ and firm value.

An Asian comparative analysis on the case for and against quality financial reporting and firm value was conducted by Morris, Susilowati and Gray (2012). Simple random sampling was used to draw 262 companies, which were listed, in eight Asian countries. Amongst those

selected some countries had adopted quality financial reporting while the rest had not. Secondary data was collected through use of a customised 441 items checklist for quality financial reporting. The study was carried out in the periods 2002 to 2007. Results of the study revealed that quality financial reporting improved the value, which did not only differ with time, but also varied across the countries under investigation. Moreover, disclosure levels adopted by institutions led to improvements in the corporate information asymmetry.

Moreover, Shima and Yang (2012) studied determinants of firm value through Choi's & Meek's (2008) accounting system development model application. The model broadly classified the determinants as major sources of finance which were equity and debt financing, legal systems adopted by a country, taxation policy, political and economic ties, inflation levels, economic development, education levels and culture. Secondary data was collected from 47 countries, which had quality financial reporting for periods 2000 to 2007. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. The findings of the research showed a negative and not noteworthy association amongst equity and FRQ while debt, legal and growth had positive and not significant relationship with quality financial reporting. Further, common wealth based members were influenced positively by quality financial reporting, while taxation had negative and significant influence to quality financial reporting.

On the regional front, an examination on the determinants of firm value in Africa was carried out by Owolabi and Iyoha (2012). In the study, cross sectional data was gathered using a closed ended questionnaire which drew respondents from users and preparers of annual audited financial statements. Purposive sampling was used to select 58 preparers of annual

financial statements and 38 users of them. Analysis of data was done using descriptive statistics and on average respondents there were remarkable success since the adoption of quality financial reporting due to monitoring and enforcement of professional standards and quality of prevailing accounting education. Further, it was revealed that there were some benefits on firm value associated with adoption of quality financial reporting, for instance, improved management, better and quality reporting and budgeting policies, better risk management policy and lower operational costs.

Locally, Naghshbandi and Ombati (2014) investigated issues and challenges affecting FRQ in Kenya. They argued that their adoption has been inhibited by skill and competence levels in developing economies, perception from developing countries that are European or politically mitigated, different levels of compliance and regulatory policies, cultural and structural differences and ownership structures of various business enterprises. Although, these challenges may lead to slowness in adoption of IFRS the anticipated benefits in regard to voluntary and mandatory disclosure triggers higher acceptance levels. This study presents a conceptual gap because it endeavoured to seek the challenges facing FR but not addressing the effect of quality FR on firm value.

King'wara (2015) investigated the effect of FRQ on firm value. In the study a sample of listed companies from 1994 to 2003 was drawn in exclusion of both banking and insurance companies. A comparative analysis was carried out before and after implementation of IFRS and the findings showed that FRQ had a significant effect on value of the firm. The financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. However, companies which were listed in the banking

and insurance sector were excluded. These studies present a contextual gap because not all firms named at the NSE were used as the populace in the research and thus the findings can vary if the excluded sectors are included.

2.5 Conceptual Framework

Rocco and Plakhotnik (2009) stipulate that a conceptual framework lays the foundation for research objectives and questions by grounding a study in the right knowledge constructs. The independent variables in this study were measures of FRQ, which include; earnings management, accounting conservatism, and accruals quality. The firm value will be the dependent variable.

Rangan (1998) opined that EM is applied in misrepresenting the actual firm's performance and analysts acts as the outside monitors to the management. Increasing firm value could be one of the incentives for managers to undertake these unethical practises, that is only applicable in the short term as in the extended period the marker corrects these manipulative firms plus they are subject to lower corporate presentation as per Rangan (1998).

García-Lara et al. (2010) and Ahmed and Duellmand (2011) revealed that accounting conservatism is positively related to the future profitability as a result of enhanced investment efficiency. Better performing projects which increases future performance are more profitable and accounting conservatism is being used an incentive to manager so as to promote such projects. In the meantime, Ahmed and Duellmand (2011) found out that traditional firms have better forthcoming productivity as a result of them investing in projects which are more efficient.

Independent Variables   **Dependent Variable**

Financial Reporting Quality Measures

```
┌─────────────────────────┐
│ Earnings Management      │
│   • Net    income/cash   │
│     flows                │
└─────────────────────────┘


┌─────────────────────────┐
│ Accounting Conservatism  │                          ┌──────────────────────┐
│   • (Net                 │                          │                      │
│     Income_t/Market      │                          │ Firm Value           │
│     Value of Equity_t-1) │                          │   • Tobin's Q Ratio  │
└─────────────────────────┘                          │                      │
                                                      └──────────────────────┘

┌─────────────────────────┐
│ Accruals Quality         │
│   • Working    Capital   │
│     Accruals             │
│                          │
└─────────────────────────┘
```

Control Variable

```
┌─────────────────────────┐
│ Firm Size                │
│   • Average      Book    │
│     Value                │
└─────────────────────────┘
```
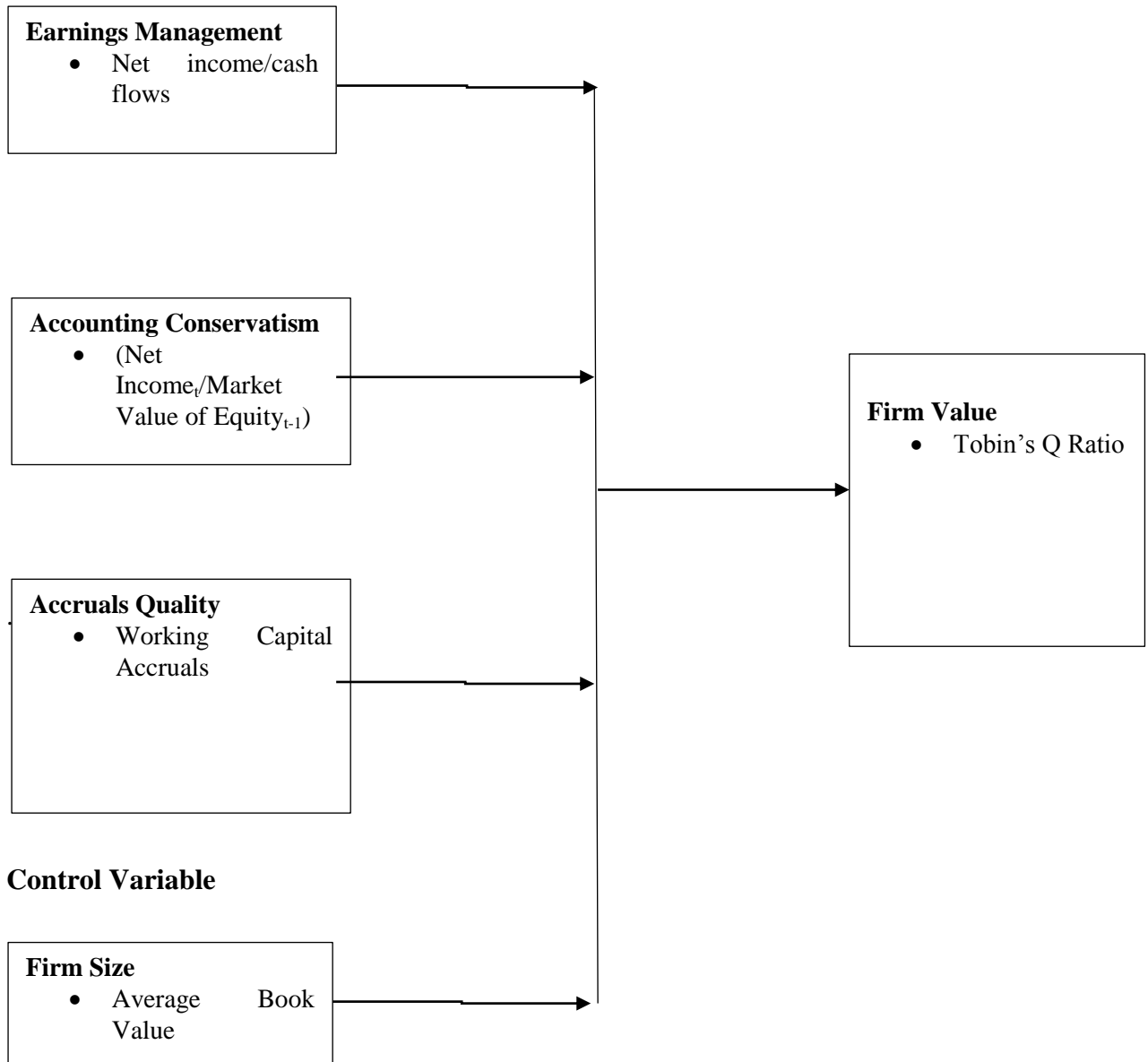
Figure 2.1: Conceptual Framework

Hope et al. (2012) stated that accrual quality dictates that companies are expected to report increasingly credible information, liberated from errors and bias, appreciate improved business presentation, enabling the marketplace to distinguish these firms and evaluate their moral doings. Accrual quality also impacts on external financing. Thus, that accrual superiority is related with a reduction in info asymmetries that influences the expenses of

capital as per Francis et al. (2008) and Bhattacharya et al. (2003). Accordingly, organizations with advanced accrual quality have lower expenses of capital, which additionally may influence the value of a company.

2.6 Summary of Literature Review and Research Gaps

Generally, from almost all surveys reviewed in the literature, it is clear that FRQ is a key aspect in optimizing the profits of a firm. In summary, all through the literature a few researchers have concluded that the FRQ is related with reduction in information asymmetries that influence firm value.

In terms of gaps, several gaps were unearthed, which warranted this study. There was a conceptual gap in the studies conducted by Morris, Susilowati, and Gray (2012) and Shima and Yang (2012) because they did not include quantitative measures of QFR.

There is also a conceptual gap in the study conducted by Shima and Yang (2012) because it utilized financial growth as a ration of company value as opposed to Tobin's Q ratio to be utilized in the current study. Additionally, the study conducted by Ferrero (2014) included market value as a measure of firm value. Although the financial information that the market participant considers organizational issues as an important resource reduces information asymmetry existing amongst the investors, management, regulators amongst other stakeholder. There is also a conceptual gap in the study conducted by Naghshbandi and Ombati (2014) because it endeavoured to seek the challenges facing FR but not addressing the effect of quality FR on firm value. Finally, the study conducted by King'wara (2015) presents a contextual gap because not all firms named at the NSE were used as the populace in the study and thus the findings can vary if the excluded sectors are included.

There is a contextual gap in the studies conducted by Ferrero (2014), Morris, Susilowati and Gray (2012), Shima and Yang (2012), and Owolabi and Iyoha (2012), because they were not conducted in the Kenyan context. There is a methodological gap in the study conducted by Owolabi and Iyoha (2012) because it employed primary data, which was cross-sectional, the current study will utilize secondary panel data.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section elaborates the research methodology that will be used in the study. This chapter contains several sections, which includes research design explaining the design applied, data collection to explain procedure for gathering data, the population, and the data analysis methods to be applied.

3.2 Research Design

The study applied an explanatory, ex post facto and causal research design. It was panel data with the scope being a census. It is a field setting with the unit of analysis being the country. It was chosen because it allowed describing the population through a standardized data is obtained at a given time. This method was utilized because it addresses the aim of research in examining the association amongst variables of the research. The design took into account aspects like sample size relative to target populace, the variables used in the research and data gathering methods (Polit & Beck, 2013).

3.3 Target Population

As per Zikmund et al. (2010), population is all the people or individuals in a study. The population tends to have similar characteristics. Grabich (2012) posits that a set of people, events or elements that are studied with an aim of providing answers to the research questions is referred to as a study population. All the 67 listed firms at the NSE, whose list is provided in Appendix I, formed the population in this study. The study is a census because the entire population will be examined.

3.4 Data Collection

The process of gathering data is critical as it ultimately impacts on the authenticity of the results. In this regard, the researcher utilized secondary data. In particular, the investigator relied on data provided by CMA, NSE, and the annual reports of the individual listed companies, which highlighted the annual reports that contain the data required for the study. The study gathered annual data for a period of five years, from 2015 to 2019. Data on firm market value, liabilities total assets, cash-flows from operations, market value of equity, accounts receivable together with inventory, accounts payable, tax payable, and other assets, was collected for the period.

3.5 Data Analysis

Information gathered was organized, tabulated and simplified so as to make it easier to analyze, interpret and understand. Because panel data was employed for the study, STATA version 13 was the statistical analysis program utilized for the study because it is able to perform panel multiple linear regression. Correlation analysis was used to show whether and how strongly changes in FRQ are related to firm value while regression analysis was employed to determine the association amongst FRQ and firm value. The quantitative reports obtained from the investigation were presented using tabulations.

The study adopted a confidence interval of 95%. The results were set to be mathematically significant at the 0.05 level, which indicates that the significance number should be less than 0.05. A statistical inference technique was used in making conclusions relating to the accuracy of the model in predicting the firm value. The model significance was tested using the significance values at 95% confidence. The meaning of the association amongst every predictor variable to the response variable will be determined by the significance values.

3.5.1 The Model of Analysis

The objectives of the research were attained through use of a multiple linear regression analysis, which tested whether predictor variables have any effect on firm value. The statistical tests were conducted at 95% significance level meaning that the study allowed for an error of up to 5%. The model is illustrated as shown;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

Y_{t-1} = Lagged Value of Firm Value of Listed Firms denoted by the Tobin's Q Ratio

α = Constant

$\beta_1 - \beta_4$ = Beta coefficients

X_1 = Earnings Management Measured by Discretionary Accruals

X_2 = Conservative Accounting Measured by Net Income Scaled by the Lagged Market Value of Equity

X_3 = Accruals Quality Measured by change in Working Capital Accruals from Year to Year

X_4 = Firm Size

ϵ = error term

3.5.2 Diagnostic Tests

For the validity of regression analysis, a number of assumptions are done in conducting linear regression models. These are; no multi-collinearity, observations are sampled randomly, conditional mean ought to be zero, linear regression model is "linear in parameters", spherical mistakes: there exist homoscedasticity but no auto-correlation, and the elective assumption: error terms ought to be distributed normally. According to the Gauss-Markov

Theorem, the first 5 assumptions of the linear regression model, the regression OLS estimators, are the Best Linear Unbiased Estimators (Grewal *et al*., 2004).

The aforementioned assumptions are of great importance since when any of them is violated would mean the regression estimates will be incorrect and unreliable. Particularly, a violation would bring about incorrect signs of the regression estimates or the difference of the estimates would not be reliable, resulting to confidence intervals that are either too narrow or very wide (Gall et al., 2006).

The diagnostic tests are conducted so as to guarantee that the assumptions are met to attain the Best Linear Unbiased Estimators. Regression diagnostics assess the model assumptions and probe if there are interpretations with a great, unwarranted effect on the examination or not. Diagnostic examinations on normality, linearity, multicollinearity, and autocorrelation were done on the collected data to establish its suitability in the formulation of linear regression model. Normality was tested by the Shapiro-Francia test, which is suitable for testing distributions of Gaussian nature which have specific mean and variance. Linearity indicates a direct proportionate association amongst dependent and independent variable such that variation in independent variable is followed by a correspondent variation in dependent variable (Gall et al., 2006). Linearity was tested by determining homoscedasticy, which was determined by the Breusch-Pagan Cook-Weisberg Test for Homoscedacity.

Tests for multicollinearity of data was carried out using variance inflation factors (VIF) to determine whether the predictor variables considered in the research are significantly correlated with each other. According to Grewal *et al*. (2004) the main sources of multicollinearity are small sample sizes, low explained variable and low measure reliability

in the independent variables. Auto-correlation test was carried out through the Durbin-Watson Statistic.

Additionally, to avoid spurious regression results unit root test was carried out on the panel data. The aim of conducting unit root test is to check whether the macroeconomic variables under study are integrated of order on (1, 1) or not before estimation procedure can be proceeded into. Unit root test was conducted through the Fisher-type unit root test. The study also utilized the Hausman specification test to ascertain if the variables used in the study posses fixed influence overtime or if they have varying and random influence over time. The null hypothesis is that that the variables have a random effect and the alternate hypothesis is that the variables have a fixed effect. If the significance value is less than α (0.05), the null hypothesis will consequently rejected and if the significance value is greater than α (0.05), the null hypothesis will not be rejected.

Table 3.1: Operationalization of the Study Variables

Variable	Measurement
Tobin's Q Ratio	Calculated as; (Total Market Value + Liabilities)/(Total Book Value + Liabilities) (Tobin, 1969)
Earnings Management	Considered in terms of discretionary accruals which will be measured by log (net income/cash flows from operations (Oktorina & Hutagaol, 2008)..
Conservative Accounting	(NI_t/MV_{t-1}), is the net income scaled by the lagged market value of equity (Khan & Watts, 2009).
Accruals Quality	$(\Delta WC = \Delta A/Cs\_Rec + \Delta Inv - \Delta A/Cs\_Pay - \Delta Tax\_Pay - \Delta other\_Current\_Assets)$, is the changes in working capital accruals from year to year (Ball & Shivakumar, 2006).
Firm Size	Natural logarithm of average book value of entire assets of a bank during the period (Munyambonera, 2011).

CHAPTER FOUR: DATA ANALYSIS, RESULTS, AND FINDINGS

4.1 Introduction

This chapter entails of the data analysis, interpretation and the discussions of the outcomes. The section hence is fragmented to four sub sections, which entail diagnostic tests, inferential statistics, interpretation, and the discussion of findings. Precisely this chapter summarizes the platform for data presentations, analysis, interpretations, and discussions.

4.2 Diagnostic Tests

Diagnostic tests that are a precursor to conducting linear regression were conducted. Diagnostic tests done in this study included; normality tests, homoscedacity tests, multicollinearity tests and autocorrelation tests. Normality test was carried out using the the Shapiro-Francia test and the homoscedacity test was conducted through the Breusch-Pagan Cook-Weisberg Test for Homoscedasticity. Test on Multicolinearity of data was carried out using Variance Inflation Factors (VIF) while the autocorrelation test was done through the Durbin-Watson statistic. Unit root test was conducted through the Fisher-type unit root test. Additionally, the Hausman test was conducted to determine whether fixed or variable effects panel regression should be conducted.

4.2.1 Normality Test

The normality tests for all the variables employed in the study are highlighted in Table 4.1.

Table 4.1: Shapiro-Francia Test for Normality

Variable	Obs	W'	V'	z	Prob>z
TobinQR	285	0.15696	186.122	11.058	0.00001
EarningsMa~t	285	0.05631	208.344	11.296	0.00001
Conservati~g	285	0.14347	189.1	11.091	0.00001
AccrualsQu~y	285	0.72063	61.678	8.721	0.00001
Firmsize	285	0.97604	5.289	3.524	0.00021

In the test, the null hypothesis holds that the data has a normal distribution. The level of significance adopted in the study is 5%. Since the significance values in tests for all the variables are less than α (0.05), the null hypothesis is rejected. Hence, the data series of the variables are not normally distributed.

4.2.2 Homoscedacity Test

The homoscedacity tests for all the predictor variables employed in the study are enlisted in Table 4.2.

Table 4.2: Breusch-Pagan/Cook-Weisberg Test for Homoscedacity

Ho: Constant variance
Variables: fitted values of TobinQR
chi2(1)   =   740.27
Prob > chi2 =   0.0000

The null hypothesis is that there is homoscedacity. The level of significance adopted in the study is 5%. Since the significance value is less than α (0.05), the null hypothesis is rejected. Hence, the data series of all the predictor variables are heteroscedastic.

4.2.3 Test for Multicollinearity

Results on Test for Multicolinearity of data carried out using Variance Inflation Factors (VIF) are displayed in Table 4.3.

Table 4.3: VIF Multicollinearity Statistics

Variable	VIF	1/VIF
Firm size	1.01	0.989567
Conservati~g	1.01	0.9906
EarningsMa~t	1.01	0.993153
AccrualsQu~y	1.01	0.993867
Mean VIF	1.01	

The common rule in statistics is that the VIF values should be less than 10 and greater than 1. The findings indicate that the individual and mean VIF values fall below 10 and are greater than 1. Hence, there is no presence of multicollinearity amongst the predictor variables utilized in the study.

4.2.4 Tests for Autocorrelation

Test for Autocorrelation of data was carried out using the Durbin Watson statistic. The findings displayed that Durbin-Watson d-statistic (5, 285) = 1.652405. The Durbin-Watson statistic ranges from point 0 and point 4. If there exist no correlation between variables, a value of 2 is shown. If the values fall under point 0 up to a point less than 2, this is an value falls under point more than 2 up to 4. As a common rule in statistics, value falling under the range 1.5 to 2.5 is considered relatively normal whereas values that fall out of the range raise a concern (Shenoy & Sharma, 2015). Field (2009) however, opines that values above 3 and less than 1 are a sure reason for concern. Therefore, the data used in this panel is not serially auto correlated since it meets this threshold.

4.2.5 Unit Root Test

The results for the unit root test conducted for the data series firm value is displayed in Table 4.4. The null hypothesis is that firm value has a unit root and the alternate hypothesis is that the variable is stationery. Since the significance values for the P, Z, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationery.

Table 4.4: Unit Root Test for Firm Value

```
Fisher-type unit-root test for TobinQ
Based on augmented Dickey-Fuller tests
```

Ho: All panels contain unit roots		Number of panels =	58
Ha: At least one panel is stationary		Avg. number of periods =	4.91

AR parameter: Panel-specific		Asymptotics: T -> Infinity
Panel means: Included		
Time trend: Not included		
Drift term: Not included		ADF regressions: 0 lags

		Statistic	p-value
Inverse chi-squared(116)	P	634.3910	0.0000
Inverse normal	Z	-8.9678	0.0000
Inverse logit t(284)	L*	-18.8766	0.0000
Modified inv. chi-squared	Pm	34.0340	0.0000

```
P statistic requires number of panels to be finite.
Other statistics are suitable for finite or infinite number of panels.
```

The results for the unit root test conducted for the data series earnings management are displayed in Table 4.5.

Table 4.5: Unit Root Test for Earnings Management

```
Fisher-type unit-root test for EarningsManagement
Based on augmented Dickey-Fuller tests
```

Ho: All panels contain unit roots		Number of panels =	58
Ha: At least one panel is stationary		Avg. number of periods =	4.91

AR parameter: Panel-specific		Asymptotics: T -> Infinity
Panel means: Included		
Time trend: Not included		
Drift term: Not included		ADF regressions: 0 lags

		Statistic	p-value
Inverse chi-squared(116)	P	934.5963	0.0000
Inverse normal	Z	-14.9907	0.0000
Inverse logit t(289)	L*	-31.6158	0.0000
Modified inv. chi-squared	Pm	53.7435	0.0000

```
P statistic requires number of panels to be finite.
Other statistics are suitable for finite or infinite number of panels.
```

The null hypothesis is that firm value has a unit root and the alternate hypothesis is that the variable is stationery. Since the significance values for the P, Z, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationery.

The results for the unit root test conducted for the data series conservative accounting are displayed in Table 4.6.

Table 4.6: Unit Root Test for Conservative Accounting

```
Fisher-type unit-root test for ConservativeAccounting
Based on augmented Dickey-Fuller tests
_____

Ho: All panels contain unit roots          Number of panels      =     58
Ha: At least one panel is stationary        Avg. number of periods =   4.91

AR parameter: Panel-specific                Asymptotics: T -> Infinity
Panel means:  Included
Time trend:   Not included
Drift term:   Not included                  ADF regressions: 0 lags
_____

                                  Statistic      p-value
_____

 Inverse chi-squared(116)  P      523.4403       0.0000
 Inverse normal            Z       -7.7142       0.0000
 Inverse logit t(279)      L*     -15.7571       0.0000
 Modified inv. chi-squared Pm      26.7498       0.0000
_____

 P statistic requires number of panels to be finite.
 Other statistics are suitable for finite or infinite number of panels.
_____
```

The null hypothesis is that firm value has a unit root and the alternate hypothesis is that the variable is stationery. Since the significance values for the P, Z, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationery.

The results for the unit root test conducted for the data series accruals quality are displayed in Table 4.7. The null hypothesis is that firm value has a unit root and the alternate hypothesis is that the variable is stationery. Since the significance values for the P, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationery.

Table 4.7: Unit Root Test for Accruals Quality

```
Fisher-type unit-root test for AccrualsQuality
Based on augmented Dickey-Fuller tests
```

```
Ho: All panels contain unit roots          Number of panels      =     58
Ha: At least one panel is stationary        Avg. number of periods =   4.91

AR parameter: Panel-specific                Asymptotics: T -> Infinity
Panel means:  Included
Time trend:   Not included
Drift term:   Not included                  ADF regressions: 0 lags
```

		Statistic	p-value
Inverse chi-squared(116)	P	233.7769	0.0000
Inverse normal	Z	-0.1474	0.4414
Inverse logit t(279)	L*	-3.4393	0.0003
Modified inv. chi-squared	Pm	7.7324	0.0000

```
P statistic requires number of panels to be finite.
Other statistics are suitable for finite or infinite number of panels.
```

The results for the unit root test conducted for the data series firm size are displayed in Table 4.8.

Table 4.8: Unit Root Test for Firm Size

```
Fisher-type unit-root test for Firmsize
Based on augmented Dickey-Fuller tests
```

```
Ho: All panels contain unit roots          Number of panels      =     58
Ha: At least one panel is stationary        Avg. number of periods =   4.91

AR parameter: Panel-specific                Asymptotics: T -> Infinity
Panel means:  Included
Time trend:   Not included
Drift term:   Not included                  ADF regressions: 0 lags
```

		Statistic	p-value
Inverse chi-squared(116)	P	468.3731	0.0000
Inverse normal	Z	-0.8991	0.1843
Inverse logit t(279)	L*	-8.5422	0.0000
Modified inv. chi-squared	Pm	23.1344	0.0000

```
P statistic requires number of panels to be finite.
Other statistics are suitable for finite or infinite number of panels.
```

The null hypothesis is that firm value has a unit root and the alternate hypothesis is that the variable is stationery. Since the significance values for the P, L* and Pm tests are all less than the critical value (α) at the 5% confidence level, then the null hypothesis is rejected. Thus, the panel data series is stationery.

4.2.6 Test for Random and Fixed Effects

The study carried out the Hausman test to determine if the variables have fixed influence overtime or if the variables have varying and random influence over time. Before the Hausman test was conducted, the variables had to be transformed because they did not meet the conditions of normality, homoscedacity. Thus, a logarithmic function was introduced to all the variables to transform them. Since you cannot transform a negative value with a logarithmic function, negative values were considered as missing values. The finding on the Hausman test of specification is presented in Table 4.9.

Table 4.9: Hausman Test of Specification

	—— Coefficients ——			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
EarningsMa~t	-1.68e-07	1.14e-08	-1.80e-07	3.81e-08
Conservati~g	-.006461	.0073871	-.0138481	.0040667
AccrualsQu~y	-1.027508	-.7297229	-.2977855	.0574606
Firmsize	-2.893666	-.8426767	-2.05099	1.071893

```
                  b = consistent under Ho and Ha; obtained from xtreg
      B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test:  Ho:  difference in coefficients not systematic

             chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                     =      16.75
        Prob>chi2 =      0.0008
        (V_b-V_B is not positive definite)
```

The null hypothesis assumed that variables have a random effect and alternate hypothesis was that the variables have a fixed effect. If the p value is less than 0.05 then the null hypothesis will be rejected and if greater than 0.05 then the null hypothesis will not be rejected. When the Hausman chi-square test statistic is negative, the alternate hypothesis is adopted because asymptotically, the p value is equal to 1. The significance value obtained in the hausman test

conducted (0.000) is less than 0.05. Thus, the variables have a fixed effect and a fixed effect panel model was utilized.

4.3 Inferential Statistics

Inferential statistics were used in determining the direction, relationship, and strength of the association between the predictor variables and the response variable. The section entails the inferential statistics employed in the study, which included correlation and fixed effects panel multiple linear regression analysis.

4.3.1 Correlation Analysis

Correlation analysis establishes whether there exists an association among two variables. The association falls between a perfect positive and a strong negative correlation. The study used Pearson Correlation. This study employed a Confidence Interval of 95% and a two-tail test. The correlation test was done to ascertain the association between financial risk and financial performance.

Table 4.10: Correlation Analysis

	TobinQ	Earnin~t	Conser~g	Accrua~y	Firmsize
TobinQ	1.0000				
EarningsMa~t	0.0050	1.0000			
	0.9337				
Conservati~g	0.0189	0.0080	1.0000		
	0.7507	0.8927			
AccrualsQu~y	0.0511	-0.0253	0.0710	1.0000	
	0.3904	0.6707	0.2319		
Firmsize	-0.3054*	-0.0770	0.0633	-0.0138	1.0000
	0.0000	0.1948	0.2869	0.8161	

Table 4.10 displays that only firm size is significantly correlated at the 5% significance level to firm value. It has a negative significant association with firm value. The aspects of FRQ

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that include earnings management, conservative accounting, and accruals quality, do not have a significant association with firm value at the 5% significance level.

4.3.2 Multiple Linear Regression

The fixed effects panel regression model assessed the effect of FRQ and firm size on firm value. The regression analysis was established at the 5% significance level. The significance critical value exhibited from the Analysis of Variance and Model Coefficients were compared with the values obtained in the analysis. The findings are displayed in Table 4.11.

Table 4.11: Panel Multiple Linear Regression

Fixed-effects (within) regression	Number of obs	=	285
Group variable: Number	Number of groups	=	58
R-sq: within = 0.0738	Obs per group: min	=	3
between = 0.1149	avg	=	4.9
overall = 0.0879	max	=	5
	$F(4,223)$	=	4.44
corr(u_i, Xb) = -0.7492	Prob > F	=	0.0018

TobinQ	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
EarningsManagement	-1.68E-07	8.63e-07	-0.19	0.846	-1.87e-06	1.53E-06
ConservativeAccounting	-0.006461	.0575142	-0.11	0.911	-.119802	0.1068799
AccrualsQuality	-1.03E+00	.3037669	-3.38	0.001	-1.626129	-0.4288874
Firmsize	-2.893666	1.099062	-2.63	0.009	-5.059542	-0.7277904
_cons	49.93712	18.40211	2.71	0.007	13.67285	86.2014

sigma_u	6.2260888					
sigma_e	3.327789					
Rho	0.77779808	(fraction of variance due to u_i)				
F test that all u_i=0:	$F(57, 223)$	=	7.50	Prob > F = 0.0000		

The overall R^2 indicates deviations in response variable as a consequence of differences in predictor variables. The overall R^2 value is 0.0879, a discovery that 8.79% of the deviations

in firm value are caused by FRQ and firm size. Other factors not incorporated in the model justify for 91.21% of the variations in financial performance.

The null hypothesis is that FRQ and firm size do not significantly influence firm value. The significance value obtained in the study (Prob>F=0.0018) is less than the critical value of 0.05. Consequently, the null hypothesis is rejected. Thus, FRQ and firm size do influence firm value. Thus, they can be utilized to significantly predict firm value.

The null hypothesis was that there was no significant relationship between each aspect of FRQ employed in the study and firm size with firm value. The study findings exhibited that only accruals quality and firm size had significant relationships with firm value. This is because their significance values are less than the critical significance value (α) of 0.05 and thus the null hypothesis is rejected. They both have a significant negative influence on firm value. Earnings management and conservative accounting however do not have significant effects on firm value. This is because their significance values are greater than the critical significance value (α) of 0.05. The following model was thus developed;

$Y = 49.93712 - 1.027508X_1 - 2.893666X_2$

Where;

Y = Firm Value

X_1 = Accruals Quality

X_2 = Firm Size

This implies that when there is no accruals quality and firm size is equal to zero, the firm value is 49.93712**.** Subsequently, when accruals quality increases by one unit, there is a decrease in firm value by 1.027508 units. In addition, when firm size increases by one unit, there is a decrease in firm value by 2.893666 units.

4.4 Interpretation and Discussion of Findings

The study endeavoured to assess the influence of financial reporting quality on value of firms listed at the NSE, with firm size acting as the control variable. The variables had to be transformed because they did not meet the conditions of normality and homoscedacity. A logarithmic function was thus introduced to all the study variables. The study findings established that only firm size is significantly correlated at the 5% significance level to firm value. It has a negative significant association with firm value. Earnings management, conservative accounting, and accruals quality do not have a significant association with firm value at the 5% significance level. Additionally, the study findings revealed that financial reporting quality and firm size do influence firm value. Thus, they can be utilized to significantly predict firm size. The study findings also exhibited that only accruals quality and firm size had significant relationships with firm value, they both have a significant negative influence on firm value. Earnings management and conservative accounting however do not have significant effects on firm value of quoted firms.

The finding that FRQ has a significant impact on firm value is consistent with the signalling theory proposed by Ross (1977), which stipulates that business ventures communicate to potential investors based on value and commitment. FR entails firms communicating to potential investors based on value and commitment signal, which reflects the value of the firm. Thus, if it turns out that the company had poor FRQ and actually had a scandal, a

product recall or accounting errors, earning would be adversely affected, and the value of the firm could decline drastically.

The finding that FRQ has a significant impact on firm value is consistent with study findings by Ferrero (2014) who did an investigation on the effect of quality FR on firm value and established relationship, which was significant between FRQ and corporate value. The study finding is also in tandem with King'wara's (2015) study finding in a research investigating the effect of FRQ on value. The study revealed that FRQ had a significant influence on value. The study finding is also in agreement with findings by Morris, Susilowati and Gray (2012) and Owolabi and Iyoha (2012) that quality financial reporting improved the firm value . Moreover, the study finding contradicts the finding by Shima and Yang (2012) which established a non-significant relationship between corporate value and FRQ

The finding that there was no significant association nor relationship between earnings management and corporate value contradicts study finding by Louis (2004) that established a negative link between earnings management and value. It also contradicts the findings by Rangan (1998) that indicated that in the beginning the market overvalues and anticipate better returns from firms which manipulates their results, though in the long-run the profitability and performance of such firms' declines when those kind of unethical practices are identified as those firms are penalized upon identification of the unethical practices which in turn result to the stock price performing poorly. The study finding is also not in tandem with the finding by Bens et al. (2002) which revealed that firms having better quality earnings, and firms that are not involved in real earning managements, enjoy increase succeeding profitability.

The study finding is also not congruent to the finding of a study conducted by Jo and Kim (2007) on analysis of the linkage amongst EM, disclosure of information and the succeeding value of the firm which established that higher levels of EM are related to lesser information disclosure and henceforth a lower quality of the information and lower subsequent performance. Consequently, when a firm's financial statement discloses a bigger information volume, its mean that the EM trend is lower and the performance is better. The study finding is also not in agreement with the contention by Tu (2012), who contends that greater information transparency, which is a quality needed for improved FRQ, the likelihood to manage earning is lower.

The study finding is also not parallel to the finding of the study conducted by Gunny (2005) which investigated the negative effect that EM posed on the future firms performance by conducting a scrutiny of economic penalties of four kinds of real earning management and established that the subsequent ROA was affected by EM, that is, cash flows and operating performance since EM influences the future of current income. Finally, the study finding is not in tandem with assertions by Bhattacharya et al., (2003), and Francis et al. (2005, 2008) that EM is associated with an increase in information asymmetries, which affects the cost of capital. Hence, firms that have better FRQ incur lower cost of capital, that in turn may have an effect on the value of a firm.

The finding that there was no significant association nor relationship between conservative accounting and corporate value contradicts study the study finding by Bushman and Smith (2001) which established that firms having higher accounting conservatisms tend to promote investment decisions that are profitable and this consequently lead to the corporate performance increasing. It is also not in tandem with the finding by Rajgopal and

Venkatachalam (2011) that the changes in accounting conservatism over the last decades is positively related to increasing idiosyncratic return volatility. The finding is also not congruent to the finding by Francis et al. (2005) that accounting conservatism is related with expected returns.

The finding that accrual quality has a negative significant relationship with firm value is in tandem with the assertions by Bhattacharya et al. (2003) and Francis et al. (2005, 2008) that organizations with better accrual quality have lower cost of capital, that additionally may influence the value of a firm. The study finding that firm size has both a significant negative association and relationship with firm value is in tandem with the assertions by (Goddard et al. (2005) and Banchuenvijit (2012) that bigger firms due to their bigger firm size incline to have organizational rigidity and therefore there are many bureaucratic hindrances that unnecessary, which may lead to loss of profitable opportunities that required more urgent attention and this can make large firm to be less profitable compared to small ones with simple decision making and this can adversely affect the large firms performance negatively

However, the finding contradicts the assertion by Ehikioya (2009) that large firms are normally considered to have the capability of exploiting both the economies of scale and scope, ability to diversify and more so being greatly formalized in aspect of procedures and that big firms have a larger capital resource compared to small firms, they can always grasp any profitable opportunity that may arise.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This section shows the study findings summary, offered conclusions, and recommendations on the effect of financial reporting quality on the value of firms listed at the Nairobi stock exchange. Additionally, the research limitations and further research suggestions are also outlined.

5.2 Summary of Findings

The study endeavoured to assess the effect of financial reporting quality on the value of firms listed at the Nairobi Securities Exchange. The study also sought to establish the effect of firm size on the value of firms listed at the Nairobi Securities Exchange. The study employed the use of correlation and regression analyses. The correlation analysis employed in the study established that only firm size is significantly correlated at the 5% significance level to firm value. It has a negative significant association with firm value.

The fixed effects of panel multiple linear regression revealed that FRQ and firm size do influence firm value and they can be utilized to significantly predict it. The analysis also revealed that only accruals quality and firm size had significant relationships with firm value, they both have a significant negative influence on firm value of quoted firms. Earnings management and conservative accounting however do not have significant effects on the firm value of quoted firms.

5.3 Conclusion

In this section, the conclusion of the study is given; the conclusion is affiliated to the study objective, which was to establish the effect of financial reporting quality on the value of firms listed at the Nairobi Securities Exchange. The study concluded that FRQ, with the control effect of firm size, has a significant effect on the firm value of listed firms and thus, it can be utilized to significantly predict the firm value. The study also concluded that only the FRQ aspect of accrual quality has a significant effect on the value of listed firms. It has a significant negative effect on the value of listed firms.

The study conclusion that capital that FRQ has a significant effect on the firm size is parallel to the conclusions by Bushman and Smith (2001), Bens et al. (2002) Gunny (2005), García-Lara et al. (2010) and Ahmed and Duellmand (2011) that organizations having quality financial information have a relatively higher subsequent value because the market positively evaluates those organizations that have a higher commitment of issuing quality financial information to the shareholders as well as other stakeholders, targeting reduction or avoidance of information asymmetries amongst the participants in the market.

The conclusion is also in tandem to the conclusion by Mutai (2014) that the International Financial Reporting Standards (IFRS) adoption of firms listed in Nairobi Securities Exchange (NSE) has assisted at reducing barriers to trading across borders of securities through making sure that the company accounts are easily reliable, transparent, and comparable.

5.4 Recommendations

The study findings will aid in further researches to be conducted on the field of financial reporting quality and its impact on corporate value. Later scholars keen in research on

financial reporting quality and its impact on corporate value will use the study findings as referral. Policy recommendations are made to the CMA and NSE, and by extension, the National Treasury, to formulate and enforce rules and regulations on financial reporting quality since it has been established that it influences the value of quoted firms. The recommendation will guide government regulators in making policies and practices to boost the capital markets and in extension, the financial system, to mitigate collapse of listed companies and ensure lack of stability in value of financial securities issued in the capital markets.

The finding that accrual quality is the only FRQ aspect that has a significant effect on the value of firms generates conclusions to firm management and consultants to implement accrual quality in order to boost firm value. Other stakeholders like investment banks, equity analysts, and individual investors should search for firms with accrual quality to invest or recommend to invest. This is because organizations with better accrual quality have lower cost of capital that additionally may influence the value of a firm (Bhattacharya et al., 2003; Francis et al., 2005, 2008).

5.5 Recommendations for Further Study

Exploring the influence of financial reporting quality on corporate value is of great importance the policy makers in the National Treasury, CMA, and NSE, practitioners in the capital markets, and consultants. However, the current study was carried out in the capital markets context, the same study could be carried out across other firms like Small and Medium-Sized Enterprises (SMEs) establish if the study findings would hold. The study was only carried out in the Kenyan context, further studies can be conducted out of Kenyan

context, they can be conducted in the African or global jurisdictions to establish whether the study findings would hold.

The study only considered earnings management, accounting conservatism, and accrual quality as the aspects of FRQ that influence corporate value. A study can be conducted to ascertain it there are other aspects of FRQ and also if there are other factors that influence corporate value. Additionally, further studies can be conducted to ascertain if there are factors that moderate on the relationship between FRQ and corporate value. This study used secondary data, a subsequent research should be undertaken applying primary data to ascertain if the study findings would hold and either complement or criticize the finding of this study. Multiple linear regression and correlation analysis were applied in the study; Other analysis technique for example cluster analysis, discriminant analysis, granger causality and factors should be incorporated in the subsequent research.

5.6 Limitations of the Study

The study was conducted only in the capital markets context, due to time and cost and also availability of data constraints, which does not give clear indication of findings if firms in other sectors like Over the Counter (OTC) markets and SMEs or all the firms in the economy were also incorporated in the study. More uncertainties would occur if similar studies were replicated in firms outside the realm of capital markets. Although the research engaged secondary sources of data, there were some major challenges like some of the data being not readily available; especially data on the accruals quality and it took great lengths and costs to obtain it. The data was not utilized in their raw form and further calculations and manipulations of the data were required. Impending delays were experienced due to data processing and further editing before the compilation by the researcher.

REFERENCES

Abarbanell, J., & Bushee, B. (1997). Fundamental analysis, future earnings, and stock prices. *Journal of Accounting Research, 35: 1–24.*

Ahmed, A. S. & Duellman, S. (2011). Evidence on the role of accounting conservatism in monitoring managers' investment decisions. *Accounting and Finance, 51 (3): 6090-633.*

Alchian, A. A., & Demsetz, H.,(1972). Production, information costs, and economic organization. *The American Economic Review, 62 (5): 777–795.*

Ball, R. & Shivakumar, L. (2006). The role of accruals in asymmetrically timely gain and losses recognition. *Journal of Accounting Research, 44 (2): 207-242.*

Ball, R., Kothari, S. & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics, 29 (1): 1-51.*

Bens, D., Nagar, V. & Wong, M. F. H. (2002). Real investment implications of employee stock option exercises. *Journal of Accounting Research, 40 (2): 359-406.*

Bhattacharya, U., & Dittmar, A. (2001). *Costless versus costly signaling: Theory and evidence from share purchases.* Working paper, Indiana University,Bloomington.

Bhattacharya, U., Daouk H. & Welker, M. (2003). The world price of earnings opacity. Accounting Review, 78, 641-678.

Boyd, D. E., Chandy, R. K., & Cunha Jr., M. (2010). When do chief marketing officers affect firm value? A customer power explanation. *Journal of Marketing Research, 47(6), 1162–1176.*

Busenitz, L. W., Fiet, J. O., & Moesel, D. D. (2005). Signalling in venture capitalist-new venture team funding decisions: Does it indicate long-term venture outcomes? *Entrepreneurship Theory and Practice, 29: 1-12.*

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics, 32: 237-333.*

Chen, F., Hope, O. K., Li, Q. & Wang, X. (2011). Financial reporting quality and investment efficiency of private firms in emerging markets. *The Accounting Review, 86 (4): 1255-1288.*

Cheng, Y., Liu, Y. &Tzeng, C. (2011).Capital structure and firm value in china: A panel threshold regression analysis. *African Journal of Business Management, 4(12), 2500-2507.*

Choi, T. H., & Pae, J. (2011). Business ethics and financial reporting quality: Evidence from Korea. *Journal of Business Ethics, 103 (3): 403-427.*

Chowdhury, A. & Chowdhury, S. P. (2010). Impact of capital structure on firmvalue: Evidence from Bangladesh. *Business and Economic Horizons, 3(3), 111–122.*

Claessens, S., & Fan, J. (2002). Corporate governance in Asia: *A survey. International Review of Finance, 3, 71-103.*

CMA, (2016). CMA annual report. http://www.cma.or.ke/index.php?option=com_content.

Costello, A. M. & Wittenberg-Moerman, R. (2011). The impact of financial reporting quality on debt contracting: Evidence from internal control weakness reports. *Journal of Accounting Research, 49, 97-136.*

Dang, U., (2011). *The CAMEL rating system in banking supervision: A case study.* Dissertation, Arcada University of Applied Sciences, International Business.

Dechow, P. M. & Dichev, I. (2002). The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review, 77 (supplement): 35-39.*

Downs, T. W. (1991). An alternative approach to fundamental analysis: The asset side of the equation. *Journal of Portfolio Management, 17 (2): 6-17.*

Duarte, A. M., Irina, S. A., & Azevedo, G. M. C., (2015). IFRS adoption and accounting quality: A review. *Journal of Business Economic Policy,2(2), 104-123.*

Elijido-Ten, E. (2009). Applying stakeholder theory to analyze corporate environmental performance: Evidence from Australian listed companies. *Asian Review of Accounting. 15. 164-184.*

Ferrero, J. M., (2014). Consequences of financial reporting quality on corporate performance: Evidence at the international level. *Estudios de Economía, 41 (1): 49-88.*

Francis, J, Nanda, D. & Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. *Journal of Accounting Research, 46 (1): 53-99.*

Francis, J., LaFond, R., Olsson, P. & Schipper, K. (2005). The market pricing of accrual quality. *Journal of Accounting and Economics, 39 (2): 295-327.*

Freeman, R. E. (1984). *Strategic management: A stakeholder approach.* Pitman, Boston.

Gall, M.D., Gall, J. P., & Borge, W. R. (2006). *Educational research: An introduction.* (8th Ed.), New York; Pearson.

García-Lara, J. M., Garcia-Osma, B., & Penalva, F. (2010). *Conditional conservatism and firm investment efficiency.* Working Paper (Universidad Carlos III de Madrid, Madrid).

Garrett, J., Hoitash, R. & Prawitt, D. F. (2012). *Trust and financial reporting quality.* Working Paper, Available at SSRN: http://ssrn.com/abstract=2137957.

Gordon, M. J. (1963). Management of corporate capital: Optimal investment and financing policy. *The Journal of Finance, 18 (2); 264–272.*

Grewal, D., Levy, M., & Lehmann, D. (2004). Retail branding and customer loyalty: An overview. *Journal of Retailing 80 (10): 101-116.*

Gunny, K. (2005). *What are the consequences of real earnings management?* Working Paper, University of Colorado.

Hassan, A. I. (2012). *Influence of stakeholder role on performance of constituencies development fund projects a case of Isiolo North Constituency Kenya.* Unpublished Masters Thesis, University of Nairobi.

Hope, O. K., Thomas, W. B. & Vyas, D. (2012). *Financial reporting quality of U. S. private and public firms.* Rotman School of Management, Working Paper No. 1995124.

Hoti A. H, & Nuhiu A. R. (2011). Early adoption of International Financial Reporting Standards (IFRS) in the US capital markets. *International Research Journal of Finance and Economics25(3): 98-105.*

IASB, (2015). *The Conceptual Framework for Financial Reporting 2010.* Available from: http://www.ifrs.org/News/Press-Releases/Documents/ConceptualFW2010vb.pdf.

Jensen, M. C. & Meckling, W. H., (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, Elsevier, 3(4): 305-360.*

Jo, H., & Kim, Y. (2007). Disclosure frequency and earnings management. *Journal of Financial Economics, 84, 561-590.*

Jonas, G. J. & Blanchet, J. (2000). Assessing quality of financial reporting. *Accounting Horizons, 14 (3): 353-363.*

Khan, M. & Watts, R. (2009). Estimation and Empirical properties of a firm year measure of accounting conservatism. *Journal of Accounting and Economics, 48 (2-3):132-150.*

Kibet, C. Y., (2015). *Effect of enterprise risk management determinants on financial performance management of listed companies in Nairobi Securities Exchange.* Unpublished PhD thesis, Jomo Kenyatta University of Agriculture and Technology.

King'wara, R. A., (2015). Effect of IFRS adoption on reporting quality in Kenya. *Journal of Business and Management, 17 (1): 82-84.*

KNBS (2017). *Kenya economic survey.* Kenya National Bureau of Statistics.

Lambert, R., Leuz, C. & Verrecchia, R. E. (2007). Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research, 45 (2): 385-420.*

Leland, H. E. & Toft, K. B. (1996). Optimal capital structure, endogeneous bankruptcy, and the term structure of credit spread. *Journal of Finance, 51, 987-1019.*

Louis, H. (2004). Earnings management and the market performance of acquiring firms. *Journal of Financial Economics, 74: 121-148.*

Lu, H., Richardson, G. & Salterio, S. (2011). Direct and indirect effects of internal control weakness on accrual quality: Evidence from a unique Canadian regulatory setting. *Contemporary Accounting Research, 28 (2): 675-707.*

McConnel, J. J. & Servaes, H. (1995).Equity ownership and the two faces of debt. *Journal of Financial Economics, 39, 131-157.*

Mitnick, B. (2013). *Origin of the theory of agency: An account by one of the theory's originators.* SSRN Electronic Journal. 10.2139/ssrn.1020378.

Modigliani, F. (1980). *The collected papers of Franco Modigliani, Vol. 3, pp. xi – xix.* Cambridge, Massachusetts. MIT Press.

Moldoveanu, M., & Martin, R. (2001). *Agency theory and the design of efficient governance mechanisms.* Unpublished Thesis, Joseph L. Rotman School of Management, Toronto University.

Morris, R. D., Susilowati, I., & Gray, S., (2012). *The Impact of IFRS adoption versus non-adoption on corporate disclosure levels in the Asian region.* Accessed online at https://www.unisa.edu.auin 5/4/2017.

Mutai, B. K., (2014). *The effect of adoption of international financial reporting standards on quality of financial reporting by companies listed at Nairobi Securities Exchange.* Unpublished Masters Thesis, School of Business, University of Nairobi.

Naghshbandi, N., & Ombati, R. M., (2014). Issues, challenges and lessons for IFRS adoption in Kenya and other adopters. *International Research Journal of Management and Commerce, 1(8): 97-113.*

Oktorina, M. & Y. Hutagaol (2008). *Cash flow analysis operating activities in detecting manipulation real activity and its impact on performance* in *the market.* National Symposium on Accounting.

Ou, J., & Penman, S., (1989). *Accounting measures, price-earnings ratio, and the information content of security prices.* Journal of Accounting Research, 27(supplement): 111–43.

Owolabi, A., & Iyoha, F. O., (2012). Adopting International Financial Reporting Standards (IFRS) in Africa: Benefits, prospects and challenges. *African Journal Accounting, Auditing and Finance, 1 (1): 77-87.*

Polit, D. F., & Beck, C. T. (2013). *Essentials of nursing research: Appraising evidence for nursing practice.* Lippincott Williams & Wilkins.

Poterba, J., & Summers, L., (1983). Dividend taxes, corporate investment, and `Q'. *Journal of Public Economics*, 22 (2): 135-167.

Rajgopal, S. & Venkatachalam, M. (2011). Financial reporting quality and idiosyncratic return volatility. *Journal of Accounting and Economics, 51, 1-20.*

Rangan, S. (1998). Earnings management and the performance of seasoned equity offerings. *Journal of Financial Economics, 50: 101-122.*

Rappaport, A. (1986). The affordable dividend approach to equity valuation. *Financial Analysts Journal, 42 (4), 52-58.*

Rocco, T., & Plakhotnik, M., (2009). Literature reviews, conceptual frameworks and theoretical frameworks: Terms, functions and Distinctions. *Human Resource Development Review 8(1), 120-130.*

Ross, S., (1977). The determination of financial structure: The incentive-signalling approach. *Bell Journal of Economics*, 8 (1): 23-40.

Sharma, S. (2011). Determinants of equity share prices in India. *Journal of Arts, Science, and Commerce, 2 (10); 1-10.*

Shima, K. & Yang, D. (2012). Factors affecting the adoption of IFRS. *International Journal of Business, 17: 276-298.*

Tarus, D. K. & Omandi, E. M., (2013). Business case for corporate transparency: Evidence from Kenya. *European Journal of Business and Management, 5(3), 113-125.*

Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit, and Banking, 1 (1): 15–29.*

Tu, C. J. (2012). The impact of stocks index adjustments announcement on earnings management. *International Journal of Economics and Finance, 4 (11), 91-98.*

Uwuigbe, U., Uyoyoghene, A., Jafaru, J., Uwuigbe, O., & Jimoh, R., (2017). IFRS adoption and earnings predictability: Evidence from listed banks in Nigeria. *Banks and Bank Systems, 12: 166-174.*

Wilcox, J. W. (1984). The P/B-ROE valuation model. *Financial Analysts Journal, 40 (1): 58-66.*

Yuri, B., Robert J. B., Jonathan, C., Glover, K. J., James, A., Ohlson, S. H., Penman, E. T., Jeffrey, W. T., (2011). A Perspective on the Joint IASB/FASB Exposure Draft on Accounting for Leases. *Accounting Horizons, 25 (4): 861-871.*

Zikmund,G.W, Babin B.J., Carr, C.J & Griffin, M. (2010). *Business research methods (8th Ed.).* South-Western California: Cengage Learning.

APPENDICES

Appendix 1: Companies Listed at the Nairobi Securities Exchange

Agricultural	
Ticker	**Company Name**
EGAD	Eaagads Limited
KUKZ	Kakuzi Limited
KAPC	Kapchorua Tea Company Limited
LIMT	Limuru Tea Company Limited
SASN	Sasini Tea and Coffee
WTK	Williamson Tea Kenya Limited

Automobiles and Accessories	
Ticker	**Company Name**
G&G	Car & General Kenya

Banking	
Ticker	**Company Name**
BBK	Barclays Bank of Kenya
CFC	CfC Stanbic Holdings
DTK	Diamond Trust Bank Group
EQTY	Equity Group Holdings Limited
HFCK	Housing Finance Company of Kenya
I&M	I&M Holdings Limited
KCB	Kenya Commercial Bank Group
NBK	National Bank of Kenya
NIC	National Industrial Credit Bank
SCBK	Standard Chartered of Kenya
COOP	Cooperative Bank of Kenya

Commercial and Services	
Ticker	**Company Name**
XPRS	Express Kenya Limited
KQ	Kenya Airways
LKL	Longhorn Kenya Limited
EVRD	Eveready East Africa
SCAN	Scangroup
NMG	Nation Media Group
SGL	Standard Group Limited
FIRE	Sameer Africa Limited
TPSE	TPS Serena
UCHM	Uchumi Supermarkets

Construction and Allied	
Ticker	**Company Name**
ARM	ARM Cement Limited

BAMB	Bamburi Cement Limited
BERG	Crown-Berger (Kenya)
CABL	East African Cables Limited
PORT	East Africa Portland Cement Company

Energy and Petroleum

Ticker	Company Name
KEGN	Kengen
KENO	KenolKobil
KPLC	Kenya Power and Lighting Company
TOTL	Total Kenya Limited
UMME	Umeme

Insurance Segment

Ticker	Company Name
BRIT	British-American Investments Company
CIC	CIC Insurance Group
CFCI	Liberty Kenya Holdings Limited
JUB	Jubilee Holdings Limited
KNRE	Kenya Reinsurance Corporation
PAFR	Sanlam Kenya Plc

Investments

Ticker	Company Name
ICDC	Centum Investment Company
OCH	Olympia Capital Holdings
HAFR	Home Afrika Ltd
TCL	TransCentury Investments

Investment Services

Ticker	Company Name
NSE	Nairobi Securities Exchange

Manufacturing and Allied

Ticker	Company Name
BOC	BOC Kenya Limited
BAT	British American Tobacco Limited
CARB	Carbacid Investments Limited
EABL	East African Breweries
EVRD	Eveready East Africa
ORCH	Kenya Orchards Limited
MSC	Mumias Sugar Company Limited
UNGA	Unga Group

Telecommunication and Technology

Ticker	Company Name
SCOM	Safaricom

Source: Nairobi Securities Exchange Website (2020)

Appendix II: Data Collection Form

Name of Company					Sector	
	Year					
Data	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total Market Value						
Total Book Value						
Liabilities						
Tobin's Q Ratio						
Net Income						
Cash flows from operations						
Earnings Management						
Net Income						
Total Market Value						
Conservative Accounting						
Accounts Receivables						

Inventory			62			
Accounts Payable						
Tax Payable						
Other Current Assets						
Accruals Quality						

Appendix III: Research Data

No	Year	Tobin Q	Earnings Management	Conservative Accounting	Accruals Quality	Firm size
1	2017	0.532075	12.52615	-0.52486	-0.91722	17.56969
1	2016	0.604281	2.189321	-0.12935	0.044655	17.74849
1	2015	0.640816	-40.6353	0.373451	0.040189	17.76554
2	2019	0.696413	0.115101	0.012364	-0.13398	17.70906
2	2018	0.966313	0.202621	0.011894	-0.54019	17.73465
2	2017	1.296207	1.305999	0.09897	-0.12377	17.66997
2	2016	1.333233	0.898202	0.061078	0.824321	17.52446
2	2015	1.395332	0.676241	0.066721	0.741889	17.55389
3	2019	0.460549	-0.88123	0.242449	0.079971	16.25644
3	2018	0.443872	0.50168	0.313401	0.166037	16.1353
3	2017	0.438984	0.201271	0.14162	-0.16494	16.04203
3	2016	0.466826	-0.97405	0.200802	0.197601	16.08817
3	2015	0.504916	0.525908	0.134322	0.177841	16.01141
4	2019	0.623718	0.662038	0.133257	0.049551	15.06927
4	2018	1.153631	0.983485	0.07407	0.002143	15.03079
4	2017	1.388878	1.015096	0.06991	0.805675	15.01154
4	2016	2.36821	1.003994	0.047807	-0.38961	14.94101
4	2015	9.879083	0.701876	0.011673	-0.35065	14.90364
5	2019	0.933686	-20.9379	0.029809	-0.01652	15.44602
5	2018	1.022045	4.936637	0.030647	-0.01652	15.51583
5	2017	0.982262	-1.16394	0.040331	0.287215	15.58564
5	2016	0.75813	0.706683	0.078079	-0.06164	15.43669
5	2015	0.974486	0.175845	0.01375	-0.21899	15.32825
6	2019	0.458548	7.204872	0.992768	-0.67551	15.65206
6	2018	0.494692	-0.85109	-0.38478	-0.67551	15.70313
6	2017	0.536082	-5.60617	-0.49119	-0.07767	15.76689
6	2016	0.518172	-0.99422	-0.39412	-0.62214	15.83685
6	2015	0.581371	1.276883	0.068828	-0.55992	15.94185
7	2019	0.261824	32.65047	-44.215	-0.49249	17.78314
7	2018	0.287612	-7.80488	5.420182	-0.49249	17.45382
7	2017	0.34096	1.865706	-0.43448	-0.40219	17.1245
7	2016	0.318261	11.54498	1.956107	-1.09787	17.14206
7	2015	0.41679	-18.0652	1.704675	-0.98809	16.95589
8	2019	0.954719	67.92213	-1.31404	-1.10095	12.4233
8	2018	1.23985	0.63248	-0.15013	-0.20255	13.25998
8	2017	0.991688	-1.07554	0.356883	0.664412	13.55758

8	2016	0.781289	1.822852	-0.27378	-0.61493	13.89507
8	2015	0.562564	387.9799	0.856369	-0.55344	14.22872
9	2019	1.262092	0.908171	0.107059	1.632144	15.33753
9	2018	1.018711	1.341787	0.079763	1.262394	15.5974
9	2017	1.097943	0.64248	0.092019	-0.20903	15.56404
9	2016	1.157895	0.81005	0.093845	0.332151	15.43775
9	2015	1.770737	0.531795	0.074787	0.298936	14.92246
10	2019	0.392505	0.268259	0.165172	1.040299	19.76092
10	2018	0.414017	0.415065	0.15744	1.040299	19.75398
10	2017	0.438603	0.642212	0.150359	1.54535	19.74704
10	2016	0.410927	0.220373	0.178029	-0.21829	19.72016
10	2015	0.376584	5.25031	4.213366	-0.19646	19.65184
11	2018	1.133063	7.441095	0.087713	0.742307	16.99343
11	2017	0.904817	-2.67459	0.119619	0.60865	16.99768
11	2016	0.940552	0.961338	0.110045	0.499059	17.00193
11	2015	0.875011	0.397627	0.142614	0.449153	16.67066
12	2019	0.428719	0.024163	0.127045	-0.53532	19.76092
12	2018	0.460333	0.06829	0.241486	-0.53532	19.63457
12	2017	0.476786	0.192999	0.297349	-0.14528	19.61834
12	2016	0.473479	0.280272	0.452487	-0.05937	19.48395
12	2015	0.465837	0.269176	0.288515	-0.05344	19.43407
13	2019	0.551038	-0.81657	-1.09029	-0.06816	19.09196
13	2018	0.692478	-1.18408	-0.14582	-0.00171	18.73282
13	2017	0.639902	-1.55559	-0.36034	-0.17904	18.81017
13	2016	0.576614	-4.66897	-3.39306	-0.37224	18.86335
13	2015	0.528904	-28.1647	-4.66295	-0.33502	19.01986
14	2019	5.175814	0.626093	0.049515	0.16449	19.13856
14	2018	4.422449	0.601229	0.062161	0.336252	18.93613
14	2017	5.215441	0.609151	0.045201	0.63119	18.90117
14	2016	4.015833	0.589818	0.049663	0.133475	18.88556
14	2015	3.366494	0.522458	0.048803	0.120128	18.87149
15	2019	0.80469	-5.41746	-0.73658	-0.91368	14.24133
15	2018	0.487678	2.128288	-1.34351	-0.31024	14.76633
15	2017	0.465975	0.143334	0.103114	-0.2195	14.90403
15	2016	0.470876	0.682716	-0.51892	-0.27051	15.00666
15	2015	0.459593	-0.12417	-0.00417	-0.24346	15.13759
16	2019	0.342782	-4.65436	0.482635	0.840908	16.50161
16	2018	0.423037	0.931036	0.066539	0.429175	16.37748
16	2017	0.570953	-1.36976	0.046538	0.842084	16.39543
16	2016	0.329861	1.801128	0.176428	-0.17299	16.63799
16	2015	0.337779	7.606897	0.218631	-0.15569	16.59088
17	2019	0.721084	-0.91743	-0.21498	-1.02948	15.24963
17	2018	0.693828	0.905959	0.108368	0.21278	15.35798
17	2017	0.796519	-0.32276	-0.06972	0.454154	15.31058

17	2016	0.546115	0.405703	0.147208	-0.01823	15.29824
17	2015	0.697508	2.58012	-0.12655	-0.01641	15.28698
18	2019	0.600918	-9.21243	0.1464	0.105505	17.44158
18	2018	0.607058	0.196596	0.133579	-0.3072	17.48569
18	2017	0.574819	7.184373	0.185087	0.11129	17.45342
18	2016	0.51938	0.620466	0.208769	0.184679	17.40417
18	2015	0.552886	0.206324	0.140568	0.166211	17.34847
19	2019	0.614085	17.09453	-2.40159	-0.57861	16.5118
19	2018	0.575302	6.538583	-2.68121	-0.57861	16.62901
19	2017	0.561372	2.500979	-1.73667	-0.56619	16.74622
19	2016	0.499964	-1.28692	-0.44858	-0.89649	16.75528
19	2015	0.55359	3.108401	-1.08501	-0.80684	16.75528
20	2019	0.746548	89.3689	-3.46202	-1.05601	14.99057
20	2018	0.715546	-36.1509	-2.68798	-1.05601	15.13551
20	2017	0.780123	14.6235	-1.00126	-1.05601	15.28045
20	2016	0.705777	-5.9154	-2.49744	-1.05601	15.42539
20	2015	0.800053	3.269618	-0.98356	-0.95041	15.67384
21	2019	0.47023	0.768565	0.211652	-0.09614	16.1807
21	2018	0.486109	-3.30965	0.30048	0.625289	16.11134
21	2017	0.560497	-0.00441	-0.0022	-0.58281	16.06209
21	2016	0.495808	0.763651	0.214278	0.053791	15.93796
21	2015	0.377666	1.230321	0.513486	0.048412	15.97559
22	2019	1.135323	0.595554	0.115825	-0.32854	15.61512
22	2018	1.118274	1.835823	0.081819	1.113138	16.23125
22	2017	1.729293	0.618544	0.061767	-0.59862	16.24211
22	2016	1.342616	0.759548	0.093228	0.442946	16.31482
22	2015	2.418206	0.707947	0.057512	0.398652	16.35685
23	2019	0.662137	7.89462	0.01892	0.238221	14.50497
23	2018	0.882105	7.973847	0.017798	0.3539	14.57713
23	2017	1.085523	0.131964	0.009371	-0.32623	14.61692
23	2016	1.223845	0.908666	0.027074	-0.09641	14.61475
23	2015	0.964078	0.33051	0.030892	-0.08677	14.65749
24	2019	1.22475	0.510285	0.093946	-0.16183	18.28217
24	2018	2.099421	0.471298	0.02971	-0.32809	18.08166
24	2017	2.389841	0.555246	0.032832	-0.1757	18.01522
24	2016	2.394013	0.5457	0.045209	-0.51337	17.93856
24	2015	2.53938	0.428627	0.031626	-0.46204	18.01931
25	2019	0.404943	0.08742	0.008149	-0.46066	13.7561
25	2018	0.558493	218.6259	-0.13409	-0.45929	13.71668
25	2017	0.810203	546752.4	2.018756	-0.45793	13.73517
25	2016	0.964874	-1446261	0.050439	-0.45656	13.54261
25	2015	1.852875	3825626	0.001072	-0.45521	12.97139
26	2019	0.430017	-0.16151	-0.07055	-0.15785	15.92838
26	2018	0.43449	1.687688	0.191393	0.502101	16.06734

26	2017	0.475303	1.123966	-0.09395	-0.7021	15.93946
26	2016	0.47848	0.618436	0.154863	-0.23785	16.00508
26	2015	0.347134	-0.41551	-0.1354	-0.21406	15.96244
27	2019	0.458464	-0.25309	-0.20077	-0.23124	14.52511
27	2018	0.42469	5.306113	0.28358	0.762448	14.72741
27	2017	0.426174	-0.31586	-0.10102	-1.02579	14.5237
27	2016	0.452724	1.595884	0.374364	0.543956	14.57846
27	2015	0.527005	2.14024	-0.02912	0.48956	14.50024
28	2019	8.034757	-1.74152	0.001759	0.545527	11.49226
28	2018	3.71342	1.112178	0.002123	0.014167	12.49969
28	2017	3.789647	-1.88663	-0.01845	-1.43821	12.47613
28	2016	3.759629	-1.55859	-0.015	-0.34285	12.55035
28	2015	5.540048	0.337842	0.001532	-0.30856	12.65641
29	2019	0.748756	0.481489	-0.09565	0.382547	13.06418
29	2018	0.815185	1.590673	-0.42817	-0.23143	12.67902
29	2017	0.69797	1.818527	-0.68052	-1.26016	12.83477
29	2016	0.655024	8.550471	-0.77025	-0.25861	12.84681
29	2015	0.629973	0.723015	-0.37657	-0.23275	12.99883
30	2019	0.447577	0.169486	0.056846	-0.19996	16.70513
30	2018	0.485464	0.280013	0.042722	-0.1029	16.6833
30	2017	0.551856	0.14968	0.020178	-0.00229	16.67696
30	2016	0.45704	0.167089	0.03463	0.133257	16.64773
30	2015	0.486862	-0.73079	-0.06161	0.119931	16.57652
31	2019	0.670823	0.77366	0.066111	-0.86803	16.3652
31	2018	0.588674	0.486724	0.085136	-0.40969	16.48449
31	2017	0.646386	4.101958	0.071131	0.136482	16.4372
31	2016	0.636097	139.041	0.05973	4.346261	16.41719
31	2015	0.932496	0.444454	0.024222	3.911635	16.33871
32	2019	0.54432	-6.79934	0.15794	0.146582	18.68364
32	2018	0.577944	2.053078	0.14068	0.019334	18.55318
32	2017	0.628811	1.116433	0.123951	-0.1736	18.46916
32	2016	0.616693	2.19513	0.125253	0.362981	18.32161
32	2015	0.630207	1.158241	0.107664	0.326683	18.22683
33	2019	0.528569	-0.06339	0.046188	-0.28307	17.18393
33	2018	0.54194	0.650891	-0.62482	0.068075	17.1863
33	2017	0.535458	-0.02787	0.013273	-1.47246	17.2104
33	2016	0.538334	-0.03021	0.017673	2.957618	17.1634
33	2015	0.633666	-0.03585	0.003166	2.661856	17.11539
34	2019	0.298554	0.553233	1.130116	1.448464	17.73477
34	2018	0.426726	0.742498	0.180546	-0.25511	17.60791
34	2017	0.483978	0.840224	0.13915	0.033127	17.57047
34	2016	0.569666	1.812187	0.178901	0.649637	17.46602
34	2015	0.574687	0.911681	0.157208	0.584674	17.39775
35	2019	0.522338	-0.63616	0.133535	0.090021	17.45892

35	2018	0.547316	-0.59159	0.079519	-0.09147	17.41499
35	2017	0.543293	0.515985	0.103215	0.729891	17.42963
35	2016	0.558606	0.618106	0.089123	-0.19562	17.36858
35	2015	0.616652	0.434768	0.07046	-0.17606	17.35745
36	2019	0.536285	0.394557	0.155985	-0.22317	18.64577
36	2018	0.572301	-0.45752	-0.08759	0.414419	18.45659
36	2017	0.599987	0.066416	0.01827	-0.54632	18.41088
36	2016	0.569912	0.494322	0.12795	0.139995	18.24206
36	2015	0.61892	-0.29584	-0.04006	0.125996	18.16749
37	2019	0.549129	0.218092	0.064895	0.294971	17.37949
37	2018	0.595055	0.380221	0.080972	-0.15237	17.31342
37	2017	0.70288	0.168891	0.024105	-0.43806	17.23341
37	2016	0.63426	-0.09083	-0.00416	-0.17395	17.10491
37	2015	0.792814	-0.7153	0.04823	-0.15656	17.03119
38	2019	0.214972	0.103056	0.07143	-0.0585	14.302
38	2018	0.219097	-0.06357	-0.04152	-0.13762	14.32166
38	2017	0.249173	1.728883	0.277486	-0.09948	14.30947
38	2016	0.259074	0.097511	0.130123	0.288051	14.23916
38	2015	0.292912	0.641799	-0.15391	0.259246	14.2417
39	2019	0.459478	1.131803	0.20989	0.385931	18.43816
39	2018	0.457761	0.589367	0.143438	0.431475	18.38286
39	2017	0.534376	4.435998	0.285449	1.370096	18.29722
39	2016	0.526515	3.996281	0.404025	-0.13753	18.17291
39	2015	0.609924	12.36738	0.256679	-0.12378	18.09689
40	2019	0.614108	-14.8037	-3.65534	4.641617	15.28518
40	2018	0.580525	-5.96327	-1.22041	-0.44369	15.32013
40	2017	0.581645	-5.41061	-0.31979	-0.23827	15.31465
40	2016	0.573281	11.41787	-0.3464	-0.25727	15.18415
40	2015	0.638356	0.707444	-0.37022	-0.23154	15.16678
41	2019	1.417476	1.169333	0.0194	-0.07673	14.62306
41	2018	1.665241	2.790204	0.049623	-0.53032	14.61229
41	2017	2.362609	3.117783	0.042801	0.740613	14.56135
41	2016	1.826089	0.937851	0.048335	-0.10579	14.51551
41	2015	1.821649	-2.80284	0.084616	-0.09521	14.46692
42	2019	1.821595	0.511531	0.078119	-0.29184	16.90366
42	2018	3.341582	0.770425	0.049544	-0.04621	16.7245
42	2017	2.827525	0.709336	0.042422	0.004732	16.69502
42	2016	2.555516	0.939803	0.067652	-0.1594	16.73327
42	2015	2.328434	1.26611	0.089441	-0.14346	16.74303
43	2018	0.515811	28.76607	-7.50419	-1.29973	16.57144
43	2017	0.414993	5.165031	-2.12498	-0.41954	16.99735
43	2016	0.369338	-0.57408	0.367507	-0.70758	17.10395
43	2015	0.476723	8.635433	-0.72043	-0.63682	16.83266
44	2019	0.859789	2.115469	0.096384	0.178688	14.66747

44	2018	0.694258	0.329712	0.137996	-0.44141	14.69411
44	2017	0.860176	0.487062	0.080633	-0.20214	14.43541
44	2016	0.600022	-0.19004	0.133967	3.212884	14.43981
44	2015	0.746357	12.15225	0.144589	2.891595	13.44346
45	2018	0.527091	-657.732	-45.9473	-0.43545	13.87076
45	2017	0.549921	22.97203	-1.94845	-0.79552	14.25559
45	2016	0.506507	-0.80232	-0.37178	-1.45333	14.64042
45	2015	0.590558	-0.20254	0.081802	-1.308	14.72621
46	2019	0.545626	0.337279	0.065267	-0.02652	14.6402
46	2018	0.893763	1.462767	0.022012	0.055109	14.42488
46	2017	1.117539	0.278112	0.019978	-0.05945	14.33476
46	2016	1.143203	3.632794	0.078203	0.476195	14.23501
46	2015	1.320295	1.365527	0.089878	0.428575	14.09808
47	2019	5.131419	3.513587	0.007497	0.086288	11.82044
47	2018	6.590566	3.7188	0.007052	4.753569	11.6489
47	2017	43.8636	1.431566	0.000657	1.229971	11.59246
47	2016	51.13795	-1.906	0.00044	-0.15406	11.3991
47	2015	58.72219	-106.449	0.003278	-0.13865	11.2738
48	2019	0.571028	0.312237	0.102827	-0.01633	19.73972
48	2018	0.561285	-0.71445	0.12469	-0.06204	19.6003
48	2017	0.602972	1.535018	0.132828	-0.04443	19.41974
48	2016	0.568361	-0.67763	0.149696	0.076124	19.37511
48	2015	0.622186	-2.29975	0.113729	0.068512	19.2998
49	2019	0.566888	0.703827	0.149187	0.014838	19.94021
49	2018	0.577317	0.384835	0.135633	-0.21798	19.84058
49	2017	0.559206	1.852489	0.147263	0.004056	19.77357
49	2016	0.5728	1.863358	0.163676	0.26964	19.67865
49	2015	0.627353	0.596153	0.110838	0.242676	19.65178
50	2019	0.497484	0.662164	0.23853	-0.03124	19.77194
50	2018	0.520514	0.563398	0.161848	-0.07757	19.74966
50	2017	0.539932	2.90367	0.128997	-0.06589	19.71075
50	2016	0.516478	-2.23391	0.234235	-0.17768	19.60866
50	2015	0.565621	-1.29557	0.126226	-0.15991	19.41987
51	2019	0.551361	0.662224	0.12069	0.0999	20.32827
51	2018	0.554113	0.495764	0.150738	-0.06798	20.16707
51	2017	0.608217	0.371146	0.126117	-0.05765	20.07789
51	2016	0.58345	0.277853	0.146652	-0.1301	19.97611
51	2015	0.646531	0.711085	0.114789	-0.11709	19.87478
52	2019	0.47432	-0.02115	-0.04432	-0.05745	17.84895
52	2018	0.472596	-0.27138	-0.28075	-0.06983	17.91897
52	2017	0.483094	0.024189	0.034726	-0.03796	18.02825
52	2016	0.494354	-0.18636	0.185009	0.098317	18.09121
52	2015	0.51861	-0.20614	0.153837	0.088485	18.08744
53	2019	0.565944	0.755946	0.200298	-0.19713	19.42874

53	2018	0.63322	0.218426	0.093241	-0.29433	19.33151
53	2017	0.688126	6.001528	0.06918	-0.0192	19.29661
53	2016	0.643247	158.9072	0.104285	-0.04817	19.1652
53	2015	0.688147	0.514002	0.086409	-0.04335	19.07157
54	2019	0.564591	8.111739	0.151993	0.098477	20.61632
54	2018	0.544103	3.034265	0.208972	0.002646	20.38683
54	2017	0.565768	0.977534	0.150336	-0.01887	20.28735
54	2016	0.536444	-2.1716	0.223739	0.058932	20.20447
54	2015	0.590357	4.43327	0.146288	0.053038	20.14004
55	2019	0.509191	-0.2981	-0.64123	-0.0886	18.53427
55	2018	0.492439	0.058838	-0.0471	-0.1362	18.55913
55	2017	0.497886	1.13213	0.247833	-0.05264	18.51484
55	2016	0.492911	-0.00677	0.029087	-0.03711	18.53478
55	2015	0.499205	-0.26094	-0.21616	-0.0334	18.64734
56	2019	0.519521	1.227465	0.166306	-0.06448	19.16579
56	2018	0.504401	0.470956	0.216069	-0.06448	19.15501
56	2017	0.511225	0.180697	0.191899	-0.19602	19.14422
56	2016	0.504759	5.22115	0.260222	0.003136	18.94812
56	2015	0.547524	-0.92839	0.162041	0.002823	18.92622
57	2019	0.544092	0.987888	0.143001	-0.19638	19.49468
57	2018	0.535235	0.117227	0.173577	-0.11565	19.4537
57	2017	0.523797	0.47962	0.134583	-0.16677	19.33191
57	2016	0.520039	-0.52067	0.158542	0.014812	19.18467
57	2015	0.535483	0.232257	0.150418	0.013331	19.15522
58	2019	0.582082	-1.7071	0.118411	0.033353	19.5264
58	2018	0.582975	-2.14435	0.121222	-0.11177	19.46942
58	2017	0.592467	-3.07028	0.096768	-0.11416	19.47054
58	2016	0.593394	-4.22149	0.139384	-0.01876	19.3389
58	2015	0.60865	0.228812	0.094685	-0.01688	19.27068