EFFECT OF INITIAL PUBLIC OFFERING ON THE FINANCIAL PERFORMANCE OF FIRMS LISTED AT THE NAIROBI SECURITIESEXCHANGE

BY

SUSAN NYAMBURA MWANGI

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR AWARD OF MASTERS OF SCIENCE IN FINANCE AND INVESTMENT OF KCA UNIVERSITY

OCTOBER, 2019

DECLARATION

This project is my original work and has not been presented for the purpose of degree award in any other university.

Signature..... Date.....

SUSAN NYAMBURA MWANGI

16/02738

The research project has been submitted with the approval of my supervisor.

Signature..... Date.....

DR. MICHAEL NJOGO

Supervisor

DEDICATION

I dedicate this project to God, my strong pillar, my source of inspiration, wisdom, knowledge and understanding. He has been my source of strength and hope throughout my course and in His wings only have I soared.

It is with deep gratitude and warm affection that I also dedicate this proposal to my family and friends. To my mother, Mrs Jenifer Mwangi and my mentor Lucy Wanjeri, strong and gentle souls who have taught me to trust in God and believe in hard work. Much wouldn't have been done if it were not for your constant support and prayers. To my father, Mr. Benson Mwangi, for earning an honest living for my siblings and me and for supporting me with both moral and financial resources to carry out my research.

I also dedicate this work to my grandfather, Mr. Peter Nguru for your words of encouragement and always pushing me to do my best, I will always celebrate you for believing in me and always reminding of my potential. To my supervisor, Dr. Michael Njogo, I appreciate you for your moral support and guidance throughout the entire process, may you be forever blessed. May Almighty God bless you allin a mighty way.

ABBREVIATIONS

ASEA - African Stock Exchanges Associations

CMA - Capital Market Authority

EMH - Efficient Market Hypothesis

FE - Fixed effect model

GDP - Gross Domestic Product

IPO - Initial public offer

NSE - Nairobi Security Exchange

NZSX - New Zealand Stock Exchange

OLS - Ordinary least squares

RE - Random effect model

SME -Medium Enterprises

US -United States

UK -United Kingdom

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Initial Public Offering has been for a long time been of interest not just to the firms being listed but also to the investors and the whole business community. This is so because of the many outcomes that firms do experience after issuing an IPO. This study aimed to determine the effect of Initial Public Offering on the financial performance of firms listed at the Nairobi Securities' Exchange. It was guided by three specific objectives; to determine the effect of liquidity on the financial performance of firms listed at the NSE after issuing an IPO, to establish the effect of size on the financial performance of firms listed at the NSE after issuing an IPO and to find out the effect of financial risk on the financial performance of firms listed at the NSE after issuing an IPO. The study adopted Modigliani and Millers Theory of market capital structure as well as Efficient Market Hypothesis (EMH) by Eugene Fama. Past studies from different scholars unveiled the existing gap in literature pertaining to the market inefficiencies that firms face after issuing an IPO. The study however adopted descriptive research design and targeted 13 companies that had been in operation for a period of 10 years (2009-2018). It used census sampling technique in considering all the 13 targeted companies studied. Secondary data was sourced from the Nairobi Security Exchange database, Capital Markets Authority resource centre and individual companies' published annual financial reports. The traditional profit theory was employed to formulate profit, measured by Return on Assets (ROA), as a function of size, liquidity ratio and financial risk ratio. The study adopted panel data analysis model to estimate the determinants of the profit function. The output was derived through the aid of STATA in the generation of the suitable model which was in the form of a panel regression model. A Prais Winsten Panel regression model (with corrected standard errors) that produces robust results was fitted as a result of the presence of heteroscedasticity and serial correlation in the variables. The Hausman test of the model specification which decides between fixed effect model and random effect model was not carried out due to violation of linear regression assumption due to the existence of significant differences of ROA among the firms. The empirical results revealed that there was a positively significant relationship between size and the return on assets. The results also revealed a positive insignificant relationship between size and the return on assets. It also concluded that financial risk had a negative significant relationship with the return on assets. The study recommended that more firms should be listed at the Nairobi Securities Exchange in order to improve on their transparency and investor confidence. Additionally, publicly listed firms should put in place liquidity management strategies and policies that should effectively govern them therefore resulting to better and improved returns. Financial risk administration policies should not be ignored as well since they would contribute greatly to the financial performance of firms listed at the Nairobi Securities Exchange

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

According to Edmonston (2009), Initial Public Offering (IPO) is the issuing of a firm's shares to the public for the first time, the process enables the firm to raise huge amount of funds and enhances the conversion from being private to public (Myers, 2003). Going public is perceived to be a very major undertaking in the life cycle of the firm (Kim & Weisbach, 2005). The process is however not easy since it attracts costs such as underwriter's fee, lawyer's and auditor's fee, publications as well as valuation fees, (Rock, 1986; Ritter, 1991; Ghosh, 2005 &Hasan *et al.*, 2013). It is therefore a cautious process since the entire operations should be directed towards increasing the firms' profitability (Ritter, 2006).

Initial public offering is associated with tremendous benefits to the company on top of funds availability since the firm is able to gain increased brand awareness as well as attract more qualified and proficient management team from all over the World (Thorell, 2004). The greatest underpinning of going public has been the under-pricing of the stock price leading to many studies being directed into exploring the main reasons for under-pricing the stocks in IPO (Loughran & Ritter 2004).

Under-pricing of firm's stocks during IPO is common in the developing countries and amounts to huge losses by the issuing firm thereby beating the purpose to which IPO is recommended, this has unanswered questions on the face of many researchers and therefore IPO

under-pricing becoming kind of a 'puzzle' in finance (La Porta, 2000). A study conducted by Reilly and Hatfield (1969) suggested that initial public offering caused abnormal returns in the short run therefore investors' experienced low rates of return. A firm could accrue positive returns in the long run depending on its liquidity, volatility, capital investment and control matching mechanisms that it exhibited, (Bessembinder & Zhang 2013).

The Nairobi security exchange is the location where the stocks are publicly traded in Kenya, the exchange market started in 1954, and was registered under the Societies Act. However, share trading was still in existence even in the absence of a registered exchange market which was established by the British colony. During those old days, there was no formality in the trading procedures including agreements that were left at the mercy of traders to settle on 'gentleman's way' (Cornelli *et al*., 2006).

Nairobi Security Exchange is a member of African Stock Exchanges Association (ASEA) and commands position 4 in terms of trading volume and 5th in capitalization as a % of GDP. Today the security market is on the verge of growth with 66 firms being listed through the oversight of the capital market authority (CMA) whose commitment is to reinstate the investors' confidence through enhancing efficiency in the capital market (Krishnan, 2011).

NSE is classified as an emerging market for its high returns and vibrancy thus sets a pace for African markets (Ogunmuyiwa, 2010). Other securities such as government bonds and corporate bonds are also traded at the Nairobi Security Exchange. The availability of data pertaining to all the listed firms in one database gave rise to the choice of NSE since it would be easily possible to answer the research questions and solve the problem in question pertaining the long term Effect of initial public offer on the financial performance of listed firms at NSE.

Over the years, the Kenyan government has put much efforts to reform the Nairobi Securities Exchange. One of the key reforms that have been achieved is its modernization which includes automation of trading the securities, dematerialization of stocks and the diversification of listed stocks, the recentintroduction of derivatives trading, Real Estate Investment Trusts and exchange traded funds. The Nairobi Securities Exchange as a body itself has also partnered with the capital markets authority which regulates, supervises, licenses and monitors all the activities of the stock exchange. Therefore, the Nairobi Securities Exchange has remained to be the fastest growing exchange market in East Africa (Ayako *et al*., 2015).

Listing at the Nairobi Securities Exchange can be a tedious process because there are major procedures that a firm should follow and also should have attained listing requirements. However, companies are usually listed depending on their sizes in some segments. The segments include; Main Investment Market Segment which is fit for large companies that have been in existence for a longer period of time and also known as blue chip companies, Alternative Investment Market Segment which is appropriate for medium-sized companies, Fixed Income Securities Market Segment which is best suited for trading fixed income securities in the secondary market , mainly corporate and government bonds and the Growth Enterprise Market Segment which incorporates small medium enterprises.

1.1.1 Financial Performance

Financial performance is the overall financial condition of any given institution over a given period of time. It measures how the assets of a company are appropriately used in order to make profits which therefore assist both the investors and stakeholders to make investment decisions (Mauwa, 2017). Financial performance analyses the firm's productivity in terms of liquidity,

solvency, profitability, repayment capacity and financial efficiency. According to Ralston *et al*., (2015), the varying levels of profitability of firms was determined by various factors both internally and externally. External factors included; economic, political, technological, legal, social and environmental while internal factors included; ownership, size, management, capital and the financial position of the company. Due to the increasing failure in financial performance of firms both globally and locally, it has become a major concern to both the investors and the stakeholders, (Omondi & Muturi, 2013).

Firms usually use different measures to gauge their financial performance and the most commonly used include Return on Assets, Return on Equity and net margin on sales, (Odalo *et al*., 2016). Additionally, these measures serve as a basis to evaluate the overall financial health of any entity, (Liebrand, 2007). Return on Assets measures how a company uses its total assets to generate profits, (Kothari *et al*., 2005). On the other hand, return on equity measures the earnings a company generates in respect to the company's net income and equity, (Venkatraman & Ramanujam, 1986). These measures also make comparisons between firms over a given period of time. However, this study adopted Return on Assets as a measure that was used to determine the Effects of Initial Public Offer on the financial performance of firms listed at the Nairobi Securities Exchange in the long run.

1.2 Statement of the problem

The importance of firms going public in a country cannot be ignored, however this calls for efficient capital market where professional ethics is highly practiced and possibilities of perpetrating frauds suppressed in an effort to establish an efficient capital market system (La

Porta, 2000). The development of a nation is dependent on the contribution from the companies established and therefore critical to safeguard their existence.

The effect of pricing securities in an initial public offering might have had a ripple effect on the willingness of the firms to go public as it's contradictory to the purpose of going public and may be used partly to explain why there is very low pace of initial public offering being witnessed at the Kenyan bourse despite several de-listing witnessed (Gajewski &Gresse 2006). This has signified challenges that firms face especially in realizing their returns on investments.

The earlier studies like Jain and Kini (1994) and Mikkelson *et al*., (1997) scrutinized more on firms' financial performance after issue of an initial public offer. Jain and Kini (1994) initiated studies that investigated the level of relationship between the ownership level of stakeholders in the post-IPO period and the post-IPO financial performance of firms which was carried out within 682 US publicly listed firms. They concluded there was a positive significant relationship between the post-IPO period and post-IPO financial performance. Thereafter, Mikkelson *et al*., (1997) explored more on the above relationship with their list of firms derived from the US stock exchange and Thailand stock exchange, respectively. Mikkelson *et al*., (1997) posited that there was an insignificant relationship between the changes in the levels of the stakeholders' ownership of firms at the time of issue and their post-IPO performance.

Some of the globally studies that had been carried out in companies that issued IPOs found out that there was a decline in operating performance in the post-IPO period (Jain & Kini, 1994 &Mikkelson *et al.,* 1997). Most of the researches were based on the accrual basis of accounting where revenues were possibly subject to creative accounting by the firm managers, for instance through adjustments in the working capital, (Teoh *et al.,* 1998). Ahmad and Lim (2005) undertook a research on operating performance of 162 public Malaysian firms during the

period 1996 to 2000. They used the accrual-based method of accounting to measure operating performance, which highlighted that operating performance declined suddenly after the issue of an initial public offering. Additionally, they also discovered that there was a positive significant influence between the firms' size and pre-IPO profitability as a measure of operating performance. Malaysian firms experienced a decreased in their financial performance when the economy suffered a financial crisis in 1997 and1998. However, they conducted further studies and re-investigated the quality of Malaysian evidence that was in existence by raising both the sample size to 254 firms and time period to 10 years (1991-2000) which they found a similar result.

Banderet and King (2014) carried out a study on 588 US firms IPO's underpricing during the crisis period (2008-2009) and non-crisis period (2003-2007). They observed that all the firms issuing an IPO had vigorously underpriced their shares because shareholders had less liquidity and expected increased returns if they participated in any issue. Therefore, their research established an insignificant difference in underpricing in both the crisis and non-crisis periods. In contrast, Fauzi *et al.*, (2012) found a positive significant difference in the short run performance of 23 firms listed on the New Zealand Stock Exchange (NZSX) between 2006 and 2010. This however suggested that the New Zealand Stock Exchange market was of interest because it was similar to that of the US and UK.

However, the short focus in previous studies such as Cornelli *et al*., (2006) and Swaminathan (2003), on the factors determining stock prices might have contributed to the firms' risk perception. Additionally, previous studies by Shian-hou (2005), Wang (2008), and Mittal & Mayur (2012) reported a significant reduction in the performance of firms after IPO. In

contrast, Krishnan (2011), Chancharat (2012) and Kinyua (2014), in their studies concluded that firms' performance improved significantly after Initial Public Offering (IPO).

Several studies have shown different results both in developing and developed economies. Jain & Kini (1994), Teoh *et al*., (1998), Wang (2005), Shiah-Hou (2005), Ahmad & Lim (2005) and Mittal & Mayur (2012) all highlighted a negative significant reduction in operating performance after going public whereas Krishnan (2011), Chancharat (2012), Kinyua (2014), Bessler (2012) and Jacquillat *et al*., (1978) showed a significant improvement in firms' financial performance after going public.

This study therefore, aimed at exploring the long term effect of initial public offering on the financial performance of firms listed at the Nairobi Securities Exchange in order to bridge the gap in the existing literature concerning the effects of IPO especially in the Kenyan perspective which has been ignored by previous studies.

1.3 Research objectives

1.3.1 General objective

The study aimed to determine the effect of Initial Public Offering (IPO) on the financial performance of firms listed at the Nairobi Securities Exchange (NSE).

1.3.2 Specific objectives

i. To determine the Effect of liquidity on the financial performance of firms listed at the NSE after issuing an IPO.

ii. To establish the Effect of size on the financial performance of firms listed at the NSE after issuing an IPO.

iii. To find out the Effect of financial risk on the financial performance of firms listed at the NSE after issuing an IPO.

1.4 Research questions

i. How does liquidity influence the financial performance of firms listed at the NSE after issuance of an IPO?

ii. How does size influence the financial performance of firms listed at the NSE after issuance of an IPO?

iii. How does financial risk influence the financial performance of firms listed at the NSE after issuance of an IPO?

1.5 Justification of the study

For a stable economy, firms must be able to access the needed funds for expansion and growth purposes, majority of small firms however prefer going public/ issuing share through Initial Public Offering (IPO). This helps to finance growth operations as well as reap other benefits of going public such as brand awareness. With this insight, it was necessary to embark on a study aiming to explore the effect of IPO on the financial performance of listed firms so that the practice of going public can be aligned to the long-term sustainability of the firm as in the current undertaking.

1.6 Significance of the study

The study would significantly contribute to the decision making process of the individuals and or groups identified below;

1.6.1 Listed Companies

The companies listed at NSE would benefit from the findings of the study since it would enable them reassess the post IPO effect and therefore determine the effect of going public. Through this, the firms could be able to employ measures that could eradicate any adverse effect of going public such as dilution of ownership.

1.6.2 Government

The government's main role on the effect of IPO studies is to be able to formulate better policies and regulations aimed at preventing the interest of various stakeholders that are vulnerable to fraudulent presentation of accounting figures pertaining the value of the firm.

1.6.3 Capital Market Authority

The capital market authority is mandated with overseeing and approval of Initial Public Offering and therefore at the centre of the study concerning the benefits. The regulator therefore could use the findings of the study to review existing policies and probably initiate reforms that are aimed at improving the growth of the newly listed firms and thus instil investors' confidence.

1.6.4 Scholars/researchers/ academicians

This group would benefit tremendously from the findings of the study since they would be in a position to explore further studies from the rich content on the effect of Initial Public Offering on the financial performance of listed firms. They will also be getting an understanding on the areas that require embarking future studies.

1.6.5 Investors

Investors would benefit from the findings in getting assurance of their value for money in Initial public offers (IPO). This would therefore help in developing the investors' confidence thus reducing the perceived risk of investing in initial public offerings.

1.6.6 Future IPO's

Firms intending to go public in future would as well benefit from the study since they would be able to get insights on the possible outcomes especially on the financial performance of the firm which is ranked among the major objectives of firms.

1.7 Scope of the study

The study focused on the determination of the effect of initial public offering on the financial performance of firms that are listed at the Nairobi Securities Exchange (NSE). The data was retrieved from the NSE database, capital markets authority resource centre as well as from the specific companies' database so as to effectively answer the underlying research questions. The sample contained selected companies that had been in operation for atleast10 years after the IPO.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter aimed to unveil the works pertaining to the effect of Initial Public Offering on the financial performance of listed companies at Nairobi Stock Exchange. It included the theoretical framework and the empirical review. Conceptual framework was also included together with the past studies in the area under study.

2.2 Theoretical Framework

A theory is a set of statements or principles devised to explain a group of facts or phenomena, especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena (Mugenda, 2003). Theoretical framework is a group of related ideas that provides guidance to a research project or business endeavor (Mugenda, 2003). The theories include: Modigliani and Millers Theory as well as Efficient Market Hypothesis as outlined below.

2.2.1 Modigliani and Miller Theory of Capital Structure

Modigliani &Miller (1963)incorporated tax as a determinant of firms' capital structure in order to review their position. An entity that paid taxes would receive a partially offsetting interest called tax- shield which was basically a lower tax benefit paid. The Modigliani and Miller (1963) proposed that companies to maximize their returns by enjoying taxable benefit along corporate taxes by capitalizing on much debt capital as possible. The studies undertaken also analyzed the case of personal taxes imposed on individuals. Miller (1977), posited that the tax

legislation of the United States of America suggested two types of tax rates that were used to determine the total value of companies. The tax rates included, corporate tax rate and the tax rate imposed on the total income of the dividends.

Modigliani and Miller (1963), stated that the market value of a firm was calculated using individual firm earnings and the risk that accrued from its underlying total assets was independent on the way it either financed its investments or distributed its surplus. Titman, (1984) deduced that agency costs were as a result of use of debt in capital structure of the company. Agency costs were also brought about by positive significant relationships between managers and shareholders as well as between shareholders and debt- holders. Jensen and Meckling, (1976)in their researches emphasized there was need for firms to balance gains and costs of total debt financing which led to a theory known as the static trade- off theory by Myers (1984).

Modigliani and Miller with a number of other authors were able to determine that firms' market value was affected by tax effects changes from their level of debts. Modigliani and Miller (1958) emphasized that firms' value was increased by high levels of debt and a borrower could borrow at a lower interest rate. Baumol and Malkiel (1967) argued that if investors didn't incur costs, capital structure would be relevant as well as when in arbitrage activities. Rubinstein (1973) posited that the security markets were partially segmented, i.e., "if the sets contained both available securities and investors in each market, they would be disjoint," and if debt was traded in a different market, the traders were likely to be more risk averse than investors who had invested in the company's equity. The level of debt therefore increased and would subsequently lower the firms' total value. Similarly, Stiglitz (1972) argued that if debt was traded in a market

where the investors were more pessimistic about the firm than its equity holders, then the firms' total value would decline as a result of an increase in debt. Baxter (1967), Bierman and Thomas (1972), Kraus and Litzenberger (1973), and Robichek and Myers (1966) argued that debt policy was relevant and that internal optimal capital structure could only exist if there were costs associated with reorganization and bankruptcy.

Mesquita and Lara (2003) established there was a negative significant relationship between rates of return and debt indicated for long- term financing. However, they also found a positive significant relationship between rates of return and equity for short- term financing. Hadlock and James (2002) determined that companies preferred debt financing because they anticipated high returns. Taub (1975), also found a positive significant relationship between coefficients for four measures of profitability in a regression analysis of the said measures against debt ratio. Petersen and Rajan (1994), Baker (1973) and Nerlove (1968) also found a similar positive significant relationship but for industries in the manufacturing sector. According to a study on leveraged buyouts carried out by Gibbons and Wang (2007), they argued that there was a positive significant association between profitability and total debt as a percentage of the total buyout- financing package.

The theory also started with the Modigliani and Miller (1958) capital structure irrelevance proposition. Modigliani and Miller assumed that firms had a particular set of expected cash flows. Firms therefore divided cash flows from different investors when they identified a proportion of equity and debt to finance its assets. Investors and firms had homemade advantage since they were assumed to have easy access to the financial markets. Investors created an advantage that was wanted but not offered. The investors also got rid of any

advantage that a company took on but was not wanted. As a result, the firm's market value would be affected by leverage. Capital structure irrelevance was proved under a range of various situations. There were two different types of capital structure irrelevance propositions. The first proposition was the classic arbitrage-based irrelevance proposition which provided settings in which arbitrage created by investors kept the firm's value independent from its leverage. To add on to the Modigliani and Miller original paper, more contributions included papers written by Hirshleifer (1966) and Stiglitz (1969). The second proposition argued that "given a firm's investment policy, the dividend payout it chose to follow would neither affect the current price of its shares nor the total return to its shareholders" (Miller &Modigliani, 1961). This meant that, neither capital structure choices nor dividend policy decisions mattered in perfect markets. The Modigliani and Miller (1958) paper highlighted serious studies devoted to disregarding capital structure irrelevance as a theory or as an empirical matter. This study however posited that the Modigliani-Miller theorem failed in various circumstances which included consideration of taxes, transaction costs, bankruptcy costs, agency conflicts, time-varying financial market opportunities and investor clientele effects.

Other models used different elements from the highlighted list. It was not surprising that many different theories had been proposed given that so many different ingredients were available and covering all of these would go beyond the scope of this paper. Harris and Raviv (1991) carried out a survey on the development of the capital structure irrelevance theory as of 1991. As a result, the Modigliani-Miller capital irrelevance proposition was not easy to test. With both debt and value of the firm being endogenous and driven by other factors such as revenues, collateral, and growth opportunities, regressing value on debt made it impossible to establish a structural test of the capital irrelevance theory. Despite the fact that fairly reliable empirical

relationships between a number of factors and leverage existed, while not disapproving the theory, this didn't make it seem an unlikely characterization of how real businesses were financed. A popular theory argued as follows: "While the Modigliani-Miller theorem did not provide a realistic description of how firms finance their operations, it provided a means of finding the reasons why financing may matter". This description interpreted the theory of corporate finance reasonably. Subsequently, this theory influenced the early development of both the trade-off theory and the pecking order theory.

2.2.2 Efficient Market Hypothesis Theory

Efficient Market Hypothesis (EMH) was developed by Fama (1970). The proposition was constructed around the availability of information in the capital market and held that the current price of security reflected the available information and therefore investors could not take advantage of the market to realize abnormal profits. Efficient market hypothesis assumed an efficient capital market which faced a fair share of criticism from other scholars arguing that there was no 100% efficient market since parties could team up and interfere with the market powers of demand and supply.

Dyckman and Morse (2006) added that efficient capital markets were based on the extent to which the prices of the securities reflected prevailing circumstances and information. According to Fama (1970), Efficient Market Hypothesis did not rule out chances of investors beating the market and earning abnormal profits but rather opposed that investors consistently made abnormal profits. For instance, where the investor got excessive profits, the theory assumed it was due to luck and not investment strategies. The theory was relevant to the study since its assumptions were on the future and present information existing in the capital market.

2.3 Empirical Review

2.3.1 Size and financial performance of listed firms

Several previous studies suggested that size of the firm was directly proportional to the financial performance of the firm. According to a study by Brown (2001), firms' financial performance was directly related to the size of the firm. A study by Robert (2002), indicated that prices dropped when an issue was announced and kept increasing compared with previous releases. Grant *et al.,* (1988) unveiled that size and the intended use of proceeds did not correlate with the intended profitability of an Initial Public Offer. Rosen and Zutter (2005) empirically found that firms that went public became more profitable and grew in size as compared to their counterparts that chose not to get listed. A study carried out by Njoroge (2014), pertained to the effects of firm size on the financial performance of pension schemes in Kenya. The study used data from the annual financial statements of the studied companies and found a positive significant relationship between firms' size and their financial performance.

A study conducted by Ahmad (2005) concerning the level of profitability of Malaysian companies entering into an IPO, where the study found that the level of profitability fell shortly after IPO. This was supported by a study conducted by Zaluki (2011) in the Malaysian market where it was observed that the financial performance of firms reduced during Initial Public Offering. In the study, performance of identical firms which were out of the stock market were compared in terms of size. Additionally, Wang (2005) conducted a research in 700 companies in the Chinese market between1994 and 1999 found a significant reduction of financial performance from 9.3 % to 6.4 % three years after Initial Public Offering.

The relationship between the size of a firm and its level of debt was viewed differently by different scholars. However, different authors argued that either positive or negative relationship between the two variables was usually vast. Modigliani and Miller (1958) and Heshmati, (2008), in their studies opinioned that there was insignificant relationship between firms' size and their level of debt. Equity markets were easily accessible by publicly listed companies due to their transparency as compared to smaller companies, therefore indicating a positive significant relationship between the firms' size and their level of debt. Fama and Jensen (2003) posited that the problems of asymmetric information and operational costs in big firms could not be compared with that of small firms since they were way much smaller. Because of the benefits that big firms experienced as a result of their size, they opted to raise their capital from equity instead of debt. According to Ferri and Jones (2009), financiers were usually reluctant to offer funds to small medium enterprises due to their mismatch in information. In addition, a lot of market regulations made it difficult for small firms to access capital. In a study conducted by Cassar and Holmes (2003), there was a stipulated minimum volume of capital that small firms could attain in order for them to raise external capital. This however concluded that Small Medium Enterprises used both internal and short-term source of capital due to the limitations they faced in accessing long term financing (Mc Mahon., 2001; Chittenden *et al*., 2006 & Michaelas *et al*., 2009).

Titman and Wessels (2008) assumed that default was not likely to be experienced in large firms because they were more diversified and had a greater debt capacity than small firms. There was a positive relationship between firm size and its financial performance (Lopez-Gracia & Sanchez-Andujar 2007). A study conducted by Kubai (2016) assessed the extent to which the debt ratio was dependent on size, profitability, risk and growth using a balanced panel model.

The study however showed there was a positive relationship between companies' size and financial risk with their financial performance. According to Simerly and Li (2000), future stock prices could be predicted by the size of a company. Subsequently, Hvide and Moen (2007) opinioned that big firms did not have better performance than small firms. Bigger firms had a competitive advantage than small firms (Flamini *et al*., 2009).

The past studies both globally and locally reported both positive and negative results on the relationship between size and the financial performance after being listed for the first time at the bourse. However, this study was conducted on selected firms at Nairobi Securities Exchange so as to justify the different findings from previous scholars.

2.3.2 Liquidity and financial performance of listed firms

Liquidity is the ability of a firm to settle down its current obligations when they fall due. Firms that are highly liquid have lower uncertainty since they can easily convert their assets into cash during difficult times and therefore solve their challenges. Liquidity risk concerns to the high amount of liabilities that a company has in respect to its assets. Liquidity risk of any firm is a measure of current assets over current liabilities (Al-Khouri, 2011). A study conducted by Brown (2001) deduced a positive relationship between liquidity and profitability of firms'. Subsequently, liquidity increased agency costs since some parties might have taken advantage of the liquid assets which were vulnerable to embezzlement and misuse.

Another study by Khidmat and Rehman (2014) on the effect of liquidity on profitability of Pakistan chemical firms. They sampled 10 out of 36 companies covering nine years' period and found that liquidity had a positive significant relationship on firms' profitability as a measure of both Return on Assets and Return on Equity. Ehiedu (2014) carried a study on the effect of

liquidity on firms' profitability using selected companies and found that liquidity had a positive significant relationship with the firms' profitability.

Al-khatib and Al-Horani (2012) carried out a study on the function of a few financial ratios that forecasts liquidity on publicly listed companies in Jordan. Both logistic regression analysis and discriminant analysis were used by the authors in order to find out which of the two methods was best appropriate in forecasting Jordanian companies' liquidity. The results highlighted that between the years' 2007 and 2011, both logistic regression and discriminant analysis were able to predict liquidity. Moreover, both Return on Equity (ROE) and Return on Assets (ROA) ratios were both significant in determining public companies' liquidity listed on Amman Stock Exchange.

Effective liquidity management enabled companies to lessen their liquidity risk either by meeting their cash requirement or trading their stock. Furthermore, it allowed the companies to gain some advantages such as making higher profit margins thus surviving in the contraction cycle of the economy (Paravisini *et al.,* 2014). The relationship between a firm's current assets and its current liabilities in relation to how it can meet its debts is determined by liquidity ratios. The most commonly used ratios are the current ratio and the quick ratio which measures a company's ability to pay its short-term obligations (Brigham & Micheal, 2008).

International Financial Reporting Standards (2006) describes liquidity as the cash at hand and is to be used in the near future, after accounting for all the financial obligations that corresponds to the said period of time. Liargovas and Skandalis (2008) argued that companies used their liquid assets to finance their operations and investments in the absence of external finance. Subsequently, higher liquidity could be of benefit to a company when dealing with

unexpected contingencies during periods of low earnings and be able to cope with their obligations. According to Bategeka and Okumu (2010), there was an inverse relationship between liquidity and profitability since liquidity positively affected profitability and vice versa since banks were required by the regulatory authorities to hold liquid assets.

Alexiou and Sofoklis (2009) proffered the theory of corporate liquidity demand which assumed that choices in respect of liquidity depended on firms' access to capital markets and the value that would accrue to the firm in the future as a result of their current investments. The model however forecasted that financially constrained companies would be more susceptible to stock prices crash while unconstrained firms wouldn't. In instances where cash fell below par, the cost incurred was usually higher for companies with greater investment opportunities set due to the expected losses that would arise from letting go valuable investments. A liquid company would take advantage of the available investments, cash discounts and capped interest charges on borrowings. Hence, a positive relationship between liquidity and investment opportunity existed which therefore positively affected the financial performance of a firm.

According to Ruozi and Ferrari (2012), liquidity is a financial institution's ability to meet its cash and security requirements without being exposed to unexpected losses. If a financial institution was able to efficiently satisfy both the expected and unexpected cash flows and collateral needs without affecting neither its daily operations nor its financial situation thus liquidity was said to be satisfactory. Therefore, liquidity risk management practices involved the withdrawal or injection into the market the amount of liquidity which was in line with the intended short-term interest rates. It is the ability of a financial institution to meet the demands

for funds to its clients by ensuring they maintain adequate cash to offset their expected expenses (Samina & Ayub, 2013).

According to Sehrish and Khalid (2011), liquidity management was meant to continuously evaluate the needs for funds in order to meet their responsibility and ensure the availability of cash or collateral in a financial institution at all times in any given condition. This therefore meant that liquidity conditions in the banking system were to be assessed on a daily basis in order to determine their liquidity needs and volume in order to either inject or withdraw from the market. This therefore suggested that liquidity management involved detailed and daily analysis of the cash inflows and outflows in order to minimize the risk and inability to access deposits by savers when they demanded them. Therefore, liquidity management enabled financial institutions to handle their financial obligations as they arose, (Sufian 2011). The inability of a bank to meet its financial obligations can scare the depositors away which would therefore affect it supply of funds and would thus lead to winding up of the institution. A research conducted by Ma and Mc Cauley (2008), on the liquidity management effectiveness in the United States concluded that over 70% of the financial institutions chose to take the best management practices.

Almajali *et al*., (2012) found out that insurance companies' financial performance was affected by liquidity. The study concluded that the insurance companies considered more current assets and reduced their current liabilities because they resulted into a positive relationship between liquidity and the insurance firms' financial performance. However, a theoretical model created by Jovanovic (1982) concluded that a modest amount of liquidity had an impact on the entrepreneurial performance, but a profusion in liquidity was harmful to the companies.

Therefore, their studies concluded that the effect of liquidity on firms' financial performance was not clear. According to Kasman *et al*., (2011), liquidity on the profitability of a firm was not significant therefore indicated the impact of liquidity to be ambiguous and further research on the same was needed.

As suggested by Stiroh and Rumble (2006), another function of liquidity management was managing all idle cash of a company in order to maximize interest income and wealth of the shareholders. However, illiquidity and insolvency were not excluded from other constraints faced by the banking system, (Businge, 2017). This therefore enabled deposits to be diversified rather than remain idle and unproductive in the surplus economic unit. Another source of sufficient income was interest on loans which eradicated the idleness of cash and ensured continued provision of more resources to the financial institutions. It was not economically practicable and financially reasonable for banks to allow excess idle cash or excess liquidity at their disposal. Rather, they managed their liquidity to reasonable levels in order to maximize on their revenues. Planning and controlling of liquid assets considering the monetary policies of the Central Bank is referred to as liquidity management. According to Trujillo-Ponce, (2012), commercial banks first complied with the legal requirements concerning their cash position in order for them to plan or manage their liquidity position.

Pandey (2007) and Eljelly (2004), found out that current assets and current liabilities which are the components of working capital management affected companies' liquidity to ensure efficient financial operations in the companies. According to Palepu *et al*., (2000), the best methods of assessing a company's financial performance which included liquidity was by

use of financial ratios. Shilitsa (2015) found out that debts weakened the financial performance of a companies' therefore leading to subsequent increase of their liquidity.

Policies are put in place in order to govern the financial institutions but they turn out to be the main source of the problems faced by the institutions. However, an effective liquidity management policy must be inversely related with the institution's rate of return. A study opinioned by Kasekende and Ating-Ego (2003) concluded that the banking sector in Ghana had a negative relationship between liquidity and profitability in Ghana since they found no related relationship between the two variables. A study done by Havrylchyk and Emilia (2006) concluded that liquidity strategies on a firm did not significantly impact on Return on Assets. A study done by Matama (2008) in Nigeria suggested effective liquidity management should have been enhanced for commercial banks to thrive since liquidity could gradually erode their profitability levels.

In a study by Mutibwa (2013), it suggested that a number of commercial banks in Uganda reported poor returns due to a number of liquidity management problems. Poor liquidity management resulted to poor earnings and therefore led to subsequent losses. In some instances, it led to bank failures or winding up of the bank (Mugume, 2010). Therefore, poor liquidity management reduced the effectiveness of the bank and its ability to compete with other financial institutions in the market (Mathuva, 2010).

A study by Banafa (2015), determined the effect of liquidity on the financial performance of non-financial firms in Kenya. The study involved 42 firms listed at NSE and obtained panel data which was analysed through descriptive statistics. The study found out that liquidity positively affected corporate performance as a measure of Return on Assets. Another study by

Chemmanur and Fulghieri (1999) stated that going public enhanced trade-off between the benefits of going public and the costs that would be incurred. These benefits according to the study included a diversified portfolio and increased liquidity levels which were directly proportional to the firm's financial performance. Olongo (2013) carried out a research between the relationship of liquidity and profitability of companies publicly listed at the Nairobi Securities Exchange. Liquidity was measured by both cash conversion period and the current ratio. The cash conversion negatively affected the firms' profitability over the 5-year period while the quick ratio insignificantly affected the profitability of firms listed in the NSE over the 5-year period. Both primary and secondary reserves should be fully optimized for liquidity management to be effective. Legal and operational requirements are satisfied by primary reserves while the secondary reserves are held to satisfy both probable and unexpected short-term and seasonal cash needs by the depositors. According to Wanjohi (2013), the reserves gave rise to the achievement of both profitability and liquidity objectives of a bank.

The past studies both globally and locally reported different relationships between liquidity and firms' performance as a result of going public due to the issue of shares to the public in exchange of equity. Some showed positive results, others negative results while others did not clearly outline the relationship between liquidity the financial performance of firms after being listed for the first time at the bourse. However, this study was conducted on selected firms at Nairobi Stock Exchange to justify the different findings from previous scholars.

2.3.3 Financial risk and financial performance of listed firms

Financial risk in this study was measured using the level of gearing which was determined through the ratio of total debt to total equity. A study by Latham and Braun (2010) on the effect

of leverage in determining whether to withdraw IPO or continue. The results however showed that levered firms continued with initial public offering in order they could get enough proceeds that could de-leverage the balance sheet as compared to an initial public offering with less or no debt at all.

A study carried out by Pervan (2014) on the effect of leverage on the firms' performance, found out that leverage had a positive significant influence on firms' performance. Ritter and Welch (2002) indicated that the primary motive to go public was to raise new capital and enhance the growth of the newly listed firms. This was supported by Kim and Weisback (2008) in their study that examined initial public offerings in 38 countries and found out that the amount raised by the firm during IPO was substantial and it was used for different purposes such as de-levering, financing growth as well as increasing cash or liquidity. According to Harvey (1995), going public enabled the firm to increase its equity capitation and thus lowered the debt to equity ratio. This however lowered the risk perception of the investors and they accepted lower rates of return and therefore lowering the cost of capital. This in turn increased the firm's value as well as its level of financial performance.

Dimitropoulos and Leventis (2002) suggested that various components of financial risk affected the volatility of the firms' financial performance. They included credit risk, interest rate risk and exchange rate risk. Credit risk was considered as the biggest hindrance to financial performance to many financial institutions and financial intermediaries. Furthermore, credit risk was mainly brought about by the high levels of non-performing loans, (Jiménez & Saurina,2006). Credit risk was also considered as the risk that a borrower would not perform in accordance with its obligations therefore deducing an insignificant relationship between the financial institutions' financial performance and their rate of return. A study done by Anthony *et*

al., (1997) posited that credit risk mainly rose when a borrower failed to honor his or her debt obligation to a financial institution.

Samuel, (2015) stressed that financial performance of commercial banks were as a result of credit risk effect. The study revealed that there was a negative significant relationship between the financial performance of banks' and their credit risk management. A research conducted by Campbell *et al*., (2015) about the impact of credit risk management on financial performance of nine publicly listed banks in Ghana revealed that credit risk was inversely related to their financial performance. A study by Yimka *et al*., (2015) opinioned that credit risk had a negative significant effect on commercial banks' financial performance in Nigeria.

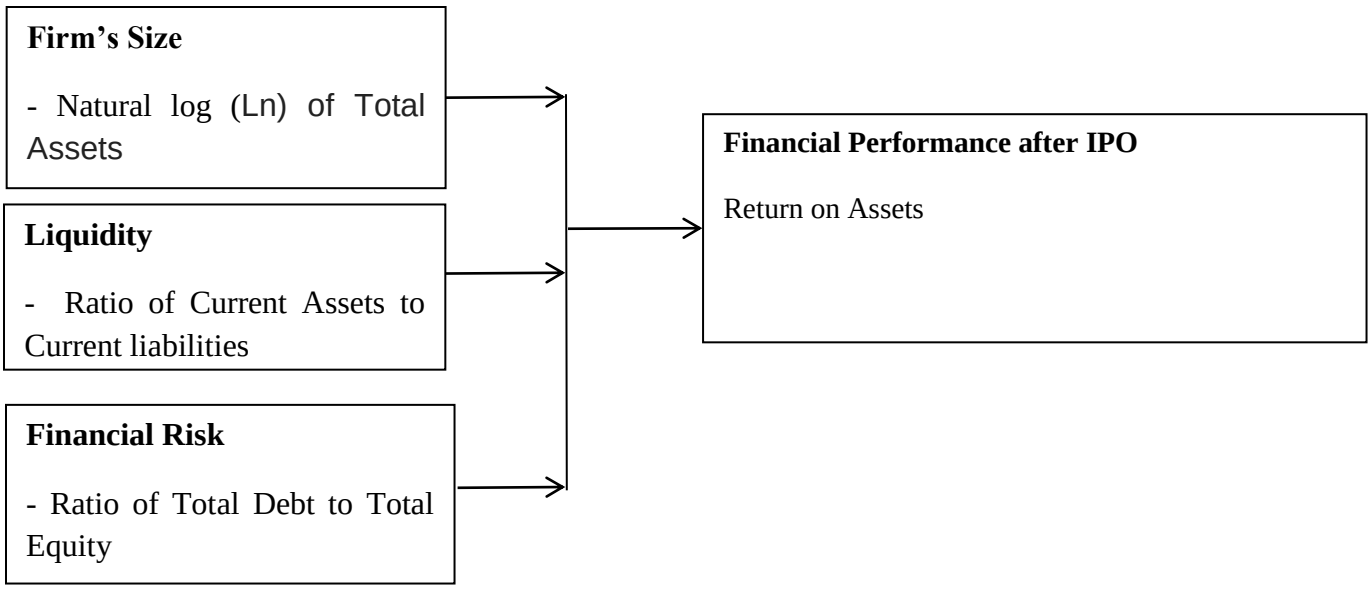
A research by Ndung'u (2013) on all oil companies in Kenya examined the effect of financial risk management on their financial performance. The study revealed that most Oil companies in Kenya had adopted financial risk management practices which were positively correlated to their financial performance. The research recommended that for oil companies' financial performance to thrive in Kenya, risk management techniques should be effectively utilized. Furthermore, kamau and Njeru, (2016) posited that credit risk had a negative significant relationship with the financial performance of the publicly listed insurance companies in Kenya. The findings from the past studies above showed mixed results where some studies reported significant positive relationship, significant negative relationship, inverse relationship while others adverse relationship between financial risk and the financial performance of the firm. This study therefore was carried out on a few listed companies at the Nairobi Stock Exchange to justify the findings concluded by past scholars.

2.4 Conceptual framework

Conceptual framework shows an understanding of the relationship between the variables being reviewed (Smith *et al*., 2011). It systematically represents the study variables, used in research to outline possible courses of action or to present a preferred approach to an idea or thought.

Figure 2.1: Conceptual Framework

Independent variables **Dependent variable**



Source: Researcher (2019)

2.5 Summary of Literature Review

This chapter outlined three theories which helped in understanding the effect of initial public offering on the financial performance of firms listed at the Nairobi Stock Exchange. The theories included the theory of corporate liquidity, Modigliani and Miller of capital structure Theory as well as Efficient Market Hypothesis Theory. The past studies on size, liquidity and financial risk

outlined the gap in literature which showed that previous scholars had put more focus on the price of the security i.e. overpricing and under-pricing after initial public offer and therefore the study aimed at bridging the gap in literature.

2.6 Operationalization of the Variables

Table 2. 1: Operationalization of Variables

	Variable	**Nature**	**Formula**
1	ROA	**Y_1** (Dependent variable)	$\frac{Net\ Profit\ After\ Tax}{Total\ Assets}$
2	Size	**X_1** (Independent variable)	*Natural log (Ln) Total Assets*
3	Liquidity	**X_2** (Independent variable)	$\frac{Current\ Assets}{Current\ Liabilities}$
4	Financial Risk	**X_3** (Independent variable)	$\frac{Total\ Debt}{Total\ Equity}$

Source: Researcher (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlined the research design that the study would use, target population, sample size, sampling procedure, instruments, data collection as well as data analysis and testing procedures.

3.2 Research Design

A descriptive research design was used since it allowed for an in-depth investigation of the variables being studied pertaining to the effect of IPO on the financial performance of firms listed at the Nairobi Securities Exchange. Mugenda and Mugenda (2003) indicated that a descriptive design entailed a complete and careful assessment of institutions, cultural groups or the various communities that embraced breadth of research. The design was most appropriate for the study since it offered an in-depth analysis across the various firms listed at the Nairobi Securities Exchange that were valuable to the study.

3.3 Target Population

Population is a well-defined or set of people, services, elements, events, group of things or households being investigated (Mugenda & Mugenda, 2003). The study targeted 13 companies which had been recently listed at the securities exchange. However, not all the companies were considered due to data collection challenges since some of the companies had not published their 2018 audited financial reports since the study would cover a period of at least 10 years (2009-

2018). Moreover, the companies listed between the stated periods were not to be considered since they would give rise to distortion of the data analysis because they had not attained the 10-year period threshold. The firms considered in the study were Crown Paints Kenya Plc, Sameer Africa Plc, National Bank of Kenya Ltd, Kenya Airways Ltd, TPS Eastern Africa Ltd, Mumias Sugar Company, Kengen Company Plc, Eveready East Africa Ltd, WPP Scangroup Ltd, Kenya-Reinsurance Corporation Ltd, Equity Group Holdings Plc,Co-operative bank of Kenya and Safaricom Plc.

3.4 Sample size and Sampling technique

Sampling is selecting some part of a group so as to represent the whole group of interest. Its primary benefit is to help reduce the amount of time needed in completing the study while saving on cost. The study used census where all the 13 firms selected were included in the study.

3.5 Data Collection

The study aimed at adopting secondary data which was sourced from the Nairobi Securities Exchange database, the Capital Markets Authority resource centre and specific companies' audited financial reports. The data covered for at least 10 years (2009-2018) for all the 13 listed companies which gave rise to panel dataset. Other secondary qualitative data was retrieved from the journals, banks magazine and books as well as the university library.

3.6 Diagnostic Tests

Diagnostic tests were used to test the accuracy of the data which was collected.

3.6.1 Test for Multicollinearity

Multicollinearity refers to the occurrence of high correlation between independent variables. This means, one variable can be used to predict others. Multicollinearity affects the result in that one is able to compare the effect of one variable against all others. Multicollinearity was tested through correlation coefficient matrix where, if r was close to -1 or +1 then there was multicollinearity problem and therefore one of the variables should have been removed from the model. Correlation of 0.5 or less is perceived to be okay.

3.6.2 Heteroskedasticity test

Heteroskedasticity means that the variance of error term is not constant and therefore makes the effect of the variables being modelled ineffective, homoskedasticity is good for the model. The test was applied based on the panel regression model adopted, for fixed effect model or Pooled OLS, Modified Wald test was used and for Random effect model LR test was used. The H_0 is that the model is homoscedastic, reject H_0 if probability > Chi2.

3.6.3 Unit root test

The unit root test was conducted to test for stationarity. The null hypothesis is that there is unit root and therefore the data should be corrected through first difference. The test was done using the Harris -Tzavalis unit root test for icfs where P value < 0.05 indicates that we reject the null hypothesis and thus no unit root.

3.7 Data Analysis

This study employed Stata software version 12 to help in the analysis. Quantitative and qualitative techniques were both used in undertaking the data analysis. This entailed generation of descriptive statistics which included the mean and standard deviation and also inferential statistics which was done through performing correlation and Panel data regression analysis. The data analyzed was presented using tables. The regression model would either be POLS, Fixed Effect Model (FE) or Random effect model (RE) in the forms shown below:

Pooled OLS

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + B_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it}$$

Fixed Effect Model

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + U_i + \varepsilon_{it}$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \lambda_t + \varepsilon_{it}$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \lambda_t + U_i + \varepsilon_{it}$$

Random Effect Model

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_i + \varepsilon_{it}$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + w_{it}$$

Where:

Y_{it}= Financial Performance of Listed companies

β_0 = Regression constant (y-intercept)

X_{1it}= Size of the firm (Independent variable 1 value for individual i at time t)

X_{2it} = Liquidity (Independent variable 2 value for individual i at time t)

X_{3it} = Financial Risk (Independent variable 3 value for individual i at time t)

ε_{it} = Error term

$w_{it} = \mathcal{E}_i + \mathcal{E}_{it}$

$\mathcal{E}_i$ = Error term due to variation between firm variation

λ_t = Error across time

U_i = Error within entity

$\mathcal{E}_{it}$= Error term due to residuals

$\beta_0, \beta_1, \beta_2$ and β_3 = Regression coefficients

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

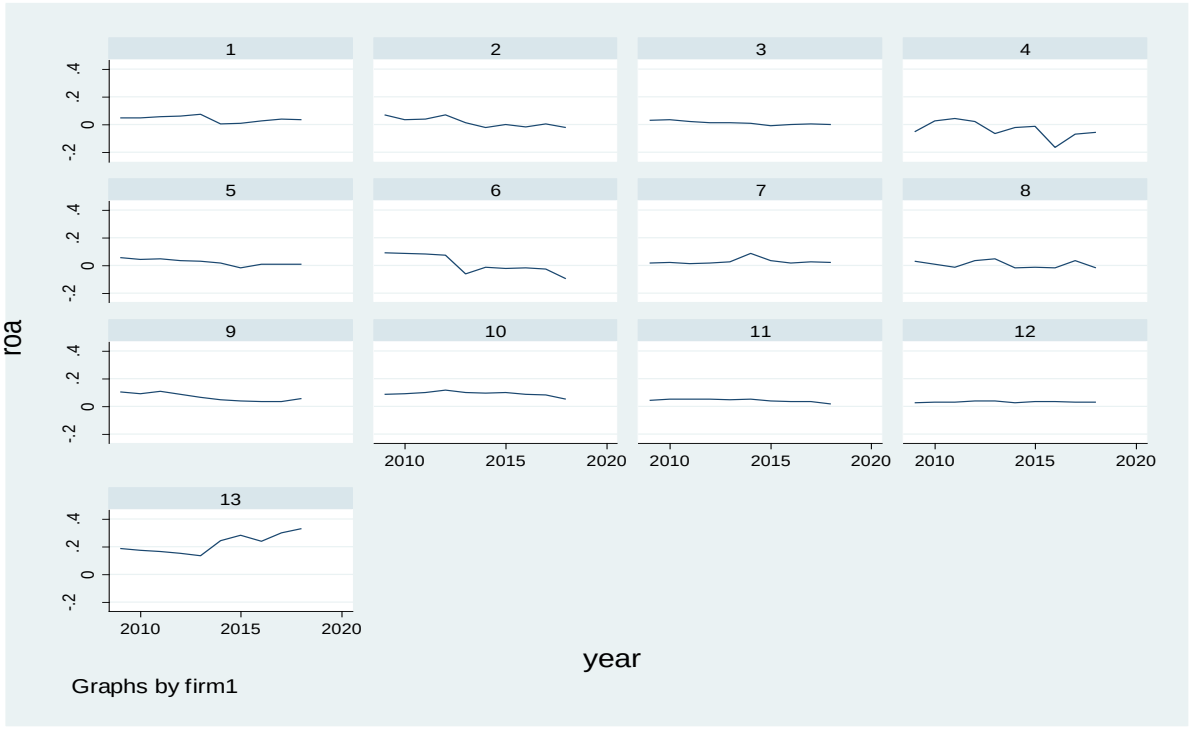
This study aimed to establish the effect of Initial Public Offering on the financial performance of firms listed at the Nairobi Stock Exchange. This chapter involved analysis, presentation and interpretations obtained from secondary data of the audited financial statements of 13 firms listed at the Nairobi Securities Exchange. Return on Assets, size, liquidity ratio and financial risk ratio were therefore analyzed. The data collected was run in a panel data analysis that was derived by Stata which is a statistical package therefore generating a suitable model as our finding. The chapter began with a brief highlight of exploratory data analysis of the panel data. Secondly, diagnostic tests were carried out to describe the existence of time related fixed effects, tests for correlation and in this study it tested for correlation between size, liquidity and financial risk across the firms. Exploratory data analysis also described the existence of unit root, heteroskedasticity of error terms and serial correlation. The Hausman test of the model specification which decides between fixed effect model and random effect model was not carried out due to violation of linear regression assumption. A Prais Winsten Panel regression model (with corrected standard errors) that produces robust results was fitted as a result of the presence of heteroscedasticity and serial correlation in the variables. The model was fitted to determine the effect of size, liquidity and financial risk on the financial performance of firms listed at Nairobi Securities Exchange.

4.2 Exploratory Data Analysis

Data analysis began with exploratory data analysis to examine the heterogeneity across firms over time. The use of either panel data model or simple pooled regression model was determined by exploratory data analysis. It was done using graphs to examine the trend of returns within an individual firm and across all firms. Details of the study are as shown below.

In the first instance, the study used empirical growth plots to study within-firm behavior of return on assets. Figure 4.1 below shows the trend of return on assets over a specific period of ten years for individual firms. The empirical growth plots revealed that return on assets changed significantly since the trends were evident with time under the study. However, there were few outliers but the variables remained to be significant hence did not suggest any existence of significant time-related fixed effects.

Figure 4.1: Growth Plot of Each Firm's Return on Asset



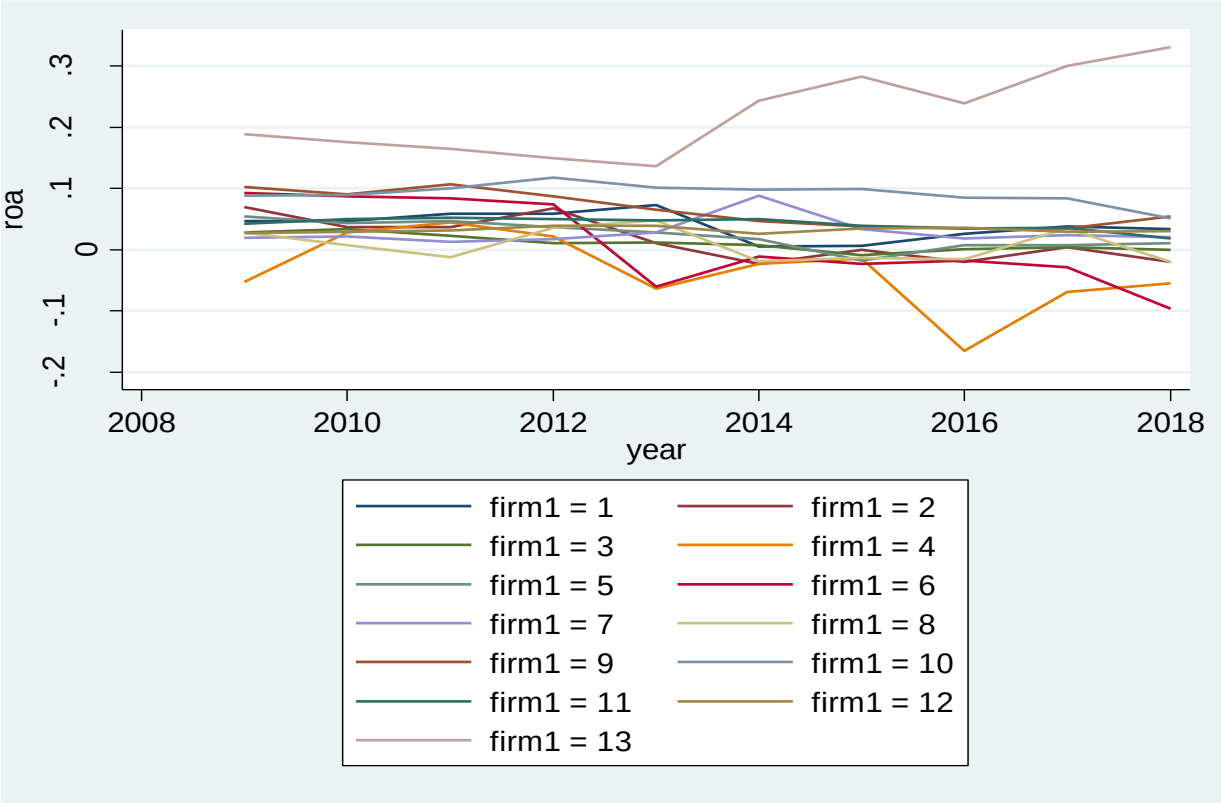
Source: Researcher (2019)

KEY

Firm 1 -Crown Paints Kenya Plc	Firm 8 - Eveready East Africa Ltd
Firm 2 -Sameer Africa Plc	Firm 9 - WPP Scangroup Ltd
Firm 3 -National Bank of Kenya Ltd	Firm 10 - Kenya-Reinsurance Corporation Ltd
Firm 4 -Kenya Airways Ltd	Firm 11 - Equity Group Holdings Plc
Firm 5 -TPS Eastern Africa Ltd	Firm 12 - Co-operative bank of Kenya
Firm 6 -Mumias Sugar Company	Firm 13 - Safaricom Plc
Firm 7 -Kengen Company Plc	

Further observation of the overlain return on assets empirical growth plots within the ten-year period indicated that the dependent variables for the firms were significantly related and there was a significant difference for the y-intercept. Once again, the dependent variables seemed to be significant. These observations are illustrated by figure 4.2 as shown below.

Figure 4.1: Overlain Plot of Return on Assets



Source: Researcher (2019)

KEY

Firm 1 -Crown Paints Kenya Plc	Firm 8 - Eveready East Africa Ltd
Firm 2 -Sameer Africa Plc	Firm 9 - WPP Scangroup Ltd
Firm 3 -National Bank of Kenya Ltd	Firm 10 - Kenya-Reinsurance Corporation Ltd
Firm 4 -Kenya Airways Ltd	Firm 11 - Equity Group Holdings Plc
Firm 5 -TPS Eastern Africa Ltd	Firm 12 - Co-operative bank of Kenya
Firm 6 -Mumias Sugar Company	Firm 13 - Safaricom Plc
Firm 7 -Kengen Company Plc	

4.3 Diagnostic analysis

This section reported results of the diagnostic analysis of the panel data. However, this section also reported on the existence of time-related fixed effects and the suitability of fitting pooled regression models as compared to panel data models. The presence of heteroscedasticity and

serial correlation was also determined in the study. Lastly a data analysis was carried out to determine whether random effects or fixed effects models were to be considered in the study.

4.3.1 Multicollinearity test

A multicollinearity test was run to determine if any correlations between the independent variables existed. Multicollinearity is the study of the relationship between independent variables in a study. High correlations are usually discouraged and this helps to preclude multicollinearity. If the coefficient of correlation< 0.7, then it means there is no multicollinearity and it was clearly elucidated in this study.

Table 4. 1: Correlation Matrix of the Study Variables

	Size	ln_liquidity1	ln_financialrisk1
Size	1.0000		
ln_liquidity1	-0.1700	1.0000	
ln_financialrisk1	0.4155*	-0.3134*	1.0000

Source: Researcher (2019)

From table 4.1 above, size and liquidity had a negative weak coefficient of correlation therefore elucidating that the correlation was statistically insignificant at 0.05 level. On the other hand, size and financial risk had a positive moderate coefficient of correlation which was statistically significant at 0.05 level. Finally, liquidity and financial risk had a negative moderate coefficient of correlation which was statistically insignificant at 0.05 level.

4.3.2 Test for Random Effects

To start with, the practicability of fitting a simple pooled regression model, which is much simpler than the panel data model was first examined. The Breusch-Pagan LM test was used to check for random effects model in order to determine which model between a simple linear regression model and a random effect model was preferable. In this test, if $p<0.05$, the model is significant. Table 4.2 below indicates chi-square value for the model is significant ($p<0.05$), therefore implying the existence of significant differences of return on assets among the firms. Consequently, it was found inappropriate to use simple regression models.

Table 4. 2: Chi-Square values for the Breusch-Pagan LM Test

Model	Dependent variable	χ^2-value	p-value
1	Return on Asset (ROA)	165.98	0.000

Source: Researcher (2019)

4.3.3 Test for Fixed Effects

Secondly, the study determined the presence of fixed effects. If fixed effects were present, then one would be required to account for the effects either by inclusion of dummy variables to capture the effects or fitting a two-way random effect model. Table 4.3, shows the results of this test which therefore revealed that there are no significant fixed effects ($p>0.05$) thus there was no need to fit two-way component models.

Table 4. 3: Test Results for Time Fixed Effects

Model	Dependent Variable	F-Value	P-Value
1	Return on Asset (ROA)	4.95	0.0029

Source: Researcher (2019)

4.3.4 Test for Heteroskedasticity

Heteroskedasticity is a serious problem since it shows the standard error is not constant thereby increasing the probability of committing a type two error, i.e. failing to reject a false hypothesis about a coefficient. The Modified Wald test for group wise heteroskedasticity in fixed effect model was used to test the data for heteroskedasticity. The null hypothesis of the Modified Wald test highlights that the data is homoscedastic across entities, i.e. the error terms have a constant variance. If the null is rejected, the conclusion is that the data is heteroscedastic, i.e. the variance of error terms across entities is not constant.

Table 4. 4: Test Results for Heteroscedasticity

Model	Dependent Variable	χ^2-value	P-Value
1	Return on Asset (ROA)	20386.30	0.0000

Source: Researcher (2019)

Since p <0.05, the study concluded that there was presence of heteroscedasticity in the dataset. Since heteroskedasticity tends to inflate the standard errors, a robust model had to be fitted to take into account the effects of heteroskedasticity.

4.3.5 Test for Serial Correlation

Serial correlation or autocorrelation is a phenomenon which occurs when the error terms of regression variables for successive periods are correlated. It can distort the efficiency of regression estimators if present in a dataset. The test was done using the Wooldridge test for serial correlation. For this study, the null hypothesis concluded that there was no first order autocorrelation in the panels. The null is therefore rejected if the p value of the test is less than 0.05. This is illustrated by table 4.5 below.

Table 4. 5: Test Results for Serial Correlation

Model	Dependent Variable	F-Value	P-Value
1	Return on Asset (ROA)	76.317	0.0000

Source: Researcher (2019)

4.3.6 Test for Stationarity

This test examines if the mean of the data in question is time independent. The Harris-Tzavalis unit root test for icfs was used to detect the non-stationarity in all the variables. Additionally, the estimates tend to change over time if the variables are non- stationary. This therefore results into spurious estimates. Therefore, differencing is applied to variables which are found to be non-stationary until the bias is eliminated. In this study, the variables under consideration were stationary. The null hypothesis was rejected since the p-value < 0.05, thus no unit root indicating the panels were stationary. The p-value in this study was 0.0217 as reflected in table 4.6 below.

Table 4. 6: Test Results for Stationarity

	Statistic	p-value
Unadjusted t	-4.8321	
Adjusted t*	-2.0199	0.0217

Source: Researcher (2019)

4.4 Model Fitting: Prais Winsten Panel Regression with Corrected Standard Errors

In this study, the Hausman test of the model specification which decides between fixed effect model and random effect model was not carried out due to violation of linear regression assumption. It was as a result of the presence of heteroskedasticity and serial correlation in the variables. Therefore, a Prais Winsten Panel regression model (with corrected standard errors)

that produces robust results in the presence of serial correlation and heteroskedasticity was fitted. The results are illustrated in table 4.7 below.

Table 4. 7: Prais Winsten Panel Regression with Corrected Standard Errors

Group variable: firm1				Number of obs = 125		
Time variable: year				Number of groups = 13		
Panels: heteroskedastic (unbalanced)				Obs per group: min = 6		
Autocorrelations: common AR(1)				:avg =9.615385		
				:max =10		
Estimated covariances =13				R-squared =0.1468		
Estimated autocorrelations =1				Wald chi2(3) =9.62		
Estimated coefficients =4				Prob>chi2 =0.0221		
roa	Het-corrected Coef	Std. Err.	z	P>[z]	[95% Conf.	Interval]
size	.0067281	.0032969	2.04	0.041	.0002663	.01319
ln_liquidity1	.0023599	.0072816	0.32	0.746	-.0119117	.0166316
ln_financialrisk1	-.0186353	.0072052	-2.59	0.010	-.0327572	-.0045135
_cons	-.1074092	.0779782	-1.38	0.168	-.2602437	.0454254
rho	.8053412					

Source: Researcher (2019)

The panel regression results with corrected standard errors presented in table 4.7 above indicated that the constant was -0.1074092, but it is statistically insignificant at the 5% level. This therefore implied that if the independent variables were held constant, the return on assets decreased by 10.74092%.

The regression results indicated a coefficient of 0.0067281 for size, with a p value of 0.041 which was less than 0.05. This therefore implied that there was a positive significant relationship between the size of publicly listed firms and their return on assets. Subsequently, a 1% increase in size would lead to a 0.67281 % increase in the return of assets of the publicly listed companies at Nairobi Securities Exchange.

The coefficient of liquidity ratio was 0.0023599which was insignificant at 5 percent level with p-value of 0.746 which was greater than 0.05. The results indicated that there was a positive insignificant relationship between liquidity and the return on assets of publicly listed companies at the NSE. Therefore, a unit change in liquidity ratio would result to a 0.23599% change in return of assets in the publicly listed firms at the Nairobi Securities Exchange.

The coefficient of financial risk ratio was -0.0186353and significant with a p-value of 0.010 which was less than 0.05. The results showed that there was a negative significant relationship between financial risk and return on assets of publicly listed companies at Nairobi Stock Exchange. The negative coefficient indicated that the beta coefficient was inverse implying an inverse relationship between the return on assets of publicly listed companies and the financial risk ratio. Thus a 1% change in financial risk ratio resulted to a 1.86353% decrease in return on assets of publicly listed companies at the Nairobi Securities Exchange.

Equation (i) can therefore be rewritten as:

$\mathbf{Y} = -0.107 + 0.007X_1 + 0.002X_2 - 0.019\ X_3$……. (i)

Where:

Y = Dependent Variable (Return on Assets)

-0.107= Constant (Level of Return on Assets when all independent variables are at zero)

0.007= Coefficient of X_1 (size) -change in the dependent variable due to a unit change in X_1

0.002= Coefficient of X_2(Liquidity)-change in the dependent variable due to a unit change in X_2

-0.019 = Coefficient of X_3(Financial Risk) change in the dependent variable due to a unit change in X_3

From the above equation, only size and financial risk had an effect on the return on assets of firms listed at the Nairobi Securities Exchange.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study sought to establish the effect of initial public offering on the financial performance of firms listed at the Nairobi Securities Exchange. Therefore, this chapter presents the summary of results of the study, conclusions and recommendations in line with the objectives of the study. It also compares and contrasts the results with existing extant literature. In addition, the chapter also presents policy implications and recommendations made to various stakeholders. Various limitations of the study are also highlighted and areas for further research are as well suggested.

5.2 Summary of Findings

5.2.1 Size and Financial Performance of firms listed at Nairobi Securities Exchange.

The study's regression results showed a coefficient of 0.0067281 for size, with a p value of 0.041 therefore implying that there was a positive significant relationship between the size of publicly listed companies and their return on assets. The implication of this finding was that size tends to positively impact the return on assets of the firms. This was a result of their diversification since by issuing of an IPO which increased its shareholders thus growth in its market share. As such, in order for the publicly listed companies to optimize their return on assets, they should implement and manage their policies that make the firms' more attractive to their shareholders therefore enabling greater profitability.

The study was in agreement with Rosen and Zutter (2005) and Njoroge (2014) who concluded that that there was a positive significant relationship between firms' size and their financial performance because firms that went public became more profitable and grew in size as compared to their counterparts that chose not to get listed. The studies of Titman and Wessels (2008); Chittenden *et al.*, (2006); Cardone-Riportella *et al*., (2001) and Daskalakis and Psollaki (2010) highlighted a positive relationship between the size of companies and their financial performance as a result of their level of debt. This was because large firms were less likely to face moral hazards than small companies therefore preferred debt as a source of capital.

The findings of Titman and Wessels (2008); Lopez-Gracia and Sanchez-Andujar (2007); Simerly and Li (2000); Hvide and Moen (2007) and Flamini *et al*., (2009) were also in agreement with the results of this study that size of a business had a positive relationship with the financial performance of a firm because publicly listed companies were more diversified and had a greater competitive advantage.

The study was conducted on selected firms at Nairobi Securities Exchange and therefore justified the different findings from previous scholars. It concurred with some of the studies both globally and locally that concluded there was a positive significant relationship between size and the financial performance of firms after being listed for the first time at the bourse.

5.2.2 Liquidity and Financial Performance of firms listed at Nairobi Securities Exchange.

The results of this study highlights the coefficient of liquidity ratio to be 0.0023599which is not statistically significant at 5 percent level with a p-value of 0.746 which is greater than 0.05. The results indicate that there was an insignificant positive relationship between liquidity and the return on assets of publicly listed companies.

The study was in agreement with Pandey (2007); Eljelly (2004) and Shilitsa (2015) who concluded in their studies that there was an insignificant positive relationship between liquidity and return on assets since an increase in the firm's liquidity could weaken its financial performance. The studies of Kasekende and Ating-Ego (2003) and Havrylchyk and Emilia (2006), concluded that policies that were put down to govern the financial institutions turned out to be the main source of problems faced by the institutions. However, effective liquidity management policies exhibited an insignificant relationship between the institutions' liquidity and their return on assets.

Additionally, the studies of Mutibwa (2013); Mugume (2010) and Mathuva (2010) were also in agreement with this study because they concluded that poor liquidity management resulted to poor earnings and losses of financial institutions therefore reducing their effectiveness in the market which made most of them to be wound up. This study was also in agreement with the work of Olongo (2013) who carried out a research on the relationship between liquidity and profitability of publicly listed companies at the Nairobi Securities Exchange. The study concluded that liquidity insignificantly affected the profitability of the publicly listed firms at the Nairobi Securities Exchange over a period of 5 years.

This study however justified the different findings from previous scholars both globally and locally that posited a positive insignificant relationship between size and the financial performance of firms after being listed for the first time at an exchange.

5.2.3 Financial risk and Financial Performance of firms listed at Nairobi Securities Exchange.

The results of this study shows coefficient of financial risk ratio to be-0.0186353and is significant with a p-value of 0.010 which is less than 0.05. The results depicted a significant negative relationship between financial risk and return on assets of publicly listed companies at Nairobi Securities Exchange. The negative coefficient indicated that the beta coefficient had an inverse relationship between the return on assets of publicly listed companies and their financial risk ratio. Thus a 1% change in financial risk ratio resulted to a 1.86353% decrease in return on assets of publicly listed companies at the Nairobi Stock Exchange. The financial risk of a company also decreases because the firms tend to increase their wealth as a result of increase in their shareholders therefore they were able to absorb dramatic events without threats to their assets.

The study is however in agreement with Samuel, (2015); Campbell *et al*., (2015) and Yimka *et al*., (2015) whose works suggested various components of financial risk such as credit risk which was a major threat to the firms' financial performance. Their studies however posited a negative significant relationship between the financial performance of banks' and their financial risk management. Additionally, kamau and Njeru, (2016) study was also in agreement with this study after they found out that credit risk had a negative significant relationship with the financial performance of the publicly listed insurance companies in Kenya.

This study was conducted on selected firms at Nairobi Securities Exchange and therefore justified the different findings from previous scholars. It concurred with some of the studies both globally and locally that determined a negative significant relationship between financial risk and the financial performance of firms after being listed at an exchange.

5.3 Conclusions

The general objective of the study was to establish the effect of initial public offering on the financial performance of firms listed at the Nairobi Securities Exchange. Additionally, the specific objectives were to establish the effect of size, liquidity and financial risk on the financial performance of the publicly listed companies at the Nairobi Securities Exchange. The results of this study showed that all the specific objectives had a special individual relationship with the financial performance of the firms listed at the Nairobi Securities Exchange.

Size is crucial on the financial performance of firms listed at the NSE since it exhibited a positive significant relationship with the financial performance in the study and contributed much on the same. Some indicators of the positive significant relationship were the level of transparency and information asymmetry that listed firms do exhibit since they are on the limelight of the public and have do have a say on the same. Additionally, public listed companies are more diversified than small companies and therefore make them to have a higher competitive advantage.

Secondly, liquidity indicated a positive insignificant relationship with the financial performance of firms listed at the Nairobi Securities Exchange. However, some indicators of the positive insignificant relationship were liquidity management policies and strategies put in place to govern the publicly listed firms. These indicators turned out to be the main source of the problems faced by the firms therefore leading to poor returns, reduced ineffectiveness therefore subsequent losses to the firms. In conclusion, an effective liquidity management policy and strategy must be inversely related with the company's financial performance.

Finally, financial risk posited a negative significant relationship with the financial performance of firms listed at the Nairobi Securities Exchange. Various components which affected the volatility of the firms' financial performance included interest rate risk, exchange rate risk and credit risk which were considered as the biggest hindrance to financial performance. In conclusion, firms listed at the Nairobi Securities Exchange should adopt and effectively utilize financial risk management practices which are positively correlated to their financial performance in order the performance of the securities exchange can thrive not only in the country but also in the world.

5.4 Recommendations of the study.

In view of these study findings, the following would be recommended: more companies should take the initiative to be listed at the securities exchange in order to improve on their transparency thus building confidence of their activities to the public. This will also improve on their information asymmetry and therefore have a competitive advantage as compared to the non-listed firms. Publicly listed firms should also put in place liquidity management strategies and policies that should effectively govern them therefore resulting to better and improved returns. Publicly listed companies' management should also put into place financial risk administration policies that would improve their financial performance. They also need to place and devise strategies that will not only limit their exposition to financial risk but can develop their performance and competitiveness with other listed firms from across the world. The Nairobi Securities Exchange and the Capital Markets Authority would use the recommendations to put into place policies aimed at improving the financial performance of the public listed firms since they regulate them. This study would be a valuable addition to literature review and scholars of

business, finance and investment who would use its results to further their knowledge. Additionally, the study would be used to give further insight to the field of research and give answers to research questions not covered in this study.

5.5 Limitations of the study

Despite the study being a success, the most difficult part was data analysis due to some technicalities of the data collected. Moreover, data collection was also a challenge because the firms' that the researcher had targeted to study at the given specific period had not yet published their audited financial reports. This however led the researcher to carry out research in some of the firms' that had not being identified for the study and also dropped some of the firms' that had being identified for the study. Another limitation was that one of the variables turned out to be insignificant but since two of the variables were significant, that was enough justification to make the model significant.

5.6 Areas for further study

There were various research gaps which were documented out of this study's effort and would provide some basis for further empirical investigations. Firstly, there was need to consider carrying out a similar study that adopts other variables like cash conversion ratio to confirm their contribution to publicly listed firms' financial performance in relation. The study also suggested that further studies would need to be undertaken that will incorporate variables such as credit risk, interest rate and exchange rate risk that would see the contribution of the relationship between financial risk and financial performance of publicly listed firms.

REFERENCES

Alexiou, C., & Sofoklis, V., (2009). Determinants of bank profitability: Evidence from the Greek banking sector. *Economic Journal* LIV (182), pp. 93-119.

Al-Khatib, H., & Al-Horani, A., (2012). Predicting financial distress of public companies listed in Amman stock exchange. *European Scientific Journal.* 8

Al-Khouri, R., (2011). Inverse relationship of financial risk and performance in commercial banks. *International Research Journal of Finance and Economics*. 65 (1), 72-81.

Almajali, A. Y., Alamro, S. A., & Al-Soub, Y. Z. (2012). Factors affecting the financial performance of Jordanian insurance companies listed at Amman Stock Exchange. *Journal of Management research*, *4*(2), 266.

Ahmad, Z., & Lim, S.M. (2005). Operating performance of initial public offerings in Malaysia. *Capital Market Review*, 13, pp. 21-32.

Ahmad, Z., & Nurwati, A., (2008). Post-IPO Operating Performance and Earnings Management. 1(2).

Ahmad-Zaluki, N. A., Campbell, K., & Goodacre, A. (2011). Earnings management in Malaysian IPOs: The East Asian crisis, ownership control, and post-IPO performance. *The International Journal of Accounting*, *46*(2), 111-137.

Akerlof, G., (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. The Quarterly Journal of Economics, 84(3):http://www.jstor.org/stable/1879431.

Anthony, A., Atkinson, J. H., Waterhouse, H., &Robert B. W., (1997). A Stakeholder Approach to Strategic Performance Measurement.

Ayako, A., Kungu, G., & Githui, T. (2015). Determinants of the Performance of Firms Listed at the Nairobi Securities Exchange. *Research Journal of Finance and Accounting*, *6*(12), 157-164.

Baker, S. H. (1973). Risk, leverage and profitability: an industry analysis. *The Review of economics and Statistics*, 503-507.

Baker, M., & Gompers, P. A. (2003). The determinants of board structure at the initial public offering. *The Journal of Law and Economics*, *46*(2), 569-598.

Ball, R. (2006). International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting and business research*, *36*(sup1), 5-27.

Banafa, A. S. (2015). Determinants of Capital Structure on Profitability of Firms in the Manufacturing Sector in Kenya. *International Journal of Current Business and Social Sciences*, 1 (3), 175-192.

Banafa, A. S., Muturi, W., & Ngugi, K. (2015). The liquidity factor in the financial performance of non-listed financial firms in Kenya. *International Journal of Finance and Accounting 4 (7), 22, 44*.

Bategeka, L., &Okumu, J.L., (*2010*). Banking sector Liberalization in Uganda.

Baxter, N. D., &Cragg, J.G., (1967), 'Corporate choice among long-term financing instruments'. *Review of Economics and Statistics*52(3), 301–324.

Baumol, W.J., & Malkiel, B.G., (1967). The Firm's Optimal Debt-Equity Combination and the Cost of Capital. *The Quarterly Journal of Economics*, Volume 81, Issue 4, November 1967, Pages 547–578, https://doi.org/10.2307/1885578.

Bessembinder, H., & Zhang, F. (2013). Firm characteristics and long-run stock returns after corporate events. *Journal of Financial Economics*, *109*(1), 83-102.

Bessler, W., Julian, H., & Kurmann, P., (2012). Hedge funds and optimal asset allocation: Bayesian expectations and spanning tests, *Financial Markets and Portfolio Management* 26, 109-141.

Bieman, H., & Thomas, J., (1972). Ruin considerations and debt issuance. *Journal of Financial and Quantitative Analysis*, 7(1).

Bharat, A.J., & Omesh, K. (1994). The Post- Issue Operating Performance of IPO Firms. *The Journal of the American Finance Association, 49(5), 1699 – 1726.* https://doi.org/10.1111/j.1540-6261.1994.tb04778.x.

Boehmer, B., Boehmer, E., & Fishe, R. P. (2006). Do institutions receive favorable allocations in IPOs with better long-run returns? *Journal of Financial and Quantitative Analysis*, *41*(4), 809-828.

Brau, J. C., Couch, R. B., & Sutton, N. K. (2012). The desire to acquire and IPO long-run underperformance. *Journal of Financial and Quantitative Analysis*, *47*(3), 493-510.

Brigham, E. F., & Michael C. E., (2008). Financial Management: Theory and Practice

Brown, H. D., (2001). *Teaching by Principle and Interactive Approach to language pedagogy*. New York: Longman Inc.

Brown, H. D., (2004) language assessment: *Principle and Classroom Practice.* New York: Pearson Education.

Brown, S., &Caylor, D., (2004). Corporate Governance and Firm Performance, European Financial Management, Vol. 2, No. 10; 151-170.

Brown, S., & Caylor, D., (2004). Corporate Governance and Firm Performance. *European Financial Management*, *2*(10), 151-170.

Businge, H. (2017). Effect of Liquidity Management on the Performance of Commercial Banks: A Case of Stanbic Bank Uganda Limited (Doctoral dissertation, Makerere University).

Callan, S. J., & Thomas, J. M. (2009). Corporate financial performance and corporate social performance: an update and reinvestigation. *Corporate Social Responsibility and Environmental Management*, *16*(2), 61-78.

Campbell, J. L., Chen, H., Dhaliwal, D. S., Lu, H. M., & Steele, L. B. (2014). The information content of mandatory risk factor disclosures in corporate filings. *Review of Accounting Studies*, *19*(1), 396-455.

Cardone-Riportalla, C. L., Lado, N., Gil, M. J. A., & Sasi, V., (2001). The relative effects of client-following and market-seeking strategies in the internationalization process of financial-service companies: A comparison of Spanish and Finnish entities.

Carter, R. B., Dark, F. H., & Singh, A. K. (1998). Underwriter reputation, initial returns, and the long- run performance of IPO stocks. *The Journal of Finance*, *53*(1), 285-311.

Cassar, G., &Holmes, S., (2003) "Capital Structure and Financing of SMEs: Australian Evidence". *Journal of Accounting and Finance,* 43: 123 – 47.

Certo, S. T. (2003). Influencing initial public offering investors with prestige: Signaling with board structures. *Academy of management review*, *28*(3), 432-446.

Chancharat, N., & Krishnamurti, C., (2012). Board Structure and Survival of New Economy IPO Firms. *Corporate governance, an international review,* 20(2), 144-163.

Chemmanur. T., & Fulghieri, P., (1994). Investment Bank Reputation, Information Production, and Financial Intermediation. *Journal of Finance*, 49, 57-79.

Chemmanur, T.J., & Fulghieri, P., (1999). A Theory of the Going-public Decision, *Review of Financial Studies* 12, 249–280.

Chemmanur, T.J., He, S., and Nandy, D., (2005). The Going Public Decision and the Product Market, working paper.

Chi, J., & Padgett, C. (2005). Short-run underpricing and its characteristics in Chinese initial public offering (IPO) markets. *Research in International Business and Finance*, *19*(1), 71-93.

Chittenden, F., Hall, G., & Hutchinson, P., (2002), 'Small Firm Growth, Access to Capital Markets and Financial Structure: Review of Issues and an Empirical Investigation', Small Business Economics, Vol. 8, pp. 59–67.

Claus, I., & Grimes, A. (2003). Asymmetric information, financial intermediation and the monetary transmission mechanism*: A critical review* (No. 03/19). New Zealand Treasury.

Corneli, F., Goldreich, D., & Ijungqvist, A., (2006). Investor Sentiment and Pre- IPO Markets. *The Journal of the American Finance Association*. 61(3), 1187-1216.

Daskalakis, N., Eriotis, N., Thanou, E., & Vasiliou, D., (2014). Capital structure and size: new evidence across the broad spectrum of SMEs. *Journal of Managerial Finance, 40*(12), 1207 – 1222.

Davidson III, W. N., & Dutia, D. (1991). Debt, liquidity, and profitability problems in small firms. *Entrepreneurship Theory and Practice*, *16*(1), 53-64.

De Wet, J. H. V. H., & Du Toit, E. (2007). Return on equity: A popular, but flawed measure of corporate financial performance. *South African Journal of Business Management*, *38*(1), 59-69.

Dharan, B. G., & Ikenberry, D. L. (1995). The long- run negative drift of post- listing stock returns. *The Journal of Finance*, *50*(5), 1547-1574.

Dimitropoulos, P., & Leventis, S., (2010). The role of corporate governance in earnings management: Experience from US banks. *Journal of Applied Accounting Research*. 13(2):161-177.

Dunbar, C. G. (2000). Factors affecting investment bank initial public offering market share. *Journal of Financial Economics*, *55*(1), 3-41.

Dyckman, T. R., &Morse. D., (1986). Efficient Capital Markets and Accounting: A Critical Analysis. Prentice-Hall.

Edmonston, P. (2009). Google's IPO, Five Years Later. *New York Times*.

Ehiedu, V. C. (2014). The Effect of liquidity on profitability of some selected companies: the financial statement analysis (FSA) approach. *Research Journal of Finance and Accounting*, *5*(5), 81-90.

Eljelly, A. (2004). Liquidity-Profitability trade off. An empirical investigation in an emerging market. *International Journal of Commerce and Management* 14:48-61

Fama, E., (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance* 25:383-423.

Fama, E. F., & Jensen, M. C., (1983). "Agency Problems and Residual Claims." *Journal of Economics.* 26. pp 327-49.

Fama, E. F., & Jensen, M. C., (2008). "Organizational Forms and Investment Decisions." Managerial Economics Research Center Working Paper no. MERC 83-03.

Fauzi, F., Wellalage, N.H. and Locke, S. (2012). The Global Financial Crisis' Impact on Short-term Performance of IPO: The Case Study of New Zealand Firms' IPOs. *Asian Journal of Finance & Accounting* [online], Vol. 4, No. 2, 2012 Available from: http://www.macrothink.org/journal/index.php/ajfa/article/view/1829/2179.

Feri, G. M., & Jones, W. H., (2009). Determinants of Financial Structure: A New Methodological Approach. Journal of Finance. 34(3). Pp 31-44.

Flamini, V., McDonald, C., & Schumacher, L., (2009). Determinants of Commercial Bank Profitability in Sub- Saharan Africa. IMF Working Paper, 1-30.

Garcia-Castro, R., Ariño, M. A., & Canela, M. A. (2010). Does social performance really lead to financial performance? Accounting for indigeneity. *Journal of Business Ethics*, *92*(1), 107-126.

Gajewski, J. F., & Gresse, C. (2006). A survey of the European IPO market. *ECMI Research Paper*, (2).

George, A. (1970). The market for 'Lemons': Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, *84*(3), 488-500.

Ghosh S (2005), "Underpricing of Initial Public Offering: The Indian Experience", *Emerging Markets Finance and Trade*, Vol. 41, No. 6, pp. 45-57.

Gibbons, L. J., & Wang, X. L. (2007). Striking the Rights Balance among Private Incentives and Public Fair Uses in the United States and China. *J. Marshall Rev. Intell. Prop. L.*, *7*, i.

Gompers, P., & Lerner, J. (1998). Venture capital distributions: Short- run and long- run reactions. *The Journal of Finance*, *53*(6), 2161-2183.

Grant, R. M., Jammine, A. P., & Thomas, H. (1988). Diversity, diversification, and profitability among British manufacturing companies, 1972–1984. *Academy of management Journal*, *31*(4), 771-801.

Grundvall, B., Melin-Jakobsson, A., & Thorell, P. (2004). Why are IPOs still attractive? *Journal of Financial Economics*, *55*, 281-325.

Hadi, M. M. (2006). Review of capital market efficiency: Some evidence from Jordanian market. *International Research Journal of Finance and Economics, 3*(3), 13-27.

Hadlock, C. J., & James, C. M., (2002). Do banks provide financial slack? *The Journal of Finance,* 57(3), 1383-1419.

Harris, M., &Raviv, A., (1991). The Theory of Capital Structure. *Journal of Finance*.

Harvey, C. R., (1995). Predictable Risk and Returns in Emerging Markets. NBER Working Paper No. 4621. *The National Bureau of Economic Research.*

Hasan T, Hadad H and Gorener R (2013), "Value Relevance of Accounting Information and IPO Performance in Indonesia", *Accounting and Finance Research*, Vol. 2, No. 1, pp. 90-96.

Havrylchyk, O., & Emilia, J., (2005). "Profitability of Foreign banks in Central and Eastern Europe: Does the Mode of Entry Matter?" CEPII Working Paper No. 21.

Heshmati, A., (2008). Investment and Performance of Firms: Correlation or Causality? *A Journal of Corporate Ownership and Control*. 6(72)

Hirshleifer, J., (*1966*). "Investment Decision Under Uncertainty: Applications of the State-Preference Approach," *The Quarterly Journal of Economics.*

Hvide, H. K., & Moen, J., (2007). Liquidity Constraints and Entrepreneurial Performance.

Jain, B.A., & Kini, O. (1994). The post-issue operating performance of IPO firms. *Journal of Finance*, 49, pp 1699-1726.

Jacquillat, B., Husson, B., & McDonald, B., (1989). French new issues, underpricing and alternative methods of distribution. *A reappraisal of the efficiency of financial markets* (pp. 349-368).

Jewartowski, T., & Lizińska, J. (2012). Short-and long-term performance of Polish IPOs. *Emerging Markets Finance and Trade*, *48*(2), 59-75.

Jensen, M. C. and Meckling, W., (1976), 'Theory of the firm: Managerial behavior, agency costs, and capital structure'. *Journal of Financial Economics* **3**, 305–360.

Jiménez., & Saurina, J., (2004): "Collateral, Type of Lender and Relationship Banking as Determinants of Credit Risk". *Journal of Banking and Finance.*

Jiménez, G.; Salas. V., & Saurina, J., (2004): "Determinants of Collateral". Working Paper, Banco de España. Forthcoming.

Jovanovic, B., (1982). `Selection and the Evolution of Industry', Econometric, Vol. 50, pp. 649-670.

Kamau, F., & Njeru, A. (2016). Effect of Liquidity Risk on Financial Performance of Insurance Companies Listed at the Nairobi Securities Exchange. *International Journal of Science and Research, 5*(10), 867-872.

Kanja, J. N. (2013). The effect of initial public offerings on the stock returns of companies listed at the Nairobi securities exchange. *Unpublished MBA Thesis, University of Nairobi*.

Kasekende, L.A., and Ating-Ego, M., 2003, "Financial Liberalization and its implication for the domestic system: The case of Uganda", *AERC Research Paper*, No. 128.

Kasman, S., Vardar, G., & Tunc, G., (2011). The Impact of Interest Rate and Exchange Rate Volatility on Banks' Stock Returns and Volatility: Evidence from Turkey**.** *Article* in *Economic Modelling***.**28(3):1328-1334.

Khidmat, W., & Rehman, M. (2014). Effect of liquidity and solvency on profitability chemical sector of Pakistan. *Economics management innovation*, *6*(3), 34-67.

King, E. and Banderet, L. (2014). IPO Stock Performance and the Financial Crisis. Social Science Research Network (SSRN)[online], Available from: http://ssrn.com/abstract=2456220 [Accessed 16th September2014].

Kinyua, A. N. (2014). Factors Affecting the Performance of Small and Medium Enterprises in the Jua Kali Sector in Nakuru Town, Kenya. *Journal of Business and Management (IOSR-JBM),* 16(1), 80-93.

Kinyua, J. K., Gakure, R., Gekara, M., & Orwa, G. (2015). Effect of internal control environment on the financial performance of companies quoted in the Nairobi Securities Exchange. *International Journal of Innovative Finance and Economics Research*, *3*(4), 29-48.

Kim, W., & Weisbach, M. (2005). Do firms go public to raise capital? (No. w11197). National Bureau of Economic Research.

Kim, W., & Weisbach, M., (2008). Motivations for public equity offers: An international perspective. *Journal of Financial Economics*. 87(2). Pp 281-307.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of accounting and economics*, *39*(1), 163-197.

Kraus, A., & Litzenberger, R.H., (1973). A state-preference model of optimal financial leverage. *Journal of Finance.*

Krishnan, C. N. V., Ivanov, V. I., Masulis, R. W., & Singh, A. K. (2011). Venture capital reputation, post-IPO performance, and corporate governance. *Journal of Financial and Quantitative Analysis*, *46*(5), 1295-1333.

Krishnan, V.S., &Sukar, A., (2014). Capital ratio of US banks, *International Journal of Business and Economics Perspectives*, 9 (1), pp. 135-150.

Kubai, F. B. (2016). The effect of capital structure on the financial performance of manufacturing firms in Kenya. *Unpublished Thesis*.

Kutsuna, K., Cowling, M., & Westhead, P. (2000). The short-run performance of JASDAQ companies and venture capital involvement before and after flotation. *Venture Capital: An International Journal of Entrepreneurial Finance*, *2*(1), 1-25.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of financial economics*, *58*(1-2), 3-27.

Latham, S., & Braun, M. R. (2010). To IPO or not to IPO: Risks, uncertainty and the decision to go public. *British Journal of Management*, *21*(3), 666-683.

Latham, S., & Braun, M., (2008). The performance implications of financial slack during economic recession and recovery: observations from the software industry (2001-2003). *Journal of Managerial Issues*, *20*(1), 30-52.

Latham, S., & Braun, M., (2011). Economic recessions, strategy, and performance: a synthesis. *Journal of Strategy and Management*, *4*(2), 96-115.

Liargovas, P., &Skandalis,K., *2008*. "Factors Affecting Firms' Financial Performance: The Case of Greece," Working Papers 0012.

Liebrand, C. B. (2007). *Measuring the performance of agricultural cooperatives* (No. 1502-2018-7855).

Lopez-Gracia, J., & Sanchez-Andujar, S., (2007). Financial Structure of the Family Business: Evidence from a Group of Small Spanish Firms. *Family Business Review*, Vol. 20, No. 4, pp. 269-287.

Loughran, T., & Ritter, J. (2004). Why has IPO underpricing changed over time? *Financial management*, 5-37.

Ma, G., & McCauley, R. N. (2008). Efficacy of China's capital controls: Evidence from price and flow data. *Pacific Economic Review*, *13*(1), 104-123.

Maina, L., & Ishmail, M. (2014). Capital structure and financial performance in Kenya: Evidence from firms listed at the Nairobi Securities Exchange. *International Journal of Social Sciences and Entrepreneurship*, *1*(11), 209-223.

Majali, A., Al-Soub, Y.Z., & Alamro. S. A., (2012). Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange.

Makori, D. M., & Jagongo, A. (2013). Working capital management and firm profitability: Empirical evidence from manufacturing and construction firms listed on Nairobi securities exchange, Kenya. *International Journal of Accounting and Taxation*, *1*(1), 1-14.

Malkiel, B. G., & Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The journal of Finance*, *25*(2), 383-417.

Matama, R. (2008). Corporate governance and financial performance of selected commercial banks in Uganda. Marketers University Business School. Faculty of Commerce. East Africa: Kampala Uganda.

Mathuva, D.M., (2010). Influence of working capital management components on corporate profitability: A survey on Kenyan listed firms. *Research Journal of Business Management 3* (1),1-11.

Mauwa, J. (2017). *Determinants of Financial Performance of Firms Listed on the Rwanda Stock Exchange* (Doctoral dissertation, COHRED, JKUAT).

McMahon, R. G. (2001). Growth and financial profiles amongst manufacturing SMEs from Australia's business longitudinal survey. *Entrepreneurship Theory and Practice*, *26*(2), 51-61.

Mesquita, J.M. C., & Lara, J. E., (2003). Capital structure and profitability: The Brazilian case.

Michaelas, N., Hall, G. C., & Hutchinson, P. J., (2009). Determinants of the Capital Structure of European SMEs. *Journal of Business Finance & Accounting*. 31(5-6). Pp 711-728.

Mikkelson, W. H., Partch, M. M., & Shah, K. (1997). Ownership and operating performance of companies that go public. *Journal of financial economics*, *44*(3), 281-307.

Mittal, S., & Mayur, M. (2012). Ownership Change and Deterioration of Performance in Post-IPO Period: A Panel Data Analysis of Indian Firms. *IUP Journal of Corporate Governance*, *11*(2).

Miller, K. D., & Bromiley, P. (1990). Strategic risk and corporate performance: An analysis of alternative risk measures. *Academy of Management journal*, *33*(4), 756-779.

Miller, M. H., (1988). "Debt and Taxes" *Journal of Finance* VOI.XXXII, No.2, (May 1977), pp.261-75.

Modigliani, F., &Miller, M. H., (1988). "The Modigliani-Miller Propositions after Thirty Years" *Journal of Economic Perspectives,* VOI.2, N0,4. Pp.99-120

Modigliani, F., &Miller, M. H., (1976). "The Cost of Capital, Corporation Finance, and the Theory of Investment" *American Economic Review,* VO1.XLVIII, No.3. Pp.261-97.

Modigliani, F., & Merton H. M., (1958). "The Cost of Capital, Corporation Finance and the Theory of Investment," *American Economic ReI20 Journal of Economic Perspectives view*, 48(3). pp 261-97.

Modigliani, F., &Merton H. M., (1959)."The Cost of Capital, Corporation Finance and the Theory of Investment: Reply," *American Economic Review, 49(*4) pp 655-69.

Modigliani, F., &Miller, M., (1963) "Corporate Income Taxes and the Cost of Capital: A Correction". *American Economic Review,* 53: 443 – 53.

Modigliani, F., &Merton H. M., "Corporate Income Taxes and the Cost of Capital: A Correction," *American Economic Review,* June 1963, ***53,*** 3, 433-43.

Mlambo, C., Smit, E. D. M., & Biekpe, N. (2003). Testing the random walk hypothesis on thinly-traded markets: the case of four African stock markets. *African Finance Journal*, *5*(1), 16-35.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American*, *1*, 3.

Mugenda, O. (2003). Mugenda (1999). *Research methods: Quantitative and qualitative approaches*.

Mugume, A. (2010). Competition and Performance in Uganda's Banking System. (Research Paper No. 203). Nairobi: African Economic Research Consortium.

Mugume, A., Apaa, J., & Ojwiya, C., (2009). Interest rate spreads in Uganda: Bank specific characteristics or policy changes. *The Bank of Uganda Staff Papers 3*(2), 5-21.

Mutibwa, D. H., (2013). Factors Affecting Performance of Commercial Banks in Uganda.

Mwangi, L. W., Makau, M. S., & Kosimbei, G. (2014). Effects of working capital management on performance of non-financial companies listed in NSE, Kenya. *European journal of business and management*, *6*(11), 195-205.

Mwangi, L. W., Makau, M. S., & Kosimbei, G. (2014). Relationship between capital structure and performance of non-financial companies listed in the Nairobi Securities Exchange, Kenya. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics*, *1*(2), 72-90.

Mwangi, C. I., & Jerotich, O. J. (2013). The relationship between corporate social responsibility practices and financial performance of firms in the manufacturing, construction and allied sector of the Nairobi Securities Exchange. *International Journal of Business, Humanities and Technology*, *3*(2), 81-90.

Myers, S. C. (2003). Financing of corporations. In *Handbook of the Economics of Finance* (Vol. 1, pp. 215-253). Elsevier.

Myers, SC, "The Capital Structure Puzzle" *Journal of Finance*VO1.XXXIX, No.3 (July 1984), Pp.575-92.

Nerlove, M., (*1968).* "Further Evidence on the Estimation of Dynamic Economic Relations from a Time Series of Cross-Sections.

Ndungu, P. N. (2013). The relationship between oil price volatility and economic growth in Kenya. *Unpublished Master of Science Research Project). University of Nairobi*.

Njoroge, E. N. (2014). The effect of firm size on financial performance of pension schemes in Kenya. *Unpublished MBA Project*.

Odalo, S. K., Achoki, G., & Njuguna, A. (2016). Relating Company Size and Financial Performance in Agricultural Firms Listed in the Nairobi Securities Exchange in Kenya. *International Journal of Economics and Finance*, *8*(9), 34-40.

Ogunmuyiwa, M. S. (2010). Investor's sentiment, stock market liquidity and economic growth in Nigeria. *Journal of Social Sciences*, *23*(1), 63-67.

Olongo, O. (2013). The Effects of Financial Fraud and Liquidity on Financial Performance of Commercial Banks in Kenya, *Unpublished MBA Project*, University of Nairobi.

Omondi, M. M., & Muturi, W. (2013). Factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. *Research Journal of Finance and Accounting*, *4*(15), 99-104.

Onyuma, S. O., Mugo, R. K., & Karuiya, J. K. (2012). Does Cross-border listing (still) improve firm financial performance in Eastern Africa? *Journal of Business, Economics*, *1*(1).

Palepu, K. G., Healy, P. M., Bernard, V. L., & Peek, E., (2007). Business analysis and valuation. *The International Journal of Accounting.* 43(4). 472-474.

Palepu, K., Healy, P., & Bernard, V. (2000). *Business analysis and valuation. Western College Publishing.*

Pandey, I. N. (1985). Financial Management, India, New Print India Ltd.

Pandey, I. (2007). Financial Management 9th Edition, Vikas Publishing House PVT Limited.

Paravisini, D., Rappoport, V., Schnabl, P., & Wolfenzon, D. (2014). Dissecting the effect of credit supply on trade: Evidence from matched credit-export data. *The Review of Economic Studies*, *82*(1), 333-359.

Pervan, G., & Arnott, D., (2014). A critical analysis of decision support systems research revisited: The rise of design science. *Journal of Information Technology*. 29(4)

Petersen, M., & Rajan, R., (1994). "The Benefits of Lending Relationships: Evidence from Small Business Data," *Journal of Finance*, XLIX (1994), 3-37.

Ralston, P. M., Blackhurst, J., Cantor, D. E., & Crum, M. R. (2015). A structure–conduct–performance perspective of how strategic supply chain integration affects firm performance. *Journal of Supply Chain Management*, *51*(2), 47-64.

Ravi, P. & Sharma, P., (2012). The impact of credit risk management on financial performance of commercial banks in Nepal. *International Journal of Arts and Commerce,* University of New England Australia.

Reilly, F. K. (1973). Further evidence on short-run results for new issue investors. *Journal of Financial and Quantitative Analysis*, *8*(1), 83-90.

Reilly, Frank K. and Hatfield, Kenneth, "Investor Experience with New Stock Issues," *Financial Analysts Journal*, vol. 25(September–October 1969), pp. 73–80.

Ritter J R (1991), "The Long-Run Performance of Initial Public Offerings", *Journal of Finance,* Vol. 46, No. 1, pp. 3-27.

Ritter, A., & Wells, P. (2006). Identifiable intangible asset disclosures, stock prices and future earnings. *Accounting & Finance*, *46*(5), 843-863.

Ritter, J.R. (2003). Differences between European and American IPO Markets. *European Financial Management* [online], Vol. 9 (4), (Dec. 2003): 421-434.

Ritter, J.R. and Welch, I. (2002). A Review of IPO Activity, Pricing and Allocations. *The Journal of Finance*[online], Vol. Lvii (4), Aug. 2002.

Ritter, R.J. (2014). Initial Public Offerings: Updated Statistics. Cordell Professor of Finance, University of Florida[online], April 10, 2014.

Robert, B., & Lajtha, C., (2002). A New Approach to Crisis Management. *Journal of Contingencies and Crisis Management.* 10(4). Pp 181-191

Robichek, A.A., &Myers, S.C. (*1966*). Problems in the Theory of Optimal Capital Structure. *The Journal of Financial and Quantitative Analysis,* 1, 1-35.

Rock K (1986), "Why New Issues are underpriced", *Journal of Financial Economics,* Vol. 15, pp. 187-212.

Rosen, R. J., Smart, S., & Zutter, C. J. (2005). Why do firms go public? Evidence from the banking industry.

Rubinstein, M., (1973)."Derivative Assets Analysis," *Journal of Economic Perspectives, I,*73-93.

Ruf, B. M., Muralidhar, K., Brown, R. M., Janney, J. J., & Paul, K. (2001). An empirical investigation of the relationship between change in corporate social performance and financial performance: A stakeholder theory perspective. *Journal of business ethics*, *32*(2), 143-156.

Ruozi, R., &Ferrari, P., (2012). Liquidity Risk Management in Banks. *Economic and Regulatory Issues.*

Sahoo, S., & Rajib, P. (2010). After market pricing performance of initial public offerings (IPOs): Indian IPO market 2002–2006. *Vikalpa*, *35*(4), 27-44.

Samina, R., &Ayub. M., (2013). The impact of Bank Specific and Macroeconomic Indicators on the profitability of Commercial banks. *The Romanian Economic Journal*; year XVI No.47, 2013.

Samuel, O. L. (2015). The effect of credit risk on the performance of commercial banks in Nigeria. *African Journal of Accounting, Auditing and Finance*, *4*(1), 29-52.

Schmidt, P., (1986). `Frontier Production Functions', Econometric Reviews, No. 4, pp. 289-328.

Schultz, P. (2003). Pseudo market timing and the long- run underperformance of IPOs. *The Journal of Finance*, *58*(2), 483-517.

Sehrish. G., & Khalid. Z., (2011). Factors Affecting Bank Profitability in Pakistan. *Romanian journal of economic forecasting* .14(39):61-87.

Simerly, R. L., & Li, M., (2000). Environmental dynamism, capital structure and performance: A theoretical integration and an empirical test. *Strategic Management Journal,* 21(1), 31-49.

Sheikh and Wang. (2012). The Impact of capital structure on performance. An empirical Management. *354-368. International Journal of Commerce and Management*, 354-368.

Shiue, M. J., & Lin, C. J. (2004). The study of earnings management detecting models: A case of firms in financial distress. *Taiwan Accounting Review*, *5*(1), 105-130.

Shiah-Hou, S. (2005). Firm Diversification & Asymmetric Information: Evidence from Earnings, Cash flow Accounting Accruals.

Shilitsa, J. (2015). Mumias halts operations for repairs, *Business Daily*, p. 9.

Smart, S. B., Thirumalai, R. S., & Zutter, C. J. (2008). What's in a vote? The short-and long-run impact of dual-class equity on IPO firm values. *Journal of Accounting and Economics*, *45*(1), 94-115.

Smith, M., Dowling, P. J., & Rose, E. L. (2011). Psychic distance revisited: A proposed conceptual framework and research agenda. *Journal of Management & Organization*, *17*(1), 123-143.

Stehle, R., Ehrhardt, O., & Przyborowsky, R. (2000). Long- run stock performance of German initial public offerings and seasoned equity issues. *European Financial Management*, *6*(2), 173-196.

Stiglitz, J. E., (1972),"On the Irrelevance of Corporate Financial Policy," *American Economic Journal,64(6)* 851-66.

Stiglitz, J. E. (1969). A re-examination of the Modigliani-Miller theorem. *The American Economic Review*, *59*(5), 784-793.

Stiroh, K.J., &Rumble, A., (2006). The dark side of diversification: The case of US financial holding companies. *Journal of Banking and Finance30*(8). 2131–2161.

Stoll, H. R., & Curley, A. J. (1970). Small business and the new issues market for equities. *Journal of financial and quantitative analysis*, *5*(3), 309-322.

Sufian. F., (2011). Financial depression and the profitability of the banking sector of the Republic of Korea: panel evidence on bank-specific and macroeconomic determinants. *Asia-Pacific journal of rural development.* 17(2):65-92.

Swaminathan, B., & Lee, C. M., (2003). The cross-section of international cost of capital. *Cornell University, New York. Mimeo*.

Taub, A., (1975), Determinants of firm s capital structure. *Review of Economics and Statistics,* 57: 410-416.

Teoh, S., David, C.Y., & Liming, G. (1998). Earnings management and the performance of seasoned private equity placements. *Managerial Auditing Journal.* ISSN: 0268-6902.

Teoh, S.H., Welch, I., & Wong, T.J. (1998). Earnings management and the long-run market performance of initial public offerings. *Journal of Finance*, 53, pp. 1935-1974.

Tianwei, Z. & Paul, E., (2006). Credit Risk and Financial Performance Assessment of Agricultural firms. *Published PhD Thesis*, University of Illinois, US.

Titman, S. (1984), 'The effect of capital structure on a firm's liquidation decision'. *Journal of Financial Economics* **13**(1), 137–151.

Titman S., & Wessels R., (2008). "The determinants of capital structure choice", *Journal of Finance*, Vol.43, pp.1-19.

Titman S., (2002). "The Modigliani and Miller theorem and the integration of financial markets", Financial Management, Vol.31, pp.5-19

Thorell A., (2004). IPO Underpricing–Can it be predicted?: A quantitative research study of Swedish IPOs

Trujillo-Ponce, A., (2012). What determines the profitability of banks? Evidence from Spain, *Accounting &Finance*, 53 (2), pp. 561-586.

Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of management review*, *11*(4), 801-814.

Wang, X.L., (2008). Accounting for autocorrelation in detecting mean shifts in climate data series using the penalized maximal t or F-test. J App Meteor Climatol 47:2423–2444.

Wang, G. Y., (2005). The Impacts of Free Cash Flows and Agency Costs on Firm Performance. *Service Science & Management, 1*(2), 1-5

Wanjohi, G., (2013). The Effect of Financial Risk Management on the Financial Performance of Commercial Banks in Kenya. *Unpublished MBA Project*, University of Nairobi

Wayne, H., Mikkelson, M., & Megan, P. (1997). Ownership and operating performance of companies that go public. *Journal of Financial Economics*, 44(3), 281-3017.

Weimer, D., & Vining, A.R. (2010). Policy Analysis, Concepts and Practice. 5th Edition.

Yimka, A. S., Adekunle, O., Agbatogun, T., & Abimbola, C. (2015). Credit risk management and financial performance of selected commercial banks in Nigeria. *Journal of Economic & Financial Studies*, *3*(01), 01-09.

Yung, C., Çolak, G., & Wang, W. (2008). Cycles in the IPO market. *Journal of Financial Economics*, *89*(1), 192-208.

APPENDICES

APPENDIX I: COMPANIES LISTING BY DATE AT THE NSE

NO	COMPANY	YEAR OF LISTING
	AGRICULTURAL	
1	Eaagads Ltd Ord 1.25 AIMS	1972
2	Kakuzi Plc Ord.5.00	1951
3	Kapchorua Tea Co. Ltd Ord 5.00AIMS	1972
4	The Limuru Tea Co. Ltd Ord 20.00AIMS	1967
5	Sasini Ltd Ord 1.00	1965
6	Williamson Tea Kenya Ltd Ord 5.00AIMS	1972
	AUTOMOBILES & ACCESSORIES	
7	Car & General (K) Ltd Ord 5.00	1950
	BANKING	
8	Barclays Bank of Kenya Ltd Ord 0.50	1986
9	Diamond Trust Bank Kenya Ltd Ord 4.00	1972
10	Equity Group Holdings Ltd Ord 0.50	2006
11	HF Group Ltd Ord 5.00	1992
12	I&M Holdings Ltd Ord 1.00	2013
13	KCB Group Ltd Ord 1.00	1989
14	National Bank of Kenya Ltd Ord 5.00	1994
15	NIC Bank Ltd Ord 5.00	1971
16	Stanbic Holdings Plc ord.5.00	1970
17	Standard Chartered Bank Kenya Ltd Ord 5.00	1988
18	The Co-operative Bank of Kenya Ltd Ord 1.00	2008
	COMMERCIAL AND SERVICES	
19	Atlas African Industries Ltd GEMS	2014
20	Deacons (East Africa) Plc Ord 2.50AIMS	2016
21	Eveready East Africa Ltd Ord.1.00	2006
22	Express Kenya Ltd Ord 5.00AIMS	1978
23	Kenya Airways Ltd Ord 5.00	1996
24	Longhorn Publishers Ltd Ord 1.00AIMS	2012
25	Nairobi Business Ventures Ltd Ord. 1.00GEMS	2016
26	Nation Media Group Ltd Ord. 2.50	1973
27	Sameer Africa Ltd Ord 5.00	1994
28	Standard Group Ltd Ord 5.00	1954
29	TPS Eastern Africa Ltd Ord 1.00	1997
30	Uchumi Supermarket Ltd Ord 5.00	1992

31	WPP Scangroup Ltd Ord 1.00	2006
32	CONSTRUCTION & ALLIED	
33	ARM Cement Plc Ord 1.00	1997
34	Bamburi Cement Ltd Ord 5.00	1970
35	Crown Paints Kenya Ltd Ord 5.00	1992
36	E.A.Cables Ltd Ord 0.50	1973
37	E.A.Portland Cement Co. Ltd Ord 5.00	1972
	ENERGY & PETROLEUM	
38	KenGen Co. Ltd Ord. 2.50	2006
39	KenolKobil Ltd Ord 0.05	1959
40	Kenya Power & Lighting Co Ltd Ord 2.50	1972
41	Total Kenya Ltd Ord 5.00	1988
42	Umeme Ltd Ord 0.50	2012
	INSURANCE	
43	Britam Holdings Plc Ord 0.10	2011
44	CIC Insurance Group Ltd Ord.1.00	2012
45	Jubilee Holdings Ltd Ord 5.00	1984
46	Kenya Re Insurance Corporation Ltd Ord 2.50	2006
47	Liberty Kenya Holdings Ltd Ord. 1.00	2007
48	Sanlam Kenya Plc Ord 5.00	1963
	INVESTMENT	
49	Centum Investment Co Plc Ord 0.50	1977
50	Home Afrika Ltd Ord 1.00GEMS	2013
51	Kurwitu Ventures Ltd Ord 100.00GEMS	2014
52	Olympia Capital Holdings Ltd Ord 5.00	1974
53	Trans-Century Ltd Ord 0.50AIMS	2011
54	INVESTMENT SERVICES	
55	Nairobi Securities Exchange Plc Ord 4.00	2014
	MANUFACTURING & ALLIED	
56	B.O.C Kenya Ltd Ord 5.00	1969
57	British American Tobacco Kenya Ltd Ord 10.00	1969
58	Carbacid Investments Plc Ord 1.00	1972
59	East African Breweries Ltd Ord 2.00	1972
60	Flame Tree Group Holdings Ltd Ord 0.825GEMS	2015
61	Kenya Orchards Ltd Ord 5.00AIMS	1959
62	Mumias Sugar Co. Ltd Ord 2.00	2001
63	Unga Group Ltd Ord 5.00	1971
	TELECOMMUNICATION	
64	Safaricom Ltd Ord 0.05	2008

	REAL ESTATE INVESTMENT TRUST	
65	STANLIB FAHARI I-REIT. Ord.20.00	2015
	EXCHANGE TRADED FUNDS	
66	Barclays New Gold ETF	2017

Source: Researcher (2019)

APPENDIX II: DATA COLLECTION FORM FOR XYZ COMPANY

COMPANY	**YEARS**	**ROA** (γ)	**SIZE** (X_1)	**LIQUIDITY** (X_2)	**FINANCIAL RISK** (X_3)
XYZ	2009				
XYZ	2010				
XYZ	2011				
XYZ	2012				
XYZ	2013				
XYZ	2014				
XYZ	2015				
XYZ	2016				
XYZ	2017				
XYZ	2018				

Source: Researcher (2019)

APPENDIX III: DATA COLLECTED

FIRM	FIRM1	YEAR	ROA	SIZE	LIQUIDITY	FINANCIALRISK
CrownPaintsKenyaPlc	1	2009	0.046440	21.343009	1.435790	1.220520
CrownPaintsKenyaPlc	1	2010	0.046349	21.402480	1.492330	1.185790
CrownPaintsKenyaPlc	1	2011	0.058230	21.518677	1.463910	1.105007
CrownPaintsKenyaPlc	1	2012	0.059100	21.527860	1.535933	0.919961
CrownPaintsKenyaPlc	1	2013	0.072601	21.803520	1.381530	1.163034
CrownPaintsKenyaPlc	1	2014	0.005117	22.072060	1.146400	1.859580
CrownPaintsKenyaPlc	1	2015	0.006770	22.236000	1.106510	2.355400
CrownPaintsKenyaPlc	1	2016	0.026050	22.344400	1.163530	2.238570
CrownPaintsKenyaPlc	1	2017	0.038020	22.493390	1.190540	2.340665
CrownPaintsKenyaPlc	1	2018	0.033568	22.423580	1.012942	4.332460
SameerAfricaPlc	2	2009	0.069981	21.537660	2.968460	0.361820
SameerAfricaPlc	2	2010	0.036690	21.613460	2.148710	0.562680
SameerAfricaPlc	2	2011	0.037000	21.686450	1.980130	0.686860
SameerAfricaPlc	2	2012	0.067634	21.754880	1.906210	0.813298
SameerAfricaPlc	2	2013	0.010936	22.023045	3.373969	0.369000
SameerAfricaPlc	2	2014	-0.023097	22.073250	2.523830	0.520787
SameerAfricaPlc	2	2015	-0.000015	27.619390	2.205018	0.505030
SameerAfricaPlc	2	2016	-0.019815	21.914410	1.580490	0.793190
SameerAfricaPlc	2	2017	0.004380	21.811780	1.548510	0.615940
SameerAfricaPlc	2	2018	-0.020454	21.674080	0.903777	1.290960
NationalBankofKenyaLtd	3	2009	0.028459	24.662980	1.160710	5.500550
NationalBankofKenyaLtd	3	2010	0.033683	24.818050	1.182590	5.045220
NationalBankofKenyaLtd	3	2011	0.022516	24.952490	1.144380	5.566690
NationalBankofKenyaLtd	3	2012	0.010866	24.930260	1.101755	5.426310
NationalBankofKenyaLtd	3	2013	0.012023	25.251077	1.106342	6.785380
NationalBankofKenyaLtd	3	2014	0.007070	25.536197	1.067995	9.069670
NationalBankofKenyaLtd	3	2015	-0.009195	25.555095	1.051071	10.348410
NationalBankofKenyaLtd	3	2016	0.000633	25.442530	1.071560	9.339430
NationalBankofKenyaLtd	3	2017	0.003730	25.422590	1.051110	14.188620
NationalBankofKenyaLtd	3	2018	0.000060	25.466880	9.979550	15.470886
KenyaAirwaysLimited	4	2009	-0.052150	25.083720	0.801329	3.973500
KenyaAirwaysLimited	4	2010	0.027777	25.017321	0.867830	3.284650
KenyaAirwaysLimited	4	2011	0.044930	25.089455	1.063380	2.401100
KenyaAirwaysLimited	4	2012	0.021400	25.072660	0.919052	2.363240
KenyaAirwaysLimited	4	2013	-0.064093	25.532975	0.562690	2.931430
KenyaAirwaysLimited	4	2014	-0.022750	25.724907	0.464830	4.266100
KenyaAirwaysLimited	4	2015	-0.014140	25.927610	0.509077	-31.532110
KenyaAirwaysLimited	4	2016	-0.016655	25.788480	0.404349	-5.441500

KenyaAirwaysLimited	4	2017	-0.068918	25.707850	0.375120	-4.253790
KenyaAirwaysLimited	4	2018	-0.055315	25.640570	0.216000	-51.951860
TPSEasternAfricaPlc	5	2009	0.054179	22.596140	1.540700	0.717070
TPSEasternAfricaPlc	5	2010	0.043309	23.201740	1.408940	0.598270
TPSEasternAfricaPlc	5	2011	0.046900	23.298300	1.495030	0.631900
TPSEasternAfricaPlc	5	2012	0.036600	23.324770	1.011880	0.648130
TPSEasternAfricaPlc	5	2013	0.027940	23.504320	0.867430	0.528607
TPSEasternAfricaPlc	5	2014	0.017210	23.492045	0.803810	0.530770
TPSEasternAfricaPlc	5	2015	-0.017740	23.472360	1.040390	0.632960
TPSEasternAfricaPlc	5	2016	0.007610	23.543750	1.634710	0.775430
TPSEasternAfricaPlc	5	2017	0.006830	23.584710	1.079180	0.908190
TPSEasternAfricaPlc	5	2018	0.010170	23.591050	0.433840	0.925900
MumiasSugarCompanyLtd	6	2009	0.092126	23.584070	1.359430	0.740700
MumiasSugarCompanyLtd	6	2010	0.086959	23.618170	1.998700	0.666750
MumiasSugarCompanyLtd	6	2011	0.084319	23.855590	2.198628	0.601020
MumiasSugarCompanyLtd	6	2012	0.073455	24.033810	1.253590	0.742600
MumiasSugarCompanyLtd	6	2013	-0.060880	22.678920	0.838215	1.038633
MumiasSugarCompanyLtd	6	2014	-0.011487	23.882947	0.838215	1.214200
MumiasSugarCompanyLtd	6	2015	-0.022731	23.747220	0.187860	2.444500
MumiasSugarCompanyLtd	6	2016	-0.017510	24.011710	0.180718	2.511760
MumiasSugarCompanyLtd	6	2017	-0.028118	23.905100	0.109290	30.842090
MumiasSugarCompanyLtd	6	2018	-0.096222	23.479190	0.029040	-2.093880
KengenCompanyPlc	7	2009	0.019060	25.410970	2.172680	0.715340
KengenCompanyPlc	7	2010	0.021827	25.737670	4.713090	1.268220
KengenCompanyPlc	7	2011	0.012921	25.804620	1.735785	1.319166
KengenCompanyPlc	7	2012	0.017300	25.817900	1.485770	1.328320
KengenCompanyPlc	7	2013	0.027691	25.963280	1.421840	1.551069
KengenCompanyPlc	7	2014	0.087809	26.245540	1.096610	2.226172
KengenCompanyPlc	7	2015	0.033625	26.559590	0.950570	1.419027
KengenCompanyPlc	7	2016	0.018362	26.629305	1.204850	1.125987
KengenCompanyPlc	7	2017	0.024010	26.656000	1.475090	1.060470
KengenCompanyPlc	7	2018	0.020800	26.661880	1.504440	0.995506
EvereadyEastAfricaLimited	8	2009	0.028336	20.720930	1.505660	1.527690
EvereadyEastAfricaLimited	8	2010	0.007270	20.902100	1.410510	1.964370
EvereadyEastAfricaLimited	8	2011	-0.012193	20.740030	1.114330	1.382780
EvereadyEastAfricaLimited	8	2012	0.036090	20.863700	1.259100	2.292600
EvereadyEastAfricaLimited	8	2013	0.047878	20.663300	1.540400	1.383440
EvereadyEastAfricaLimited	8	2014	-0.019095	20.650750	1.333850	3.257230
EvereadyEastAfricaLimited	8	2015	-0.013243	21.041680	0.869610	0.867484
EvereadyEastAfricaLimited	8	2016	-0.015868	20.802820	0.453799	1.225340
EvereadyEastAfricaLimited	8	2017	0.034429	20.465570	2.694800	0.406400

EvereadyEastAfricaLimited	8	2018	-0.019463	20.167730	2.532460	0.310960
WPPScangroupPlc	9	2009	0.101990	22.092700	2.066110	0.662200
WPPScangroupPlc	9	2010	0.089990	22.803880	1.678550	1.238640
WPPScangroupPlc	9	2011	0.107131	22.862140	2.046790	0.949500
WPPScangroupPlc	9	2012	0.086960	22.880470	2.551270	0.764800
WPPScangroupPlc	9	2013	0.065229	23.268370	2.455532	0.568280
WPPScangroupPlc	9	2014	0.047084	23.309833	2.460160	0.548106
WPPScangroupPlc	9	2015	0.038390	23.246460	2.755740	0.433830
WPPScangroupPlc	9	2016	0.034135	23.324940	2.377900	0.531040
WPPScangroupPlc	9	2017	0.034736	23.344950	2.281600	0.534700
WPPScangroupPlc	9	2018	0.054462	23.392240	2.069870	0.699205
KenyaReinsuranceCorporationLimited	10	2009	0.088589	23.431350	3.483490	0.648430
KenyaReinsuranceCorporationLimited	10	2010	0.089400	23.570550	4.009500	0.630570
KenyaReinsuranceCorporationLimited	10	2011	0.100259	23.672760	3.954326	0.656740
KenyaReinsuranceCorporationLimited	10	2012	0.117780	23.892440	3.049270	0.627840
KenyaReinsuranceCorporationLimited	10	2013	0.101070	24.042106	3.948836	0.625800
KenyaReinsuranceCorporationLimited	10	2014	0.097505	24.194430	3.973110	0.609400
KenyaReinsuranceCorporationLimited	10	2015	0.098855	24.305509	3.822140	0.639281
KenyaReinsuranceCorporationLimited	10	2016	0.085396	24.373770	3.590470	0.595070
KenyaReinsuranceCorporationLimited	10	2017	0.083714	24.478229	3.952160	0.570760
KenyaReinsuranceCorporationLimited	10	2018	0.051355	24.515660	4.019381	0.563540
EquityGroupHoldingsPlc	11	2009	0.041998	25.336520	1.324860	3.400730
EquityGroupHoldingsPlc	11	2010	0.049867	25.686230	1.274140	4.257240
EquityGroupHoldingsPlc	11	2011	0.052599	26.002870	1.287150	4.725360
EquityGroupHoldingsPlc	11	2012	0.049677	26.217020	1.354730	4.666180
EquityGroupHoldingsPlc	11	2013	0.047809	26.349900	1.351610	4.387040
EquityGroupHoldingsPlc	11	2014	0.049774	26.565560	1.329230	4.402847
EquityGroupHoldingsPlc	11	2015	0.039104	26.782530	1.328800	4.934090
EquityGroupHoldingsPlc	11	2016	0.035047	26.883860	1.323960	4.778670
EquityGroupHoldingsPlc	11	2017	0.036070	26.985640	1.188175	4.630810
EquityGroupHoldingsPlc	11	2018	0.018390	27.074820	1.167170	5.038350
Co-operativeBankofKenya	12	2009	0.026816	25.429890	1.101990	6.069366
Co-operativeBankofKenya	12	2010	0.029670	25.762410	1.097180	6.724670
Co-operativeBankofKenya	12	2011	0.031881	25.849080	1.060533	7.033550
Co-operativeBankofKenya	12	2012	0.038506	26.024510	1.125222	5.830380
Co-operativeBankofKenya	12	2013	0.039390	26.166610	1.140260	5.947380
Co-operativeBankofKenya	12	2014	0.026149	26.377140	1.140270	5.666990
Co-operativeBankofKenya	12	2015	0.034170	26.559530	1.151118	5.964177
Co-operativeBankofKenya	12	2016	0.036020	26.586480	1.202550	4.741730
Co-operativeBankofKenya	12	2017	0.029481	26.681322	1.199029	4.550630
Co-operativeBankofKenya	12	2018	0.030779	26.748330	1.212516	4.846500

SafaricomPlc	13	2009	0.188420	24.747200	0.489435	0.790879
SafaricomPlc	13	2010	0.175470	24.976050	0.667370	0.668770
SafaricomPlc	13	2011	0.165029	25.102000	0.636070	0.683840
SafaricomPlc	13	2012	0.149822	25.157450	0.563430	0.686280
SafaricomPlc	13	2013	0.136119	25.581960	0.692957	0.605380
SafaricomPlc	13	2014	0.243056	25.779240	0.624450	0.505200
SafaricomPlc	13	2015	0.282869	25.784770	0.623350	0.497000
SafaricomPlc	13	2016	0.239370	25.793300	0.651670	0.363570
SafaricomPlc	13	2017	0.299610	25.808920	0.464220	0.504210
SafaricomPlc	13	2018	0.330200	25.843880	0.630940	0.351250

Source: Researcher (2019)

APPENDIX IV: TIME PLAN

Activity	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT
Formulation of statement of problem	✓								
Literature review		✓							
Research design &methodology			✓						
Presentation of proposal				✓					
Data collection					✓				
Data classification						✓			
Data analysis							✓		
Review and revise								✓	
Typing of final draft of research project								✓	
Presentation of research to KCA university panel.									✓

Source: Researcher (2019)

APPENDIX V: BUDGET

Item	**Cost**
Stationary	3,800
Research cost	4,400
Typing and printing and photocopies	5,000
Contingencies	2,800
Total	**16,000**

Source: Researcher (2019)