

**EFFECT OF CAPITAL STRUCTURE ON STOCK RETURNS OF
COMMERCIAL AND SERVICES FIRMS LISTED AT THE
NAIROBI SECURITIES EXCHANGE**

BY

ARPHAXADE WANJALA SIFUNA

D63/5555/2017

**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULLFILLMENT OF THE REQUIREMENTS FOR THE AWARD
OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE,
SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

NOVEMBER, 2018

DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed_____Date_____

ARPHAXADE WANJALA SIFUNA

Registration No. D63/5555/2017

This research project has been submitted for examination with my approval as the University Supervisor.

Signed_____Date_____

DR. CYRUS IRAYA

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

ACKNOWLEDGEMENTS

I thank Almighty God for the precious gift of life and His blessings throughout this study. To God be the glory because were it not for Him undertaking this study would not have been possible.

I also thank my supervisor Dr. Cyrus Iraya for his insightful feedback throughout this study, for sharing knowledge and for dedicating his time to my learning process. My appreciations also extend to my moderator Dr. Mirie Mwangi for his useful reviews in the course of this study.

Lastly, I would like to genuinely thank the University of Nairobi staff for their direct and indirect professional support which led to the success of this research work. God bless you all.

DEDICATION

I dedicate this project to my family members. To my wife Sarah Ndunge and my son Emmanuel Sifuna for their prayers, love and moral support which enabled me undertake this research.

To my parents: Mr. Chrispinus Sifuna and Mrs. Christine Machuma for their passion in education, constant encouragement and investing in my education. I appreciate and love you all.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENTS.....	iii
DEDICATION.....	iv
LIST OF TABLES.....	viii
ABBREVIATIONS.....	ix
ABSTRACT.....	x
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Capital Structure	2
1.1.2 Stock Returns	3
1.1.3 Effect of Capital Structure on Stock Returns.....	4
1.1.4 Commercial and Services Firms Listed at the Nairobi Securities Exchange.....	5
1.2 Research Problem.....	7
1.3 Research Objective.....	8
1.4 Value of the Study.....	9
CHAPETR TWO: LITERATURE REVIEW.....	10
2.1 Introduction	10
2.2 Theoretical Review	10
2.2.1 Modigliani and Miller Theory	10
2.2.2 Pecking Order Theory	11
2.2.3 Trade-Off Theory.....	12
2.2.4 Agency Theory.....	13
2.3 Determinants of Stock Returns	14
2.3.1 Capital Structure	14

2.3.2	Company News and Performance.....	14
2.3.3	Firm Size.....	15
2.3.4	Firm Liquidity.....	15
2.3.5	Market Sentiments	16
2.3.6	Industry Performance.....	16
2.4	Empirical Review.....	17
2.4.1	Global Studies.....	17
2.4.2	Local Studies.....	18
2.5	Conceptual Framework	20
2.6	Summary of Literature Review	21
CHAPTER THREE: RESEARCH METHODOLOGY		22
3.1	Introduction	22
3.2	Research Design.....	22
3.3	Population.....	22
3.4	Data Collection.....	22
3.5	Data Analysis	23
3.5.1	Diagnostic Tests.....	23
3.5.2	Analytical Model	24
3.5.3	Tests of Significance.....	25
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION		26
4.1	Introduction	26
4.2	Diagnostic Tests	26
4.3	Descriptive Analysis	27
4.4	Correlation Analysis.....	28
4.5	Regression Analysis and Hypothesis Testing	30
4.6	Discussion of Research Findings	32

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	35
5.1 Introduction	35
5.2 Summary of Findings	35
5.3 Conclusion.....	36
5.4 Recommendations	37
5.5 Limitations of the Study	38
5.6 Suggestion for Further Research	38
REFERENCES.....	40
APPENDICES	466
Appendix 1: Firms that Constitute the Population	466
Appendix 2: Data Collection Form	477
Appendix 3: Research Data (2018)	478

LIST OF TABLES

Table 4.1: Levene's Test of Equality of Error Variances ^a	26
Table 4.2: Tests of Normality	27
Table 4.3: Descriptive Statistics	28
Table 4.4: Correlations.....	29
Table 4.5: Model Summary	30
Table 4.6: Analysis of Variance (ANOVA)	30
Table 4.7: Model Coefficients	31

ABBREVIATIONS

ATS	Automated Trading System
CMA	Capital Market Authority
EPS	Earnings per Share
GDP	Gross Domestic Product
KNBS	Kenya National Bureau of Statistics
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Sciences

ABSTRACT

This research sought to investigate the effect of capital structure on stock returns of commercial and service firms listed at the NSE. Annual changes in share prices of the sector firms were used as the measure of stock returns while debt ratio was used as the proxy for capital structure. In addition profitability, liquidity and firm size were used as the control variables. The study covered firms listed under the commercial and service sector of the NSE and a five year period data was analyzed; from 2013 to 2017. The study adopted a descriptive research design using panel data. Secondary data was collected from audited financial statement of the firms under study. Data was then analyzed using multiple linear regression model in SPSS in order to establish whether capital structure has an effect on stock returns of the commercial and services firms listed at the NSE. The analysis produced an adjusted R squared value of 0.256 which mean that 25.6% of changes in stock returns of the commercial and services firms listed at the NSE can be explained by the four predictors; meaning 74.4% of the changes in the stock returns is explained by factors beyond the coverage of this study. This study also discovered a strong correlation between the predictor variables and stock returns of the commercial and services firms listed at the NSE ($R=0.566$). The analysis of variance showed that the model was fit to explain the relationship between the studied variables because the p value was significant at the 5% level ($p = 0.002$). The analysis further revealed that debt ratio and profitability produced positive statistically significant results while liquidity and firm size produced negative statistically insignificant results. This study recommends that firms should utilize debt financing in order to increase stock returns consequently maximizing shareholders' wealth but also firms' management should be cautious because borrowing is associated with bankruptcy costs. Increase in debt ratio has been found to increase stock returns of the commercial and services firms listed at the NSE.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The issue of debt and equity choice has been a significant deliberation point in finance. It has been deliberated by academicians, companies and financial institutions over the years with no common ground on what the optimal ratio of capital structure should be (Onaolapo & Kajola, 2010). Despite the contention in optimal ratio of debt and equity, businesses need funds so as to realize their financing, operating and investing plans. Of more significance is the choice of investment on fixed assets because the decision on capital structure is bound to affect a firm's profitability. As such, a firm needs to be very careful when deciding on capital structure so as to ensure they do not lock their working capital and that the objective of shareholders wealth maximization is upheld (Nyamita, 2014). In order to meet the latter, substantial amount of debt needs to be incorporated into the capital structure so as to unlock equity. However, debt financing by itself is not the optimal solution to a firm's objectives since it can result into a better performance or failure of the firm. Therefore, a financial manager needs to be prudent when deciding on a firm's capital structure (Aliu, 2010).

Through various theories, scholars have tried to document whether capital structure really matters and what the probable optimal structure might be. Some of the advanced theories are: the MM stheory which advanced that the type of financing a company uses is not informed by the cost of acquiring capital and therefore there is no optimal structure. Capital structire does not influence the firm's value (Modigliani & Miller, 1958). In addition to the MM theory there is the trade-off theory. This theory suggests that inorder for there to be optimal capital structure, then there must be tradeoff between the benefits and costs of using debt vis a vis equity financing. The theory argues that the main benefit of debt finacing is tax savings while the costs associated with debt

financing are the agency and potential bankruptcy costs (Jensen & Meckling, 1976). The third theory which tries to explain whether capital structure really matters is the pecking order theory. It advances that information asymmetry exists between a firm's agents and shareholders and so as to mitigate this asymmetry, a firm prefers to use equity as opposed to debts in its financing (Myers & Majluf, 1984).

Firms in Kenya have expanded their frontiers of seeking debt financing to the capital market. The listed commercial and services firms are amassing debts in order to fund their operations and expansion plans. The amassing of debt financing informs the firm's capital structure. Financing of operations in such a sector is very critical because unlike other sectors like manufacturing, the commercial and services sector has to be closer to the customers in order to be in business since their delivery mode is personal in nature. This means that opening of regional stores and regional distribution points for most firms in the sector is inevitable. Given such endeavours require substantive financing for expansions and subsequent operations, debt financing is increasingly sought after by these firms (Wangige, 2016).

1.1.1 Capital Structure

Capital structure is how firms employ debt and equity in financing. Capital structure sheds more light on the relationship between shareholders' funds and borrowings which constitute the financial mix of a firm. Usually, the utilization of external funds by a firm is in a bid to increase its operating profit beyond what could have attained by solely utilizing internal funds or retained earnings (Barakat, 2014). Debt in a financial mix can take various forms such as bonds or notes payables while equity can constitute a firm's earnings, common stock or even preference shares (Haris & Raviv, 1991).

Unlike equity, debt financing is unique with regards to benefits and costs associated with it. These benefits and costs directly impact growth of a firm. Tax shield is one such vital benefit associated with debt financing while agency costs and potential bankruptcy costs are some of the costs which can stem from debt financing. Agency costs stem from disparity between owners and managers goals where as bankruptcy costs come about when a firm plunges into financial distress. Therefore, financial managers should balance the costs vis a vis the benefits when deciding on debt financing (Fama & French, 1998).

Debt ratio is used in measuring capital structure. The debt ratio compares the total debt against the total assets of a firm and is used to measure capital structure of a firm. If the debt ratio is low, it means that the firm relies less on borrowings and other forms of debt while a high ratio means a firm heavily relies on debt. Despite this measure, the most preferred method used to measure capital structure is the debt to equity ratio. This method is preferred since it exclusively addresses the constituents of capital structure (Abor, 2005).

1.1.2 Stock Returns

A gain or loss which results from trading in a share is a stock return. Such returns are usually tracked using percentages. Stock returns do constitute capital gain and any incomes an investor received from one's investment in stocks. These returns can be used to predict future cash flow or discounts relating to a respective stock. Due to this nature, stock returns usually serve as indices for governments and investors upon which they make investment decisions. Typically, different kind of investors can invest in markets and each desires to get returns which outweigh the costs of investing (Wang, 2012).

Despite each investor yearning to make a gain, it is not guaranteed in the market. The availability and access to market information and efficiency of the market in allocating shares is highly

informed by returns on stocks. As such, changes in prices usually create uncertainty in the market which trigger reactions from different traders, some buying and other selling stocks (Sirucek, 2013). The firms whose stocks returns are higher are more profitable hence significantly inform the growth of the economy (Aliyu, 2011). As discussed herein, stock returns in light of market uncertainty is an important aspect of aggregate economy because unstable growth makes investment difficult (Erdugan, 2012).

In order to measure stock returns, indexing is used for the market. Just like an increase in a stock price indicates an upward performance while a decrease indicates a plunging performance, similarly a higher index means the market or a sector is performing well whereas a low index means that the market or sectors is performing poorly (Daferighe & Sunday, 2012). At Nairobi Securities Exchange, NSE 20-share index acts as the benchmark to measure performance since it is used to calculate stock returns.

1.1.3 Effect of Capital Structure on Stock Returns

According to the MM theory, there is no optimal capital structure and hence a decision to use whichever source of finance has no impact of a firm's value (Modigliani & Miller, 1958). The trade-off theory on the other hand argues that tradeoff between benefits derived from and costs associated with each source of financing should inform a firm's capital structure (Myers, 1977). Myers and Majluf (1984) noted in the pecking order theory that equity is preferred over debt because information asymmetry is a source of problem between agents of the firm and shareholders when it comes to employing debt financing. Therefore, a profitable firm will use less debt compared to a firm that does not generate high returns.

In a subsequent study, Modigliani and Miller advanced that the value of a firm is maximized when using debt financing (Modigliani & Miller, 1963). The rationale for this advancement is that using

debt financing does alter the market hence shareholders compete for share of the firm's earnings with debt providers. This effectively means that owners will demand a higher return on investment (ROI) in light of debt inclusion in order to guard against leverage risk. Modigliani and Miller submitted the 1963 paper as a correction of their 1958 work.

More studies have been undertaken with contrary results with regards to whether stock returns influence capital structure or capital structure influences stock returns. One such conclusion is that returns on stock influences debt ratio (Welch, 2004). Contrary, a different study established that stock returns are influenced by among other factors, the debt to equity ratio (Sebnem & Vuran, 2012). This finding was shared by a later study which established that capital structure informs stock returns although its impact varies by industries (Tahmoorespour, Ali-Abbar, & Randjbaran, 2015).

1.1.4 Commercial and Services Firms Listed at the Nairobi Securities Exchange

The NSE roots date back to 1954 when it was registered as a broker's association under Societies Act. In 1988, NSE was privatized. Most trading was executed manually up to 2006 when the Automated Trading System (ATS) was implemented effectively facilitating live trading. ATS was linked to Central Depository System (CDS) to enable live trading on the basis of first come first served. It was also integrated with Central Bank's system to allow for trading in government bonds. NSE is licensed and regulated by the Capital Markets Authority (CMA). As such, listings are approved by CMA.

There are currently ten commercial and services firms listed and trading at the securities exchange. The ten companies are: Deacons Limited, Express Limited, Kenya Airways, Longhorn Publishers, the Nation Media Group, Sameer Africa, Scangroup, the Standard Group, TPS Eastern Africa (Serena) and Uchumi Supermarket. The firms in the commercial and services sector in Kenya

generally raise funds via debt or equity; which are the main constituents of their capital structure. It is worth noting that the sector is unique in that it is made up of firms from varied subsectors which collectively form the commercial and services sector in the NSE. These sub sectors represented are hotelier, chain stores, transport and logistics, media and airlines. The services sector is instrumental in creation of employment in the country and also contribute heavily to the GDP having recorded a growth of 13.5% in the first quarter of 2018 (KNBS, 2018).

In the recent past, the sector has mainly been using retained earnings in their financing and also seeking capital from the market in general. Though the firms' capital structures still contain debt, it is not the largest constitute. The preference for equity and retained earnings over debt has been affirmed by firms like Atlas Development and Support Services seeking more capital from the market via cross-listing at the NSE and the London Stock Exchange at the end of 2016. In addition, Longhorn Publishers also had their rights issue approved by the regulator indicating the firm was critical in decreasing leverage risk (CMA, 2016).

The share prices for the commercial and services sector have generally been declining since 2014. This decline can be attributed to news on most firms in the sector making losses or experiencing financial distress reaching the market. Despite the negative trend, most firms registered again in their shares in 2017. For example, in the last quarter of the year, Kenya Airways registered again of 275.29% owing to successful implementation of the turnaround strategy that the company had adopted in 2016, which saw it convert the Government of Kenya loans into equity resulting into the Government of Kenya shareholding in the company increasing from 29.80% to 48.90%. Also, Uchumi Supermarkets registered again of 46.03% in the same period due to the smooth transition in the company's leadership heralding continuity of business. Furthermore, implementation of restructuring activities which saw the company sale a parcel of land to offset Kshs. 3 billion debt

in addition to getting the government bailout commitment valued at Kshs. 1.8 billion contributed to the gain of Uchumi's share price (CMA, 2017).

1.2 Research Problem

What constitutes an optimal capital structure is unknown and a topic of ongoing discussion in finance (Onaolapo & Kajola, 2010). In addition to this discussion, there is no common ground on effects of debt and equity on profitability from both empirical and theoretical studies. Myers and Majluf (1984) suggested that firms would rely on retained earnings instead of debt financing as grounded in their information asymmetry argument. Contrary, MM's tax shield advancement argued that firms want to use more external financing due to the tax shield benefit.

The commercial and services sector in Kenya is an interesting sector since the sector firms need funds to run their day to day business obligations. As to what portion of their financing should come from equity or debt is not clear from both empirical and theoretical studies. Nevertheless, for the growth of the sector in Kenya, there is need establish an optimal capital structure which the firms can utilize for growth and increased returns. In the recent past, the sector has mainly been using retained earnings in their financing and also seeking capital from the market in general. This depart from preferring debt financing indicates that firms in the sector are critical of leverage risk and as such want to decrease it (CMA, 2016).

Empirical evidence is also unreliable and varied with regards to the impact of capital structure on stock returns. There was a study on the effects of capital structure on stock returns of firms in Tehran Stock Exchange by two scholars. Their conclusion was that there is no correlation between capital structure and stock returns in Tehran (Saeedi & Mahmoodi, 2011). On the other hand, a different pair of scholars found out that there is positive correlation between capital structure and stock returns (Sebnem & Vuran, 2012). As a follow up to Saeedi and Mohmoodi (2011) study, a

subsequent study examined the impact of leverage on stock returns in Tehran and concluded that there is a negative correlation between leverage and free cash flow per share but there is a positive correlation between leverage and returns on equity (Akbarian, 2013).

In Kenya, various studies have also been carried out with inconsistent findings. One examination concluded that there is a weak positive correlation between financial structure and financial performance of listed firms (Maina & Ishmail, 2014). On the same trail of thought, another scholar who studies the entire stock market but for insurance and banking sector concluded that a firm's leverage ratio is positively correlated with stock returns (Ndung'u, 2014). Conflictingly, a different investigation unearthed a strong positive correlation between financial structure and financial performance of listed firms (Njeri & Kagiri, 2015). This contradiction was affirmed by a different investigation which concluded that financial structure is negatively correlated to performance (Ogut, Riro, & Ofunya, 2015).

Clearly there is no common ground among different scholars on the effect of capital structure on stock returns. This lack of a common ground as to how capital structure impacts stock returns is sufficient reason to undertake further study in the area. Furthermore, most local scholars have focused their studies on the effect of capital structure on overall firms' performance. As such, more study needs to be carried out on stock returns relating to individual sectors of the economy in order to have an understanding as to how capital structure impacts stock returns of different sectors of the market. This research seeks to answer the research question: what is the effect of capital structure on stock returns of the commercial and services firms listed at the NSE?

1.3 Research Objective

The objective of this study was to determine the effect of capital structure on stock returns of commercial and services firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

The findings of this study are an important reference source for researchers, scholars and students who might be interested in undertaking research in this field. Significance of this study to the scholars stems from it being capable of helping ascertain research gap to guide them when carrying out further studies in this field. Identification of research gap is critical in ensuring the field is enriched with knowledge depth as opposed to quantity of research works with limited depth.

The study can also aid regulatory agencies such as the capital markets authority (CMA) develop sounder regulatory framework around listed firms' capital structure so that investors can maximize return on investment. Of importance in such frameworks is the understanding of how capital structure of listed firms inform returns and the risks around investment in firms' securities. It is through this understanding that policies which make the environment fair and suitable for investors to thrive in will be created by regulatory agencies.

The study can also assist the management of commercial and services firms listed at the NSE make capital mix decisions which will increase their companies' value by furnishing them with important recommendations on how capital structure affects stock returns. They can use the information to adjust their capital structures in order to improve stock returns and in effect maximize shareholder's wealth. This study not only inform the management of the companies currently listed at the NSE but also contributes to the pool of knowledge to be used by firms which may perhaps seek to list in future.

CHAPETR TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the theoretical framework on capital structure as applied in previous studies. It covers the theoretical review, determinants of stock returns, empirical review, the conceptual framework and a summary of the literature.

2.2 Theoretical Review

Theoretical framework reviews the various relevant theories which explain relationship between capital structure and stock returns. The theories covered under this framework are; Modigliani and Miller theory, Pecking Order theory, the Trade-off theory and Agency theory.

2.2.1 Modigliani and Miller Theory

Modigliani and Miller (1958) advanced that capital structure is irrelevant to a firm's value in light of efficient markets. In a subsequent study, Modigliani and Miller (1963) detailed the impact of charges on capital structure and concluded that a firm is bound to use debt so as to enjoy the tax benefit of using external financing. In addition, they highlighted that despite the benefit, there are possible costs associated with debt financing such as insolvency costs in instances where market symmetry is actual.

The subsequent theory by Modigliani and Miller (1963) was advanced from the previous theory by including duties and taxes which is tax-deductible. As a result of the advancement, the theory stipulates that firms need to considerably employ debt in their financing mix so as to maximize value. This theory is therefore relevant to this study since it stipulates that employing debt in a firm's financial mix ultimately result in increment of a firm's value; a postulation which is or is not affirmed by the effects on capital structure on stock returns.

2.2.2 Pecking Order Theory

Myers and Majluf (1984) contended that an optimal capital structure is not predefined rather firms do and should display varying preferences in utilizing equity over debt. As such, there is no ideal predetermined combination of internal and external financing which can optimize a firm's value. This theory argues that a firm ought to follow a given order when utilizing financing options so as to minimize on financing costs. It proposes that a firm needs to foremost utilize retained earnings, debt financing should be the second option and lastly, a firm can raise equity if need be.

The pecking order theory advancements come from the problem of information asymmetry which is built on the assumption that a firm agents (managers) have privy information regarding risks and a firm's prospects which external investors lack. Myers and Majluf (1984) argue that consequently investors value the company lowly owing to inability of the agents to pass to them all the material information pertaining firm's prospects. This disconnect therefore makes the agents utilize retained earnings first before seeking debt or raising equity in the market. In the event of insufficiency of retained earnings, the agents will prefer debt financing over equity from the market since they are undervalued by external investors. This means that in instances where external investors' funds are sought, then the investors do demand high returns for their investment.

The pecking order theory postulates that firms do choose to utilize their earnings before embarking on debt and borrowing from the market. As such, this theory assisted in finding out whether firms with higher profits do employ less debt owing to them utilizing the retained earnings first. The theory was relevant to this study since its postulation was affirmed or departed from by the researcher understanding whether discrete preference is given to retained earnings over debt.

2.2.3 Trade-Off Theory

Myers (1984) proposed the trade-off theory. The theory advances that there is an optimal financing mix for each firm which can be reached at through balancing the benefits and costs of each financing option. Thus, a firm decides how much debt and equity it should include in its capital structure based on the balancing. For instance, debt financing upshots to benefits like tax shield. However, high levels of debt in the financing mix can result to insolvency costs and agency expenses. The latter originates from information asymmetry which causes rift in the interests of stakeholders (Jensen & Meckling, 1976). Therefore, a firm determines its optimal financial mix through harmonizing the benefits of external financing (tax shield) and costs of excessive external financing (insolvency costs) and, the consequential agency expenses relating to equity verses agency costs relating to debt. As a firm increases borrowing in the mix, the marginal cost related with borrowing increases whereas the marginal benefits related to the borrowing decreases until an optimal point is arrived at; beyond which a firm's value will reduce. This means that a firm ought to set its optimal capital structure in order to increase the returns on stock (Jensen & Meckling, 1976).

To further the proposition, Myers (1984) proposed that firms which have more tangible assets need to have high debt ratios whereas firms which have more intangible assets need to have more equity financing since they can simply lose value in case of liquidation. Under trade-off theory, firms should thus determine their optimal capital structure appreciating the benefits and costs attached to each option. This theory gives explanation to why in reality firms usually have varying financing mix. This theory was relevant to this study since its argument regarding variation in capital structure of firms was evident in the capital structure of the listed commercial and services firms.

2.2.4 Agency Theory

Agency theory arises when the authority to manage a business is delegated to an agent by the principle (Jensen & Meckling, 1976). The agency problem is usually triggered by goals of an agent are not in line with the goals of the principle. In order to avoid this conflict, the principle must invest in monitoring the work of an agent which can be an expensive investments. Therefore, the advancements in the agency theory are meant to solve the agent/principle conflict since the interests of the principle (shareholders) and the agents (executives of a firm) are not perfectly aligned for them to work to achieve the goals set by the firm (Itiri, 2014). Thus, agency theory greatly informs financing decisions owing to the conflict that arises between agents and shareholders (Aliu, 2010).

Agency theory has it that managers will prefer to have high cash flow all the time even when there is no profitable investment prospect so that they can use the funds for their own individual benefit instead of increasing the value of the firm (Calabrese, 2011). Jensen and Meckling (1976) advanced that to reduce the probable conflict between managers and principle, a firm ought to increase debt effectively reducing equity in the financing mix so as to increase the firm's market value.

The theory proposes that debt financing is a tool for controlling managers because with debt, managers are focused on freeing cash flows in order to repay the debt rather than looking to invest funds in unbeneficial projects (Calabrese, 2011). In a nutshell, the agency theory advocates for the use of debt financing to increase a firm's market value; in effect, increase stock returns. This theory was relevant to this study since it explained the essence of managers utilizing debts in the instances where they do despite having retained earnings at their disposal.

2.3 Determinants of Stock Returns

Stock market investors are primarily interested stock returns since it affects their wealth. The following factors are significant players in the stock market's performance:

2.3.1 Capital Structure

How a firm balances debt financing and equity financing in its capital structure has some bearing on stock returns. As argued by the preliminary Modigliani and Miller (1958) theory, perfect markets are assumed to have no information asymmetry and as such, the arbitrage opportunity is nil. This implies that a firm's net worth is not affected by leverage which is not the case since in reality there exist taxes and they affect the operations of firms with regards to their financing structure (Lee, 2012).

Employing debt come with a couple agency costs such as the lenders' constraints (Lee, 2012). Such constraints may cause rigidity in executing some projects even when the projects promise higher return on equity (Amato & Burson, 2007). Such costs may negatively affect performance of the firm resulting in impacting stock returns.

2.3.2 Company News and Performance

Given markets constitute both noise and money traders, stock prices are mainly affected by news since market participants understand news differently based on their experiences and knowledge. Despite this, a firm specific factors which may cause change in share price are; management change, earnings news, projected earnings news, dividends declaration, news on introducing new products, accounting errors, news on mergers or employee layoffs (Malte, 2012).

Certain firms stocks are affected mainly by intra sector risks as opposed to market risks. As such, investors are privy to this and do monitor sector prospects and forecasts. For instance, an

improvement in competitors' profitability or dividends announcements can be a signal that the firm may be able to pay dividends too. Usually such investors react to sector news by trimming a firm's stock or demanding more which can affect a firm's stock returns (Lee, 2012).

2.3.3 Firm Size

The stock market capitalization measures the size of a firm listed in a stock /securities exchange. Alternatively, firm size can be measured using its total assets. Stock market capitalization is the total value of a listed firm's issued shares and market capitalization is a significant measure which investors use in determining yields from investment. It is a worldwide recognized metric for measuring the health of listed and publicly traded firms (Nyungen & Nyungen, 2016).

In the study, they found out that small firms, whose market cap is low, usually realize greater returns on average than large firms whose market cap is high. This proposition was braced by a subsequent scholar's study which found out that market cap has a substantial negative impact on stock returns. This is because investors do demand higher return on investment from smaller firms due to their perceived higher risk compared to larger firms (Wairimu, 2017).

2.3.4 Firm Liquidity

Liquidity is the degree by which a firm meets its short term obligation exhaustively and in a timely fashion. Usually, excessive liquidity result into idle resources with no profit implication for the company whereas low liquidity levels may culminate into damaging a company's reputation, negatively affect its credit standing and ultimately liquidation of assets. As such, firms should endeavor to maintain appropriate amount of liquidity so as to maximize profit (Vieira, 2010).

In addition to cash, some assets are also considered liquid. An asset is liquid if it can be converted in to cash fast. A firm's liquidity is usually measured by use of liquidity ratios. These ratios are;

cash ratios, quick ratios, current ratios and changes in working capital. Existence of a firm is pegged on it being able to meet its maturing obligations. Conversely, a firm's inability to meet its maturing obligations owing to inability to maintain sufficient level of liquidity will subsequently make it insolvent (Gitman, 2003).

2.3.5 Market Sentiments

Market sentiments is the responsiveness of contestants in the market, be it individually or collectively (Peris, 2017). Despite the annoyance of market sentiments most times, it is prudent to appreciate and understand this factor. Sentimentality in the market is most times personal and fixated. For instance, despite a firm's fundamental analysis of a stock, the market can hold stock at a given level; high or low, based on one piece of superfluous news beyond the fundamental analysis.

Such critical drivers of market value are beginning to be appreciated for in finance which advocates for making decision based on intrinsic values. Such drivers as elucidated by disciplines like behavioral economics are critical to stock returns. Despite this appreciation, numerous doubts still exist as to whether shareholders respond to markets with emotions or carry on with an error due to crowd mentality (Lee, 2012).

2.3.6 Industry Performance

Profitability of a sector the firm operates in has an important impact on the firm's stock price. This is so because most a time stock prices of intra sector firms fluctuate in the same manner owing to factors investors use to evaluate a firms such as earnings prospects, earnings per share (EPS) and revenue most times affect intra sector firms in similar fashion. Despite this knowledge, a firm's stock returns may increase as a result of bad news affecting its rival in the market (Peris, 2017)

Effectively, market share is a sector's total revenue percentage which a firm earns. As such, shifts in market share have greater impact on a firm's performance in case it operates within a cyclic sector with low growth because firms' returns move in tandem with the market and their respective sector (Peris, 2017).

2.4 Empirical Review

Several empirical studies, both international and local back the relationship between capital structure and stock returns. However, these studies' findings are inconsistent because they have mixed results.

2.4.1 Global Studies

Sebnem and Vuran (2012) studied the factors which affect quoted firms' stock returns at the Istanbul bourse. Using annual data of stock returns of 64 industrial firms listed continuously in the bourse over 5 years up to 2007, they analyzed the data using dynamic panel model in order to expound on the determinants of a company's stock returns. They inferred that capital structure among other dynamics does inform stock returns. This research was however not conclusive as to whether capital structure as a sole independent variable does affect stock returns owing to the fact it had 30 independent variables.

In another research, Mohohlo (2013) investigated the effect of financial structure on value of firms quoted at the Johannesburg bourse. The researcher had a sample size of 65 firms listed at the Johannesburg bourse but for financial firms. The exclusion of financial firms was informed by South Africa's regulations which dictates such firms' capital structure. Secondary data was collected through Bloomberg for the years 2002 to 2011 and studied. After using regression model to analyze the data, it was concluded that there is no statistically significant relationship between value of firms and capital structure at the Johannesburg bourse. The short coming of this study is

that the researcher did not run a complementing study to understand if the findings hold for financial firms too; reason being despite their being regulations, all financial firms on the bourse cannot have similar financial structure.

Enekwe, Agu and Eziedo (2014) studied the influence of leverage on financial performance of pharmaceutical firms in Nigeria. Secondary data for the years 2001 to 2012 was used in the study and the researcher used regression model in analysis. The researchers found that both debt to equity ratio and the debt ratio were negatively correlated with profitability when profitability was measured using ROA. In addition, the researchers also found out that interest coverage ratio was positively correlated with profitability of the firms. Despite the fore mentioned findings, the study established that jointly, debt ratio, the interest coverage ratio and the debt-equity ratio had no significant correlation with profitability of Nigerian pharmaceutical industry. It is worth noting that this study is sector specific and as such cannot be a basis of inferring how capital structure affects all firms' stock returns.

A different study was carried out by Idris & Bala (2015) on firm specific characteristics and returns on stocks for the quoted food and beverage companies in Nigeria. Secondary data of a sample of 9 out of 21 firms in the sector was studied. The collected data was analyzed using OLS regression. The findings were that a company's debt to equity ratio and EPS has a statistically significant positive correlation with stock returns. This study is also sector specific and as such cannot be used to infer the effect of capital structure on performance of all firms.

2.4.2 Local Studies

Ndung'u (2014) investigated the influence of capital mix on stock returns of the NSE listed firms. The study sample, which amounted to the target population, was 50 companies listed in the bourse but for insurance and banking firms. The researcher cited capital regulations by insurance

regulatory authority and the CBK as grounds for eliminating the insurance and banking firms. Years 2011 to 2013 data was analyzed using correlation and multi-regression models. The researcher concluded that a firm's leverage ratio is positively correlated with stock returns. There is room to further this research since firms in the insurance and banking sector were excluded and can yield peculiar results despite their financial structure being regulated to a given extent.

Maina and Ishnail (2014) explored the link between capital structure and financial performance of the listed firms at the NSE. Causal research design was adopted for the study and secondary data from 2002 to 2011 was studied. The researchers analyzed the data using regression analysis on Gretel software. The finding was that there is no statistically significant correlation between capital structure chosen by a firm and its market value.

Njeri and Kagiri (2015) investigated the impact of financial structure on financial performance of NSE listed banks. Debt-equity ratio was used in measuring financial mix whereas ROE and ROA were used in measuring financial performance. Descriptive research design was employed and primary data gathered via questionnaire administered to 35 respondents. Banks branch managers were the respondents. The collected data were analyzed via multi-regression models. The researchers conclude that 56% of the financial performance of listed banks could be informed by financial mix of the firm. However, since the study relied on individual managers thoughts, it is not conclusive since secondary data might have relayed contrary inference.

In another study, Ogutu, Riro & Ofunya (2015) studied how financial structure affects performance of commercial and services firms at the NSE. The study was for a 10 year period leading to 2013. Secondary data of 9 firms was used and the researcher used descriptive research design. Data was analyzed using regression and correlation analyses. The study found out that increased leverage is negatively correlated to performance of commercial and services firms.

2.5 Conceptual Framework

The factors considered in this study are capital structure and stock returns. Capital structure is the independent variable and was measured by the debt ratio while stock return is the dependent variable which was measured using the stock prices and stock dividends where applicable. Control variables of this study are; profitability as measured by return on equity, liquidity as measured by current ratio and firm size as measured by natural logarithm of total assets.

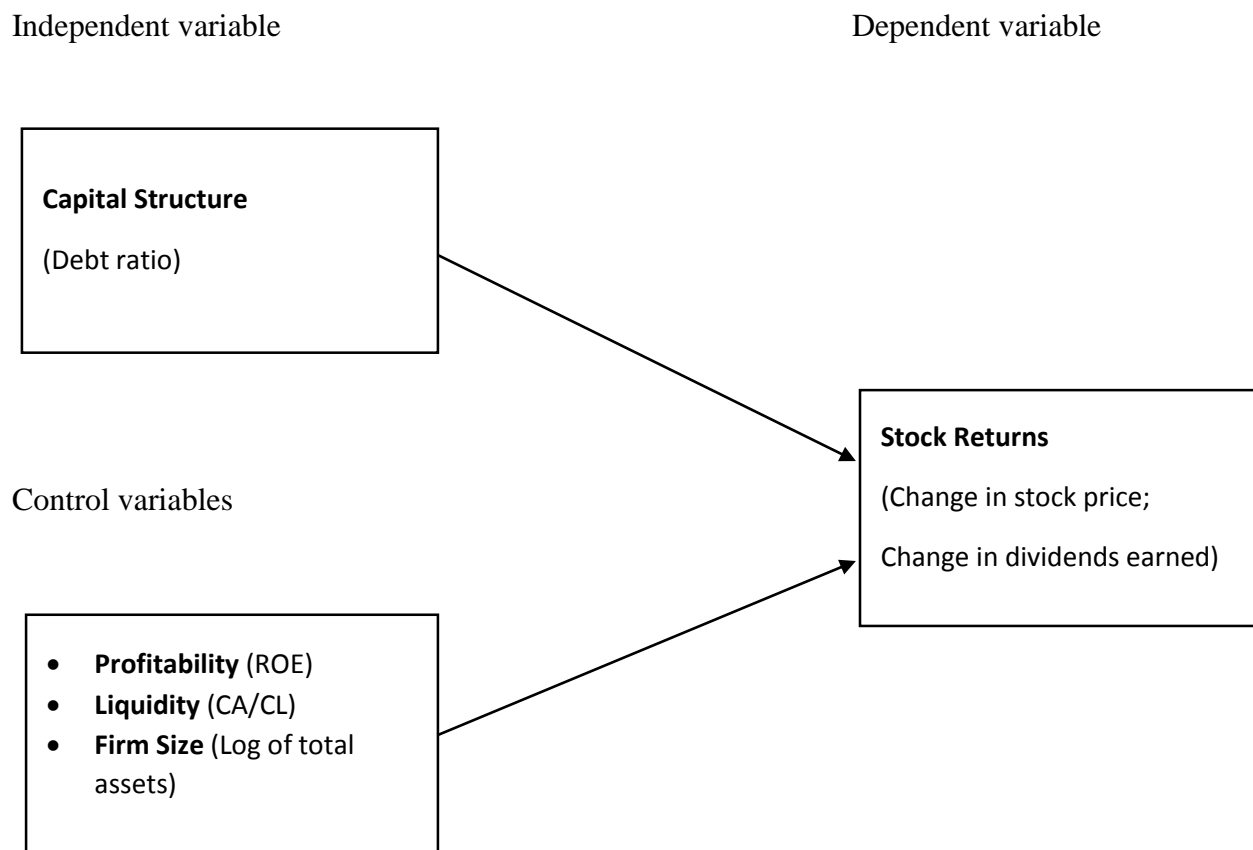


Figure 1: The Conceptual Model

Source: Researcher (2018)

2.6 Summary of Literature Review

The capital structure concept has been explained by various theories. These theories are; Modigliani and Miller theory, the pecking order theory, the trade-off theory and agency theory. Main stock return determinants have also been explained in this chapter. In addition, findings from various empirical studies have been deliberated on in this chapter.

From literature, there is no consensus among scholars with regards to the relationship between capital structure and stock returns. This lack of consensus is sufficient reason to carry out further research in the area. In their study, Saeedi and Mahmoodi (2011) found out that capital structure has no effect on firms' performance. Idris and Bala (2015) found out there is a positive correlation between capital structure and financial performance while Maina and Ishmail (2014) found out there is no statistically significant correlation between capital structure and financial performance of listed firms in Kenya. The latter finding is contrary to another local study by Njeri and Kagiri (2015) which found out that capital structure and financial performance of banks listed at the NSE are positively correlated. Therefore, this study greatly contributes to this deliberation by scrutinizing the effect of capital structure on stock returns of commercial and services firms listed at the NSE.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design used in the study so as to establish the effect of capital structure on stock returns. It also discusses the population of the study and how data was collected and analyzed.

3.2 Research Design

According to Khan (2008), research design can be defined as the road map or blueprint of the procedures which are implemented by the researcher for testing relationship between the dependent and independent variables (Khan, 2008). Descriptive research design which uses panel data was adopted in this study. This design was chosen because descriptive study entails explanation of the elements of a population and allows for identification of relations among the different elements. Variables associations and strengths of the respective associations are also identified through a descriptive design (Cooper & Schindler, 2008).

3.3 Population

Population is characteristics of importance upon which a study strives to draw inferences (Burns & Burns, 2008). The population for this study comprised the 10 commercial and services firms listed at the NSE from 1st January 2013 to 31st December 2017 (Appendix 1). The 10 firms listed under commercial and services sector of the NSE were studied in the census.

3.4 Data Collection

Secondary data was solely collected from the CMA since it is a regulatory requirement for all listed firms to report their annual financial information to the regulator. As such, secondary annual data was obtained for the period of 1st January 2013 to 31st December 2017. Of interest to this

study was data relating to firms' revenues, current liabilities, long term liabilities, current assets, equity, share prices and distributed dividends.

3.5 Data Analysis

Data was sorted, coded and tabulated for seamless analysis. The analysis used both descriptive and inferential statistics. The Statistical Package for Social Sciences (SPSS) was used in the analysis since the software is effective and has a user friendly interface. In descriptive statistics, the research mean and standard deviation while in inferential statistics the used multivariate regression analysis to draw inferences between the study variables. In addition, diagnostic tests were run to determine the reliability and validity of the analysis.

3.5.1 Diagnostic Tests

In order for the study model to be well specified, little if any information which can be used to improve prediction should be contained in the disturbance term. This means that the term should be random for the model to be well specified. Based on this, the following tests were carried out to check if the model was well specified.

3.5.1.1 Test of Heteroskedasticity

To check whether the variance of disturbance terms was constant in the adopted model, the Levene's test was used since the study involved time-varying volatility. As such, the test hypotheses based on the regression equation were:

H₀: no heteroskedasticity (variance is constant)

H₁: heteroskedasticity (variance is time varying)

The assumption was that there is homoskedasticity; as such, if the null hypothesis was rejected then validity of the data would need to be confirmed.

3.5.1.2 The Normality Test

To test for normality, that is to check the goodness of fit - whether the sample data had skewness and kurtosis corresponding a normal distribution, the Kolmogorov-Smirnov and Shapiro-Wilk tests were employed. The hypotheses of the tests were:

H₀: non-normality

H₁: normality

A p-value greater than 0.05 would lead to rejection of the null hypothesis since the disturbances would be normally distributed.

Carrying out these diagnostic tests was important since it helped tell whether the model is well specified or not. The model is well specified if very little information if any is contained in the disturbance term. In the event that any of the diagnostic tests would fail, the researcher would have to recheck data to ensure it was accurate and came from the correct source.

3.5.2 Analytical Model

The data was input into SPSS and examined using correlation and regression analyses in order to determine if there was a relationship between stock returns (dependent variable) and the independent variables: capital structure, profitability, liquidity and firm size.

As such, the regression model that the researcher adopted in the study was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = stock returns; measured by the annual change in market stock prices and issued dividend

β_0 = the y intercept

$\beta_1, \beta_2, \beta_3$ and β_4 = slope of regression

X_1 = debt ratio which is given by; $\frac{\text{long term debt}}{\text{long term debt} + \text{shareholders equity}}$

X_2 = profitability, ROE is given by; $\frac{\text{net income}}{\text{shareholders' equity}}$

X_3 = firm size given as; natural log of total assets

X_4 = Liquidity is given by; $\frac{\text{current assets}}{\text{current liabilities}}$

ε = error term

3.5.3 Tests of Significance

To test statistical significance, the F- and t-tests were used at 0.95 confidence level. The F-test was used to test statistical significance of the regression model whereas the t-test was used to test statistical significance of the study coefficients.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

Chapter four discusses the results of this research and is dedicated to the analysis on data collected from the CMA to investigate the impact of capital structure on stock returns of commercial and services firms listed at the NSE. Descriptive statistics, correlation and regression analysis were used and the findings of the research were presented in table format for easier interpretation.

4.2 Diagnostic Tests

The researcher performed diagnostic tests so as to ascertain the authenticity of the collected data. Levene's test of equality in error variances was used to test heteroskedasticity. The null hypothesis stated there is no heteroskedasticity. Table 4.1 shows that the diagnostic test significance is .943 which is way greater than critical value of 0.05. We therefore fail to reject the null hypothesis since there is homoskedasticity.

Table 4.1: Levene's Test of Equality of Error Variances^a

F	df1	df2	Sig.
.536	23	46	.943

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Debt Ratio + Profitability + Firm Size + Liquidity

Source: Research Findings (2018)

To test for normality, the Kolmogorov-Smirnov and Shapiro-Wilk tests were used. The null hypothesis was that secondary data is not normal. The critical p-value for this test is 0.05 hence if the recorded p-value is more than the critical value then the researcher would have to reject the null hypothesis. In this research, both tests returned p-values greater than the critical point as evident in Table 4.2. As such, the null hypothesis was rejected because the secondary data used in

the study is normally distributed making it suitable to for tests like the Pearson's correlation, analysis of variance and regression analysis.

Table 4.2: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Debt Ratio	.212	47	.300	.759	47	.784
Profitability	.338	47	.300	.582	47	.835
Firm Size	.143	47	.300	.939	47	.723
Liquidity	.164	47	.300	.903	47	.821

a. Lilliefors Significance Correction

Source: Research Findings (2018)

4.3 Descriptive Analysis

Descriptive statistics present the mean, standard deviation and the minimum and maximum values of the variables in the study. The descriptive statistics for variables in this study are shown in table 4.3 below. Analysis of the variables was done using SPSS version 20 software for a five year period (2013 to 2017). Stock returns had 0.077 mean with a 0.44835 standard deviation. Debt ratio had a 0.2967 mean and a 0.37161 standard deviation. Profitability had a -0.3005 mean and a 1.18098 standard deviation. Firm size had a 15.5842 mean and a 1.6148 standard deviation while liquidity had a 1.4842 mean and a 1.0288 standard deviation.

Table 4.3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Stock Returns	47	-.60	1.96	.0770	.44835
Debt Ratio	47	.00	1.66	.2967	.37161
Profitability	47	-5.32	1.72	-.3005	1.18098
Firm Size	47	12.79	19.02	15.5842	1.61480
Liquidity	47	.08	3.88	1.4842	1.02688
Valid N (list wise)	47				

Source: Research Findings (2018)

4.4 Correlation Analysis

To establish if there is a relationship between variables, correlation analysis is employed. The correlation ranges from a strong negative (-) correlation to a strong positive (+) correlation. To analyze the relationship between the returns on stocks and the independent (debt ratio) and control variables (profitability, liquidity and firm size), Pearson's correlation test was run.

The research found a positive statistically significant correlation ($r=.487$, $p=0.01$) between debt ratio and returns on stock. It also found out that there was a positive statistically insignificant correlation ($r=.024$, $p=.872$) between profitability and returns on stock. On the contrary, the research found out there was a negative statistically significant correlation ($r= -.352$, $p=.015$) between liquidity and returns on stock. It also found out there was a negative statistically insignificant correlation ($r= -.061$, $p=.683$) between firm size and stock returns. Despite the independent and control variables having an evident relationship, it was not strong enough to cause

multicollinearity using a critical value of $r \geq 0.70$. Therefore, the independent and control variables are suit to be used as factors in regression analysis of stock returns of commercial and services firms listed at the NSE. The correlation analysis is shown in table 4.4 below.

Table 4.4: Correlations

		Stock Returns	Debt Ratio	Profitability	Firm Size	Liquidity
Stock Returns	Pearson Correlation	1				
Debt Ratio	Pearson Correlation	.487	1			
	Sig. (2-tailed)	.001				
Profitability	Pearson Correlation	.024	-.370	1		
	Sig. (2-tailed)	.872	.010			
Firm Size	Pearson Correlation	-.061	.010	.176	1	
	Sig. (2-tailed)	.683	.946	.236		
Liquidity	Pearson Correlation	-.352	-.532	.301	-.072	1
	Sig. (2-tailed)	.015	.000	.039	.633	

Source: Research Findings (2018)

4.5 Regression Analysis and Hypothesis Testing

The returns on stocks of commercial and services firms listed at the NSE were regressed against the four predictors: debt ratio, profitability, liquidity and firm size. The study was carried out at 0.05 level of significance and the model summary is as shown in table 4.5 below.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.566 ^a	.321	.256	.386693358

a. Predictors: (Constant), Liquidity, Firm Size, Profitability, Debt Ratio

Source: Research Findings (2018)

From table 4.5, the adjusted coefficient of determination as measured by adjusted R squared is 0.256. This means that 25.6% of deviations in returns on stock of the listed commercial and services firms are instigated by changes in the predictors under study: debt ratio, profitability, liquidity and firm size. This finding means that 74.4% of changes in stock returns is explainable through other factors not captured in the study model. In addition, the results show there is a strong relationship among selected predictors and stock returns at a correlation coefficient of $R = 0.566$.

Table 4.6: Analysis of Variance (ANOVA)

Models	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	2.967	4	.742	4.960	.002 ^b
Residual	6.280	42	.150		
Total	9.247	46			

a. Dependent Variable: Stock Returns

b. Predictors: (Constant), Liquidity, Firm Size, Profitability, Debt Ratio

Source: Research Findings (2018)

From table 4.6 above, the ANOVA significance value is 0.002 which is less than the significance level of 0.05 meaning the model was statistically significant in predicting how the predictors affect stock returns of commercial and services firms listed at the NSE. The researcher also carried out the t-tests to investigate significance of each predictor used in the research. P values under the sig. column in table 4.7 below were used to indicate relationship significance of a predictor and the dependent variable. The 95% confidence level was used to indicate statistical significance.

Table 4.7: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.612	.595		1.029	.309
Debt Ratio	.598	.188	.496	3.189	.003
Profitability	.109	.054	.286	2.025	.049
Firm Size	-.036	.036	-.130	-.995	.326
Liquidity	-.080	.067	-.184	-1.205	.235

Source: Research Findings (2018)

From the results in table 4.7, debt ratio and profitability produced positive statistically significant values (high t-values (3.189 and 2.025), $p < 0.05$) for this research. Firm size and liquidity produced negative and statistically insignificant values for the study (t-values (-0.995 and -1.205), $p > 0.05$). Therefore, firm size and liquidity are not needed in the model because they are not significant.

The resulting regression model is:

$$Y = 0.612 + 0.598X_1 + 0.109X_2$$

Where:

Y = Stock returns

X₁ = Debt ratio

X₂ = Profitability

From the regression model, the constant = 0.612 show that in case the predictors are zero, then stock returns of commercial and service firms at the NSE would be 0.612. A unit increase in debt ratio would lead to increase of stock returns of commercial and service firms listed at the NSE by 0.598 while a unit increase in profitability would lead to an increase in stock returns of commercial and service firms listed at the NSE by 0.109.

4.6 Discussion of Research Findings

This study sought to investigate the effect of capital structure on stock returns of commercial and services firms listed at the NSE. Capital structure as measured by debt ratio was the independent variable. Profitability as measured by return on equity, liquidity as measured by current ratio and firm size as measured by the natural logarithm of total assets were the control variables while stock returns as measured by the annual changes in share prices was the dependent variable.

Pearson's correlation showed there exists weak positive correlation between profitability and stock returns. Capital structure and stock returns were also found to be positively correlated with a stronger correlation than the correlation between profitability and stock returns. On the contrary, liquidity was found to have a weak negative correlation with stock returns. Firm size was also found to have a weak negative correlation with stock returns and its p value showed insignificance.

In addition, the correlation analysis showed there is no multicollinearity among the predictors indicating that they were suitable to be used to explain changes in the dependent variable.

The study model showed that the predictors: debt ratio, liquidity, profitability and firm size explain 25.6% of deviations in returns on stock of the listed commercial and services firms at the NSE as indicated by the adjusted R squared value. The finding means that 74.4% of changes in stock returns is explainable through other factors not captured in the study model. In addition, the results show there is a strong relationship among selected predictors and stock returns at a correlation coefficient of $R = 0.566$. The regression model was found to be statistically significant at the 95% confidence level confirming that it was suitable to explain how the predictors affect the stock returns of commercial and services firms listed at the NSE.

This study findings are in line with Ndung'u (2014) who investigated influence of financial leverage on stock returns of firms listed at the NSE but for the firms in the banking and insurance sector whose capital structure is regulated. The researcher adopted descriptive research design and used data for a three year period; from 2011 to 2013. The researcher carried out multiple regression and found out that stock returns are positively correlated with firms' leverage ratio. Therefore, this study findings are consistent with theoretical review and the reason for the findings is that as a firm's leverage ratio increase, investors will demand high return on stocks owing to the potential risk of bankruptcy resulting from increasing leverage as measured by debt ratio in this research.

However, the findings of this study are contrary to Ogutu, Riro & Ofunya (2015) who investigated the effect of financial leverage on stock returns of commercial and services firms at the NSE using ten year period data from 2003 to 2013. The researchers utilized descriptive research design in their study to analyze the acquired panel data on the commercial and services firms listed at the NSE. After carrying out regression and correlation analysis, the researchers concluded that

financial leverage negatively affected stock returns of the commercial and services firms listed at the NSE.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Chapter five summarized the findings of the previous chapter, conclusion and limitations encountered during the study. In addition, the chapter documents recommendations which policy makers can apply to achieve increased firm value. Lastly this chapter advances suggestions for further research that can be important to future researchers.

5.2 Summary of Findings

This study aimed to investigate the effect of capital structure on stock returns of commercial and services firms listed at the NSE for the five year period between 2013 and 2017. The independent variables for the study were capital structure, firm size, profitability and liquidity while the dependent variable was stock returns. The study adopted a descriptive research design which uses panel data and the study data was obtained from the CMA. Data analysis was undertaken using the Statistical Package for Social Sciences (SPSS) version 20 software.

The correlation analysis showed there exists weak positive correlation between profitability and stock returns. Capital structure and stock returns were also found to be positively correlated with a stronger correlation than the correlation between profitability and stock returns. On the contrary, liquidity was found to have a weak negative correlation with stock returns. Firm size was also found to have a weak negative correlation with stock returns and its p value showed statistical insignificance owing to it exceeding the 0.05 level. The correlation analysis also showed there is no multicollinearity among the predictors; an indication that they were suitable to explain changes in the dependent variable.

The regression analysis results showed that the predictors: debt ratio, liquidity, profitability and firm size explain 25.6% of deviations in stock returns of the listed commercial and services firms at the NSE as indicated by the adjusted R squared value of 0.256. The finding means that 74.4% of changes in stock returns is explainable through other factors not captured in the study model. In addition, the results show there is a strong relationship among selected predictors and stock returns at a correlation coefficient of $R = 0.566$. The regression model was found to be statistically significant at the 95% confidence level confirming that it was suitable to explain how the predictors affect the stock returns of commercial and services firms listed at the NSE. In addition, the study further discovered that debt ratio and profitability are statistically significant determiners of stock returns while liquidity and firm size were found to be statistically insignificant owing to their significance values exceeding 0.05.

5.3 Conclusion

This study concludes that capital structure has significant effect on stock returns of commercial and services firms listed at the NSE. Debt ratio was found to have a positive statistically significant effect on stock returns of commercial and services firms listed at the NSE. Profitability was also found to have a positive statistically significant effect on stock returns of commercial and services firms listed at the NSE. On the contrary, firm size and liquidity were found to have a negative and statistically insignificant effect on stock returns of commercial and services firms listed at the NSE. This study therefore concludes that firm size and liquidity do not significantly influence stock returns of commercial and services firms listed at the NSE.

This study also concludes that the independent and control variables selected for the study: capital structure, liquidity, profitability and firm size significantly influence stock returns as evident by the ANOVA significance of 0.002. The model summary leads to the conclusion that the predictor

variables explain 25.6% of the changes in stock returns for the commercial and services sector at the NSE. This means that 74.4% of changes in the sector's stock returns is explainable through other variables not included in the fore mentioned variables. These findings concur with Ndung'u (2014) who investigated influence of financial leverage on stock returns of firms listed at the NSE but for the firms in the banking and insurance sector. The researcher adopted descriptive research design and used data for three year period from 2011 to 2013. The researcher carried out multiple regression and found out that stock returns are positively correlated with firms' leverage ratio.

5.4 Recommendations

This study found capital structure to have a significant positive effect on stock returns of commercial and services firms listed at the NSE. Therefore, this study recommends the sector firms' management to use debt financing to trigger positive stock returns but also ensure they strike a balance between increased financial leverage and the risks associated with borrowing such as potential bankruptcy costs. This recommendation stems from the finding that increased financial leverage leads to increase in stock returns. Therefore, firms' management need to be cognizant of this finding so as to employ appropriate levels of debt in their capital structure in order to maximize shareholders' wealth.

This study also established that profitability positively influences stock returns of the commercial and services firms listed at the NSE. Thus, this study recommends that the firms' management implement measures which will result in the firms increasing their profits and as a consequence trigger increased stock returns through increased profitability. This recommendation stems from the finding that increased profitability results into increase in stock returns. Therefore, firms' management need to work on increasing their profitability so as to ultimately guarantee that the goal of shareholders' wealth maximization is attained through increase in stock returns.

5.5 Limitations of the Study

This study solely relied on secondary data to reach at the discussed conclusion. Secondary data was employed because it is an aggregate of experts' efforts in consolidating the data for the public, investors and regulators consumption. However, an assessment of the same study using primary data and consulting with experts in the bourse might yield different results. In addition, the scope of this study was five years period (2013 to 2017). Therefore, the results may not hold for a longer study period which would otherwise capture major events not included in this study hence resulting into more reliable outcome.

For data analysis, the researcher used multiple linear regression model. Due to inadequacies of applying regression models such as misleading results when variable values change, the findings of this research cannot be generalized with certainty. This is so because in case progressively more data is added to the regression model the hypothesized relationship between variables may not hold in light of the addition.

5.6 Suggestion for Further Research

This study was centered on capital structure and stock returns of commercial and services firms listed at the NSE and solely depended on secondary data. A research study in which primary data collection tools such as structured interviews and in depth questionnaires are employed for the ten commercial and services firms listed at the NSE is suggested as a complement to this study. This recommendation is raised because primary data may yield different results owing to the data coming directly from the relevant experts and it having not been combed and aggregated like is the case with secondary data.

This study was not comprehensive of independent variables which affect stock returns of commercial and services firms listed at the NSE and thus recommends that further studies

incorporate other variables not covered by this study such as corporate governance, growth prospects, management efficiency, age of firm, political stability and other macro-economic predictors. Finding out the effect of individual variables on stock of commercial and services firm listed at the NSE will be significant in shaping frameworks since policy makers will appreciate and utilize insight on drivers which maximize shareholders' wealth.

This study focused on a five year period (2013 to 2017) owing to the fact that it was the most recent annual data for commercial and services firms listed at the NSE. Further studies in this area may use data for longer periods for example data from 1990 to present which would be helpful in upholding or refuting the findings of this study. Utilizing longer period's data is important since such data is bound to capture the effects of rare but important events which a shorter period may not capture. This study also restricted itself to the listed commercial and services firms. It therefore recommends that further research be conducted on commercial and services firms which are not listed at the NSE.

This study used multiple linear regression model to explain the relationship between the variables under study. Linear regression models have limitations such as being sensitive to outliers and being restricted to linear conditions even when variables may have relationships which are nonlinear. This study therefore recommends that further studies utilize other models beyond the linear regression models. For example the vector error correction model can be employed to explain relationship between variables because unlike the linear regression models, the model includes error correction features to the vector auto regression.

REFERENCES

- Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *The Journal of Risk Finance*, 438-445.
- Akbarian, S. (2013). The investigation on effect of financial leverage and environmental risk on performance of listed companies in Tehran Stock Exchange. *Journal of Applied Sciences and Agriculture*, 8 (3), 249-255.
- Aliu, N. (2010). *Effect of capital structure on the performance of quoted manufacturing firms in Nigeria, unpublished thesis*. Ahmadu Bello University.
- Aliyu, S. U. (2011). *Does inflation has an impact on stock returns and volatility? Evidence from Nigeria and Ghana*. Kano, Nigeria: Bayero University.
- Amato, L., & Burson, T. (2007). The effect of firm size on profit rates in the financial service. *Journal of Economic and Economic Research*, 8 (1), 61-81.
- Barakat, A. (2014). The impact of financial structure, financial leverage and profitability on industrial companies share value: Applied study on sample of Saudi industrial companies. *Research Journal of Finance and Accounting*, 5 (1), 55-66.
- Burns, N., & Burns, S. (2008). *The Practice of Nursing Research: Conduct, Critique and Utilization, 5th Edition*. St Louis: Elsevier Saunders.
- Calabrese, T. (2011). Testing competing capital structure theories of nonprofit organizations. *Public Budgeting and Finance*, 119-143.
- CMA. (2016). *Annual report and financial statements*. Nairobi, Kenya: Capital Markets Authority.

- CMA. (2017). *The capital markets soundness report volume v*. Nairobi, Kenya: Capital Markets Authority.
- Cooper, R., & Schindler, S. (2008). *Business research methods*. New York: McGraw Hill.
- Daferighe, E., & Sunday, C. S. (2012). The impact of inflation on stock market performance in Nigeria. *American Journal of Social and Management Sciences*, 3 (2), 76-82.
- Enekwe, C. I., Agu, C., & Eziedo, K. N. (2014). The effect of financial leverage on financial performance: Evidence of quoted pharmaceutical companies in Nigeria. *Journal of Economics and Finance*, 5 (3), 17-25.
- Erdugan, R. (2012). *The effect of economic factors on the performance of Australian stock market, unpublished dissertition*. Melbourne, Australia: Victoria University.
- Fama, E., & French, K. R. (1998). Value versus growth, the international evidence. *Journal of Finance*, 53 (6), 19-75.
- Gitman, L. (2003). *Basic managerial finance, 2nd edition*. New York: Harper & Row.
- Haris, M., & Raviv, A. (1991). The theory of capital structure. *Journal of Finance*, 46, 297-355.
- Idris, L., & Bala, H. (2015). Firms' specific characteristics and stock market returns (evidence from listed food and beverages firms in Nigeria). *Research Journal of Finance and Accounting*, 6 (16), 188-200.
- Itiri, I. (2014). *Impact of financial structure on the performance of quoted firms in Nigeria*. Nsukka: University of Nigeria.
- Jensen, M., & Meckling, W. (1976). The theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.

- Khan, J. (2008). *Research methodology*. New Delhi: APH Publishing Corp.
- KNBS. (2018). *Quarterly gross domestic product report*. Nairobi, Kenya: Kenya National Bureau of Statistics.
- Lee, J. (2012). Does size matter in firm performance? Evidence from US public firms. *Journal of the Economics of Business*, 16 (2), 189-203.
- 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.
- Malte, K. (2012). The impact of financial and corporate social responsibility news on business performance. *The Berlin International Economics Congress* (pp. 1-16). Berlin: Cultural Diplomacy Organization.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48, 261-297.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *The American Economic Review*, 53 (3), 433-443.
- Mohohlo, N. (2013). *Capital structure and its impact on firm value of JSE listed companies, masters research project*. Johannesburg: University of Witwatersrand.
- Myers. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5, 146-175.

- Myers, S. C., & Majluf, N. S. (1984). Corporate financial and investment decision when firms have information that investors do not have. *Journal of Finance and Accounting*, 9 (7), 36-69.
- Ndung'u, C. N. (2014). *The relationship between capital structure and stock returns of firms quoted in the Nairobi Securities Exchange, unpublished master's research project*. Nairobi: University of Nairobi.
- Njeri, M. K., & Kagiri, A. W. (2015). Effect of capital structure on financial performance of banking institutions listed in Nairobi Securities Exchange. *International Journal of Science and Research*, 4 (7), 924-930.
- Nyamita, M. O. (2014). *Factors influencing debt financing and its effects on financial performance of state corporations in Kenya, unpublished doctoral thesis*. Durban: Durban University of Technology.
- Nyungen, T. D., & Nyungen, P. H. (2016). The relationship between firm size and stock returns of service sector in Ho Chi Minh City Stock Exchange. *Review of European Studies*, 8 (4), 1-10.
- Ogutu, A. W., Riro, K., & Ofunya, A. (2015). Effect of capital attributes on the performance of commercial and services companies listed in Nairobi Stock Exchange. *International Journal of Social Sciences Management and Entrepreneurship*, 2 (1), 313-326.
- Onaolapo, A. A., & Kajola, S. O. (2010). Capital structure and firm performance: Evidence from Nigeria. *European Journal of Economics, Finance and Administrative Science*, 25, 70-82.

- Peris, N. W. (2017). *The effects of pension funds investments on stock market returns at the Nairobi Securities Exchange*. Nairobi: University of Nairobi.
- Saeedi, A., & Mahmoodi, I. (2011). Capital structure and firm performance: Evidence from Iranian companies. *International Research Journal of Finance and Economics*, 70 (7), 20-29.
- Sebnem, E. R., & Vuran, B. (2012). Factors affecting stock returns of firms quoted in ISE market: A dynamic panel approach. *International Journal of Business and Social Research*, 2 (1), 109-122.
- Sirucek, M. (2013). *The impact of the money supply on stock prices and stock bubbles*. Brno, Czech Republic: Mendel University.
- Tahmoorespour, R., Ali-Abbar, M., & Randjbaran, E. (2015). The impact of capital structure on stock returns: International evidence. *Hyperion Economic Journal*, 1 (3), 56-78.
- Vieira, R. (2010). *The relationship between liquidity and profitability: An exploratory study of airline companies between 2005-2008*.
- Wairimu, B. M. (2017). *Testing the firm size effect on stock market returns at the Nairobi Securities Exchange, unpublished master's project*. University of Nairobi.
- Wang, F. (2012). *Determinants of Chinese stock market returns, master thesis*. Kedah: Universiti Utara Malaysia.
- Wangige, G. J. (2016). *Effects of firm characteristics on financial distress of non-financial firms listed at Nairobi Securities Exchange, Kenya*. Nairobi: Kenyatta University.

Welch, I. (2004). Capital structure and stock returns. *Journal of Political Economy*, 112 (1), 106-131.

APPENDICES

Appendix 1: Firms that Constitute the Population

1. Deacons Ltd
2. Express Ltd
3. Kenya Airways Ltd
4. Longhorn Publishers Ltd
5. Nation Media Group Ltd
6. Sameer Africa PLC
7. Scangroup Ltd
8. Standard Group Ltd
9. TPS Eastern Africa (Serena) Ltd
10. Uchumi Supermarket Ltd

Appendix 2: Data Collection Form

Company/Year	Variable	2013	2014	2015	2016	2017
	Total assets					
	Long term debt					
	Shareholders' equity					
	Net income					
	Current assets					
	Current liabilities					
	Total assets					
	Long term debt					
	Shareholders' equity					
	Net income					
	Current assets					
	Current liabilities					
	Total assets					
	Long term debt					
	Shareholders' equity					
	Net income					
	Current assets					
	Current liabilities					
	Total assets					
	Long term debt					
	Shareholders' equity					
	Net income					
	Current assets					
	Current liabilities					

Appendix 3: Research Data (2018)

Company/Year	Stock Return	Debt Ratio	Profitability	Firm Size	Liquidity
Express Ltd					
2013	0.11	0.38	0.00	16.44	0.64
2014	0.59	0.49	-0.10	15.11	0.59
2015	-0.27	0.65	-0.50	16.68	1.13
2016	-0.21	0.91	-4.18	15.28	0.85
2017	0.06	0.34	-1.35	12.79	0.60
Kenya Airways Ltd					
2013	0.15	0.59	-0.28	16.25	0.56
2014	-0.34	0.69	-0.13	15.12	0.46
2015	0.44	1.09	-3.04	16.38	0.50
2016	0.17	1.48	-0.78	15.24	0.45
2017	1.96	1.66	0.19	16.60	0.43
Longhorn Publishers Ltd					
2013	0.32	0.00	0.24	15.53	1.40
2014	-0.31	0.00	0.18	13.08	1.46
2015	-0.54	0.03	0.26	18.82	1.47
2016	0.03	0.33	0.14	13.48	3.48
2017	0.13	0.22	0.16	16.30	2.43
Nation Media Group Ltd					
2013	0.40	0.01	0.36	15.17	2.77
2014	-0.16	0.01	0.33	16.40	2.48
2015	-0.33	0.02	0.28	15.09	2.33
2016	-0.51	0.00	0.20	16.58	2.17
2017	0.25	0.00	0.16	15.75	2.00

Sameer Africa PLC					
2013	0.19	0.07	0.24	13.08	2.63
2014	0.12	0.08	0.03	19.02	2.02
2015	-0.38	0.00	0.01	13.43	1.80
2016	-0.25	0.00	-0.27	16.36	1.49
2017	0.00	0.02	0.05	15.14	1.18
Scangroup Ltd					
2013	-0.29	0.03	0.08	16.34	2.72
2014	-0.06	0.03	0.06	15.29	3.88
2015	-0.33	0.02	0.05	16.58	3.33
2016	-0.34	0.00	0.04	15.67	3.77
2017	0.08	0.00	0.05	13.00	3.69
Standard Group Ltd					
2013	0.16	0.25	0.09	14.64	1.16
2014	0.23	0.28	0.13	18.86	1.20
2015	-0.19	0.27	-0.15	14.41	0.95
2016	0.41	0.23	0.10	16.31	1.17
2017	1.06	0.22	-0.16	15.01	0.72
TPS Eastern Africa (Serena) Ltd					
2013	0.16	0.22	0.04	16.42	0.87
2014	-0.18	0.21	0.03	15.30	0.80
2015	-0.32	0.29	-0.05	16.65	1.04
2016	-0.18	0.36	-0.01	15.43	1.64
2017	0.59	0.39	0.02	12.85	1.08
Deacons Ltd					
2016	-0.60	0.19	-0.24	18.63	1.64
2017	0.43	0.46	-2.55	13.35	0.80

Uchumi Supermarket Ltd					
2013	0.02	0.06	0.12	14.26	0.70
2014	0.48	0.05	0.11	18.80	0.57
2015	0.05	0.40	-5.32	14.44	0.34
2016	0.63	0.47	1.72	16.24	0.26
2017	0.23	0.41	-0.50	14.90	0.08

EFFECT OF CAPITAL STRUCTURE ON STOCK RETURNS OF COMMERCIAL AND SERVICES FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE by Arphaxade Sifuna

From PROJECT (MASTERS)

- Processed on 05-Nov-2018 16:07 EAT
- ID: 1033201154
- Word Count: 10538

Similarity Index

14%

Similarity by Source

Internet Sources:

9%

Publications:

6%

Student Papers:

7%