

**THE EFFECT OF CAPITAL STRUCTURE ON STOCK RETURNS FOR
FIRMS LISTED ON THE NAIROBI SECURITIES EXCHANGE**

BY

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DECLARATION

This research project is my original work and has not been presented for examination in any other University.

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I dedicate this work to my wife Jennifer and my son Able for allowing me to use part of the time I ought to have spent with you to work on this project. To my siblings, and my parents Mr. and Mrs. Jacob Ngome for continuously challenging me to achieve beyond my abilities.

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LIST OF ABBREVIATIONS

DE - Debt to Equity

DPO - Dividends Payout

DPS - Dividend per Share

EPS - Earnings per Share

JSE - Johannesburg stock exchange

KSE - Karachi Stock Exchange

LDE - Long Term to Equity

LTDA - Long Term Debt to Assets

MPS – Market Price per Share

NPM - Net Profit Margin

NSE - Nairobi Securities Exchange

ROA - Return on Assets

ROE - Return on Equity

STDA - Short Term Debt to Assets

TA - Total Assets

ABSTRACT

The goal of the study was to investigate the effect of capital structure on stock returns for firms listed on the Nairobi Securities Exchange. The period of focus was from 1st January 2011 to 31st December 2015. The study adopted a causal research design and multiple regression analysis was used to investigate this effect at 95% confidence level. Other independent variables adopted in the study were profitability measured by earnings per share, firm size measured by firms' total assets and liquidity measured by the average annual trading as a quotient of the outstanding shares in number. Secondary data was utilized for both the dependent and independent variables. The data was obtained from Nairobi Securities Exchange (NSE) historical data on price changes and volume between 1st January 2011 and 31st December 2015 and the 2016 NSE handbook financial reviews per company. Regression analysis results disclosed that overall, capital structure has a positive bearing on stock returns for firms listed on the Nairobi Securities Exchange within the period the study was carried out. The sectorial analysis also showed that capital structure has a positive effect on stock returns in the different sectors except for the agricultural sector, investment and telecommunication sectors. The results are however not statistically significant and can therefore not be used to meaningfully explain changes in stock returns for firm's listed on the Nairobi Securities Exchange. Nevertheless, the results were found to be statistically significant for the telecommunication sector even though only one firm was reviewed in the sector. Overall, in addition to the positive effect of capital structure on stock returns, profitability and stock liquidity had a positive impact while firm size had a negative impact on a firm's stock returns. None of the variables were deduced to be statistically significant and the model adopted only accounted for 4.4% variation in stock returns. Other factors not factored in the model employed in the study thus account for 95.6% of the variation in stock returns. Correlation analysis pointed at weak positive correlations between stock returns and all the independent variables. The correlation was only found to be statistically significant between stock returns and stock liquidity. The researcher recommends research on other variables not employed in this study that could account for the 95.6% variation that has not been accounted for by the model adopted. The period of the study can also be extended in future research and different proxies for measuring different variables employed in the same study to eliminate the weaknesses that associated with particular proxies for the independent variables.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Mathanika et al. (2015) pointed out that capital structure is the most significant discipline of a company's operations. Masereti (2014) also emphasized this by noting that capital structure is an important managerial decision which influences the stock return and in turn the market value of firms. Capital structure, stock returns, and their determinants have garnered considerable attention among researchers in financial management (Ahmad et al., 2013). The controversial and almost indefinite discussion on the capital structure relevance or irrelevance in determining firm value initiated this focus.

Practically, a certain number of companies fail to plan their capital structure; hence it stems from the decisions taken by the managers in charge of finance. These companies, albeit prospering in the short-run, find it challenging to raise funds to finance their operations (Pandey, 2009). Conversely, some companies acknowledge the fundamental role that capital structure plays in determining the risk level hence develop appropriate capital structure strategies. Whenever debt is present in a firm's capital structure, it introduces an element of fixed costs. The fixed interest costs should be kept to a minimum due to the uncertain nature of the environment (Nirajini & Priya, 2010).

In attempts to plan their firm's capital structure, firms face some limitations inherent in the respective sources of capital. Due to the limitations of each source of finance,

financial managers of different firm's opt to mix the various sources of capital as opposed to adopting sole sources of capital. The mixture chosen affects both the risk and the shareholder return (Ahmad et al., 2013). The goal of all financing decisions is wealth maximization (Mwangi et al., 2014). Maximization of the wealth of equity providers translates into higher stock returns. As a result, different financial managers will attempt to combine the mix that maximizes the shareholders' wealth since shareholders want management to choose a combination that will maximize firm value and in turn their returns

1.1.1 Capital Structure

The proportion of a firm's debt and its equity signifies the firm's capital structure (Nirajini & Priya, 2013). Abhor (2005), also noted that the capital structure of a firm is the blend of equity and debt that firms adopt in their operations. Apart from regulated industries where there may be limitations on the amount of debt a firm can use, firms are at liberty to choose the amount of debt and equity in addition to the other sources of finance they will use to finance their activities. Musiega et al. (2013) noted that equity, as a source of finance, is preferred by investors given that it is devoid of conditions from the providers of the finance on where it can be invested or used. On the other hand, all debt financing is prioritized in states where debt interest is tax deductible. The tax deductibility of interest helps reduce the firm's tax burden while the firm utilizes the debt capital to enhance their operations.

Pandey and Chee (2001) defined leverage or capital structure as aggregate debt computed as a ratio of the book-value equity. Different methods can be used measure capital structure. These include the ratio of debt to aggregate capital and the proportion of overall debt to assets. Nevertheless, the widely preferred method of measuring capital structure as used by various researchers to compute capital structure

in studies using capital structure to predict different variables is the proportion of debt to equity. Capital structure was relevant in this study given that it was the primary independent variable in the study.

1.1.2 Stock Returns

Providers of capital expect a return to compensate for the risk they take to provide funds to a firm to utilize in its operations. Otherwise, the providers of such funds will not be willing to provide these funds. Otweyo (2014) defined a return as the increase or decrease in value of an asset in a specific timeframe. For providers of equity (shareholders) the return on stocks takes the form of two components. These are the capital gain or loss and some income. The capital gain results in the appreciation in the stock price, and the income is usually in the form of dividends earned from holding the stock over a given period.

In all investments, investors seek to gain by earning returns besides attempting to acquire information as pertains to the future amount of stock returns of companies (Ogello, 2014). It is, therefore, critical for the investor to understand how they can compute returns on their investments. Levisaukaite (2010), provided that, summing the returns from the stock as a result of the capital gain and returns from the stock due to income in the form of dividends, yields to stock returns. The quotient of the overall change in market price over the holding period and the market value of the security at the onset of the holding period helps in computing returns from the capital gains. On the other hand, returns from the stock as a result of the income in the form of dividends are computed as the quotient of dividend per share and the market price of the share at the commencement of the holding period. The concept of stock returns was relevant to the study by being the dependent variable in the study.

1.1.3 Capital Structure and Stock Returns

Masereti (2014) emphasized that capital structure and stock returns are vital in financial management. Buigut et al. (2013) noted that the value realized from issuing debt is the tax deductible interest costs which make debt finance inexpensive. Modigliani and Miller (1958) contended that the utilization of debt-financing fundamentally alters the market for shares as multiple providers of funds are brought on board and shareholders have to compete for a share of the company's earnings with the debt providers. Their assertion implied that the firm value is maximized when it employs debt. The fundamental change impacts the stock returns which are expected to be higher given that equity investors will demand a higher return with the introduction of debt to guard against the risk introduced by leverage.

Several studies have been carried out with different studies giving conflicting results on what influences the other between stock returns and capital structure. Welch (2004) found out that stock returns are the main drivers of debt ratios. Chen et al. (2014) arrived at similar results by concluding that firms respond to stock return volatility with more debt reduction than equity issuance. Conversely, Sebnem and Vuran (2012) in their study established that stock returns are affected by financial structure among other factors. The assertion is consistent Tahmoorespour et al. (2015) who found out that stock returns are affected by capital structure although the effect varies depending on the industry. While the relationship is positive in some industries, it is negative in others. This study will be seeking to investigate the effect of capital structure on stock returns for firms listed on the Nairobi Securities Exchange.

1.1.4 Firms Listed on the Nairobi Securities Exchange

The Nairobi Stock Exchange was registered as per chapter 108 laws of Kenya, the society's act of 1954 (Muiva, 2015). Initially, business on Nairobi Stock Exchange (NSE) was transacted by phone and purchase and sale prices determined through negotiation. The Stock Exchange initially served the entire East Africa. Change in political regimes in the East African Community resulted in the delisting of companies resident in Tanzania and Uganda from the Nairobi Stock Exchange. As from 6th July 2011, The Nairobi Stock Exchange, rebranded to the Nairobi Securities Exchange Limited. The move was necessitated by the 2010 – 2014 strategic plan. The plan was for the Securities Exchange to progress into a Securities Exchange that is conducive for trading of derivatives, debt, equities, and other instruments (Otweyo, 2014). As at August 2016, The Nairobi Securities Exchange has a total of 65 listed firms. The firms have been categorized into 11 different segments. The Nairobi Securities Exchange is also listed on the NSE with 194,625,000 issued and fully paid up shares. The Capital Markets Authority regulates the NSE (Mukaria et al., 2015)

Firms listed on the Nairobi Securities Exchange utilize both debt and equity as sources of financing. Previous researchers have concluded that the level of debt for most listed firms is low. Masereti (2014) observed that most of the firms listed on the NSE seem to follow a constant target debt ratio in the long run while Musiega et al. (2013) observed that firms on NSE use less debt but focus more on use of retained earnings. The researchers arrived at this conclusion by computing the mean of various capital structure measures for a sample of listed companies. The highest proxy for capital structure was Total Debt to Assets (TDA) which averaged 51.66%. The other proxies such as Short Term Debt to Assets (STDA) and Long Term Debt to Assets (LTDA) averaged 32.55% and 22.64% respectively. Maina and Ishmail (2014)

arrived at a conclusion similar to Musiega et al (2013) when they noted that firms listed at the NSE used less long-term debt compared to short-term debt.

Stock returns for firms listed on the Nairobi Securities Exchange vary. Some companies record positive returns while others record negative returns. Mwangi (2014) noted that the variation in a specific stocks returns from period to period is higher compared to the variation from stock to stock. Kinyae (2013), using data between 2007 and 2012 observed that the NSE share index was inconsistent within this period. The researcher computed the average stock return for 17 firms across 10 different sectors and found a mean stock return of -0.11 and a standard deviation of 0.52. The above observations were also confirmed by Nyaga (2014) using data for 54 firms over the period 2008 – 2013. The researcher observed that stock returns for firms listed at the Nairobi Securities Exchange vary from firm to firm and period to period.

1.2 Research Problem

Mwangi et al. (2014) acknowledged that a significant stalemate for investors and management is whether an optimal capital structure exists. Investors and management are also concerned with how capital structure decisions, whether short-term or long-term, impact business performance. The conflicting research in this area has served to intensify this dilemma. Modigliani and Miller (1958) proposed that the firm's market value is not dependent wholly on the financial structure of that firm. The proposition sparked a series of research in the area with different researchers carrying out research in this area to affirm or disagree with Modigliani and Miller. Others have attempted to develop other theories to expound on how different firms choose their capital structure.

The trade-off theory postulates that firms will select a combination of debt and equity that will help achieve a balance between the outflows and the inflows of debt (Myers & Majluf, 1984). Costs of debt relate to financial distress costs while the inflows of debt stem from the tax savings that accrue to a firm in form of interest deductions from the taxable income for the firm. Myers and Majluf (1984) developed the pecking order theory in another critical attempt to explain how firm's select their capital structure. The pecking order theory proposed that investments are financed first by internally generated funds; followed by debt and lastly by equity. The pecking order of sources of finance is motivated by the desire by financial managers to withhold information about a company's performance and future plans from the public hence managers use the source that will delay their provision of these information to the public.

Globally, empirical evidence on the effect of capital structure on stock returns has yielded conflicting results. Yelch (2004) concluded that stock returns are the main

drivers of debt ratios. The researcher further indicated that stock returns are the only well-understood determinants of debt ratio. Pandey and Chee (2001) resolved that leverage has no effect in explaining stock returns. Nirajini and Priya (2013) discovered a positive correlation linking capital structure and financial performance. Sebnem and Vuran (2012) affirmed this when they found a positive correlation between stock returns and financial structure.

Locally, most studies on capital structure have revolved on the connection between financial structure and financial performance. Mwangi et al. (2014) found a statistically significant negative association between financial leverage and performance. Koech (2013) and Ogutu et al. (2015) affirmed this when they concluded that capital structure is inversely related to performance. Maina and Ishnail (2014) found no weighty association between capital structure choice and financial performance of Kenyan listed firms. The conclusion is contrary to Njeri and Kagiri (2015) who found that capital structure and financial performance of listed commercial banks are positively correlated.

Firms on the Nairobi Securities Exchange employ different mix of capital and also generate varying returns on stock. Research on the causal association amid capital structure and stock returns for firms listed on the Nairobi Securities Exchange has attracted the attention of few researchers in the recent past. Masereti (2014) sought to investigate the existence of a causal relationship between capital structure and stock returns. The researcher concluded that the two variables are correlated. Ndung'u (2014) found that increase in operating leverage increases the firm's stock returns. It is consistent with the assertion that leverage influences share price, and firms may need to increase their leverage if they desire to increase their firms share price and encouraging more investors to invest in their firm (Buigut et al., 2013). Besides the

fact most local studies on capital structure have pursued the effect of capital structure on financial performance of listed firms as opposed to stock returns, the little research done to establish the influence of financial structure on stock returns of firms listed on the Nairobi Securities Exchange have led to recommendations for further research in the area. The gap and demand for research thus necessitates carrying out a study on the effect of capital structure on stock returns of firms listed on the Nairobi Securities Exchange over the period of 1st January 2011 and 31st December 2015 to fill the research gap existing in this area by answering the following research query: what is the effect of capital structure on stock returns of firms listed on the Nairobi Securities Exchange?

1.3 Research Objective

To investigate the effect of capital structure on stock returns of firms listed on the Nairobi Securities Exchange.

1.4 Value of the Study

All investors in any securities exchange invest with an intention to earn dividends, capital gains or both. These two elements, dividends and capital gains constitute the stock returns. The study will assist investors in companies quoted on Securities Exchanges since they will know the effect of capital structure on the returns of firms listed on various Security Exchanges and thus, make informed decisions when deciding on the stocks to invest in. Firms will also benefit from the study as it will inform their decisions on the capital structures that the firms can employ. The firms will be better placed by focusing on the combination that maximizes stock returns and shareholders wealth.

The outcome of this study will also aid the various regulatory agencies when developing legislation and regulatory framework around companies' capital structure. The regulators will thus consider this study as they formulate policies that will create a favorable environment for investors. Future researchers will also make reference to this work as they extend their research in this area. Moreover, the research will add to the frame of understanding on the effect capital structure on stock returns providing a basis for further studies in this area.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The first part of the chapter is an analysis of leading theories on capital structure. Determinants of stock returns of firms listed on the Nairobi Securities Exchange will also be discussed followed by a review of previous research on the effect of capital structure on stock returns and financial performance. The conclusion of the chapter will be a summary of the previous works and known theories and highlighting of the research gap.

2.2. Theoretical Review

Several theories have been formulated regarding how firms select their capital structure. This section presents the three main theories in capital structure. The discussion will commence with the Debt Irrelevance theory, the Trade-Off theory and conclude with the Pecking Order theory.

2.2.1 Debt Irrelevance Theory

In an environment with rational investors, healthy-operational markets and neutral taxes, the worth of the firm is contingent on the revenue stream created by its assets (Modigliani & Miller, 1958). Rational investors are investors who can hold positive or negative amounts of debt and eventually beat the corporate financial structure. If the market value of a firm is contingent only on the revenue stream created by a firm's assets, then the market value of a firm is not influenced by the firm's capital structure and subsequently no finance manager can increase the value of a firm by altering the combination of securities used to finance the company (Espieh & Moridipour, 2013).

However, in the ideal world markets may not be as well functioning as assumed by Modigliani and Miller. Investors may not manage to borrow on the same terms as the firm. Second, capital markets may not be efficient and, taxes exist in every country. The inability to downplay the effect of taxes led to a modification of this theory by the same proponents who introduced taxes in the model concluding that debt does matter (Njeri & Kagiri, 2015). Firms that borrow too much land in financial distress and information asymmetries exist. Besides, other practical complications encountered in selecting the appropriate sources of financing for many firms are a pointer that a firm's capital structure mix may influence the value of the firm. Baxter (1976) affirmed this and noted that a firm with higher levels of debt is likely to incur higher bankruptcy costs eventually affecting the value of the indebted firm. The practical complication of the assumptions as fronted by Modigliani and Miller has led to other theories that attempt to explain how companies select their capital structure. The theory is relevant to this study as it is the main initial argument to be fronted in the area of capital structure sparking further study in the area. The study sought to understand whether the postulates of the Debt Irrelevance Theory hold for the firms listed on the Nairobi Securities Exchange.

2.2.2 Static Trade-Off Theory

The theory suggests that firms will adopt a proportion of debt and equity that mirrors a trade-off amid the merits and demerits of debt (Myers & Majluf, 1984). The merits of debt arise from the tax shield offered by debt while the costs of debt usually present themselves concerning financial distress costs. The trade-off theory acknowledges that debt quotients differ from firm to firm. Firms set target debt-equity ratio and gradually move towards it. It is done while seeking a middle ground between the tax

merits of additional debt and the potential outflows that come with the possibility of financial distress (Koech, 2013).

Ghazouani (2013) describe the theory as the theory of give and take. The Static trade-off theory clarifies why there are differences in capital structure from one industry to another. Establishments with secure, substantial assets and significant amount of taxable income to safeguard tend to raise the bar target debt ratios. Conversely, loss-making firms with uncertain, intangible assets rely primarily on equity financing. However, Shyam-Sunder and Myers (1999) explained that debt levels changes occur when there is a gap in internally generated cash flow, net of surpluses, and other investment opportunities. The statement affirms that debt ratios changes are influenced by the necessity for external funds as opposed to attempts to reach an optimal capital structure. The static trade-off theory was relevant to the study as it lay down the expected relationship between stock returns and debt levels. Firms with high debt levels are expected to have higher stock returns as investors will demand the same for the exposure to the demerits of high debt levels in terms of bankruptcy costs.

2.2.3 Pecking Order Theory

The theory, a proposition by Myers and Majluf (1984) using the adverse selection concept. Adverse selection is based on information asymmetry which indicates that managers have more information about an organization compared to outside. Where the manager chooses to sell equity, outside investor will be curious as to why the manager opts to do so. Managers of an overvalued firm will gladly sell the firm's equity, contrary to the managers of an undervalued firm (Murray & Vidhan, 2005). The pecking order theory postulates that when a company required funds, it will first source internally internal before opting for debt and equity in that order. The

motivation is the desire of managers to withhold information regarding earnings and future opportunities and plans from those outside the firm.

Butt et al. (2013) identified two weaknesses of the pecking order theory. The first was its failure to provide for the effect of corporate taxes, floatation costs, agency cost, and financial distress costs. The second weakness being the fact that it overlooked the challenges that may arise from the financial manager's decisions to accumulate financial slack. Due to these limitations, the researchers asserted that the pecking order theory is a complement and not a substitute of the trade-off theory. The pecking order theory introduced a different perspective to the study by proposing that capital structure may not be motivated by the need to balance between the merits and demerits of debt but by the availability or unavailability of internal funds. The theory therefore necessitated computing of tests of significance to assess the extent to which the capital structure influences the stock returns.

2.3. Determinants of Stock Returns

Several researchers have sought to determine what influences stock returns on various Security Exchanges. Various determinants have been identified having different effects on the stock returns. The primary determinants of stock returns that vary from firm to firm include firm size, profitability, capital structure and liquidity. The outline of these factors, except capital structure which is discussed in section 1.1.1, is in the section that follows.

2.3.1 Firm Size

The firm size of a listed firms is measured by its stock market capitalization. Firm size can also be assessed in terms of a firm's total assets. Ikikii and Nzomi (2013) define stock market capitalization as the combined value of all company's issued shares

listed on a national stock exchange. Market capitalization represents the value the market has placed on the value of a company's equity (Skamo, 2012). Market capitalization computation is critical to any stock valuation formula as it denotes the aggregate market value of all the company's issued shares. As noted by Wambui (2008), market capitalization is a measure of corporate or economic size. The higher the number of outstanding shares for a firm, holding other factors constant, the larger the market capitalization. Similarly, if firms have the same number of outstanding shares, the firm with a higher prevailing market price per share will have a higher market capitalization.

Market capitalization is arrived at by computing the product of the outstanding number of shares for a firm and the current share price. Musebe (2015) noted that market capitalization is a key measure for investors in the determination of the yields from their investment. It is also a universally accepted metric for assessing the health of a publicly traded company and an approximation of the value of a business entity. Firms whose market capitalization is low, on average, realize greater returns than firms whose market capitalization is high (Banz, 1981). The assertion was supported by Idris and Bala (2015) who established that market capitalization has a significant negative effect on stock market returns. The assertions are due to the fact that investors demand higher returns from smaller firms compared to larger firms due to the risky nature of smaller firms. Firm size can also be computed or measured by the sum of total assets for a firm (Pervan & Visic, 2012). Firm size was an independent variable in the study.

2.3.2 Profitability

A firm is considered profitable if it has the ability to cover the expenses it incurs in generating revenue and still have a surplus. Firms with ability to generate huge profits

are have plenty of profit to shield against tax (Ahmad et al., 2013). The firms usually take advantage of these huge profits to incur huge debts that can be utilized for expansion and diversification thus generating significant returns for their shareholders. Fama and French (2006) found the existence of a significant influence between profitability and stock returns.

The profitability of a firm can be measured using various indicators. Return on Capital Employed (ROCE), Earnings per Share (EPS), Return on Equity (ROE), and Return on Assets (ROA) are the main ratios that are used to measure profitability (Har & Ghafar, 2015). Foroghi & Jahromy (2015) used earnings per share as a measure of profitability in their study to assess how profitability affects stock returns on the Tehran Stock Exchange. Conversely, Heryanto (2016) used Return on Assets (ROA) as an indicator of profitability. The researcher acknowledged that profitability is one among the different factors that affect the stock returns of a firm. Profitability was an independent variable in the study

2.3.3 Liquidity

Liquidity refers to the degree of ease of purchase or sale of a security in a market without incurring losses (Dalgaard, 2009). There is safety when an investor invests in liquid securities since the trading costs are lower. On the other hand, investment in illiquid securities is more risky due to higher trading costs. As a result, investors who invest in illiquid securities demand a higher return. Liquidity is more important for short term investors who target to make a sale whenever there is a slight appreciation in the price of a security as opposed to long-term investors who invest with a dividend motive (Akram, 2014).

Liquidity for a particular security is measured by computing the average trading volume of the security as a percentage of the number of outstanding shares (Koech, 2012). Okanga (2012) studied the relationship amid illiquidity and stock returns of companies listed at the Nairobi Securities Exchange and concluded that illiquidity had a positive relationship with stock returns for firms listed at the Nairobi Securities Exchange. The assertion was also affirmed by Ndung'u (2014) who noted that empirical and theoretical studies show a negative correlation between liquidity and stock returns. Liquidity was an independent variable in the study.

2.4. Empirical Review

Sebnem and Vuran (2012) investigated the factors affecting stock returns of firms quoted in Istanbul stock exchange. Using secondary yearly data on stocks of 64 manufacturing firms listed continuously on the stock exchange between 2003 and 2007, Dynamic Panel Data Analysis method was adopted to explain the determinants of firm's stocks returns. They deduced that stock returns are affected by firm's financial structure among other factors. Total debt measured the financial structure in this research to equity and short-term debt to total assets. However, the researchers did not explicitly show how the stock returns could be linked to the firm's financial structure given that there were 30 independent variables that they had sought to test whether they have any effect on stock returns of the selected firms.

Musiega et al. (2013) studied the consequence of a firm's capital structure on performance using a sample of 30 out of 50 Nairobi Securities Exchange (NSE) listed non-financial companies. To measure performance, they used six performance measures. The measures used were EPS, Dividend Payout (DPO), ROE, ROA, and market price to book ratio of stock. The capital structure proxies used were long-term debt to asset ratio (LTDA), short-term debt to asset ratio (STDA), and total debt to

asset ratio. The empirical research model was utilized and a linear regression analysis done between the various capital structure measures and the financial performance measures done using secondary data. The study concluded that firms listed on the NSE are in sync with the pecking order hypothesis owing to the undeveloped debt market and restraining terms contained in debt covenants. The research never gave a definitive conclusion on the influence of capital structure on performance.

Mohohlo (2013) probed the bearing of capital structure on the firm value of firms listed on Johannesburg Stock Exchange (JSE). The focus was on a sample of 65 non-financial firms listed on JSE on grounds that regulations dictate the capital structure of financial firms. Secondary sources of data from listed firm's databases, that is, Bloomberg and McGreggorBFA over the ten year period from 2002 to 2011 were used. The secondary data analyzed in panel data form and subjected to regression analysis led to a deduction that no statistical relationship exists between firm value and capital structure of JSE listed firms. While the financial structure of financial firms is regulated, all financial firms cannot have the same financial structure; the researcher ought to have included the financial firms and studied them separately to see if the relationship still holds for the financial firms

Mumtaz et al. (2013) carried out research on Capital Structure effect on Financial Performance in Pakistan. 83 top companies from different sectors, out of 639 companies listed on Karachi stock exchange limited were used for the purpose of this research. The research was carried out over the four year period from 2006 – 2009. Four accounting based measures; return on Assets (ROA), Earnings per Share (EPS), Return on Equity (ROE), and net profit margin were used to measure firm performance. To measure capital structure, the researchers used the firms' total debt to total assets.

The researchers used generalized least square regression to analyze the secondary data from the annual financial statement of the firms and Karachi Stock Exchange. They concluded that capital structure was negatively and significantly associated with the adopted financial performance measures. The researchers did not separate the firms in their respective sectors but rather carried out a generalized study. The generalization is likely to have obscured the peculiarities of the different industries.

Buigut et al. (2013) explored the bearing of capital structure on share price of energy firms listed on the NSE. The researchers used secondary financial data from the companies' financial reports and subjected the data to multiple regression statistical techniques. They concluded that increase in debt to equity ratio for energy firms in Kenya led to an increase in the firm's share price and a reduction in the debt to equity ratio resulted in a decrease in share price. The researchers did not provide information on their population, sample, and the period over which the study was carried out. Therefore, it was impossible to evaluate the reliability of their research in the absence of the mentioned critical parameters for the research.

Ndung'u (2014) explored the influence of financial structure on stock returns of firms listed on the Nairobi Stock Exchange. The target population, as well as sample for this study, was 50 firms listed on the main segment excluding banking and insurance companies, which the researcher cited regulation of the companies' capital regulation by central bank of Kenya and Insurance regulatory authority as the grounds for exclusion. The researcher adopted an empirical research design. Using secondary financial data relating to stock returns and the firm's capital structure for three years from 2011 to 2013, the researcher analyzed the data based on Pearson correlation analysis and multiple regression models and concluded that stock returns increase with increase in the companies leverage ratio. This research can be extended by

analyzing the banking and insurance alongside the other firms to identify any peculiarity in the banking and insurance companies.

Maina and Ishnail (2014) examined the link between financial structure and the financial performance of all firms listed on the NSE. Using a causal research design and secondary data from financial statements of NSE listed firms between 2002 and 2011, the researchers subjected the data to panel regression analysis using Gretl statistical software. The research concluded that capital structure choice measured by Debt to Equity (DE), Long Term Debt to Equity (LDE), Total Assets (TA) has no substantial effect on NSE listed firms performance denoted by ROA, ROE, and market value/book value.

Akeem et al. (2014) probed the Effect of Financial Structure on Firm's Performance in Nigeria. Total debt to assets ratio and total debt to equity ratio (DE) were employed to quantify capital structure while Return on Equity (ROE) and Return on Assets (ROA) were used to measure firm performance. Using secondary financial data from financial and governance database, they reviewed 10 out of 173 companies from the Nigerian Stock Exchange (NSE). The 10 firms were drawn from manufacturing, telecommunication and oil and gas sectors. These sectors were considered the major sectors driving the Nigerian economy. The data analysis was carried out within a panel data estimation framework using regression and correlation techniques. The researchers deduced that capital structure negatively impacts performance. The sample in this research was quite small for this nature of study, and this casts doubt on the extrapolation of the sample results to the population.

Njeri and Kagiri (2015) probed the Influence of Financial Structure on Financial Performance of banks listed on Nairobi Securities Exchange. Debt to equity ratio was

the proxy for measuring capital structure while net profit margin, ROA and ROE were used to measure financial performance. The descriptive research study design was used and primary data obtained by administering questionnaires to 35 respondents who were mainly branch managers of listed banking institutions. The collected data was then subjected to correlation and multiple regression analysis, leading to the conclusion that 56.4% of financial performance of listed commercial banks could be explained by the capital structure of the firm. Given that this study relied on views of branch managers as opposed to using available secondary data, the results may reflect the opinion of the respondents as opposed to the facts.

Idris and Bala (2015) explored firms' specific attributes and stock returns for listed Nigerian food and beverages firms. Their study adopted the correlation and ex-post facto research design. Using a sample of 9 firms from 21 food and beverages firms and secondary data, the researchers analyzed the collected secondary data using ordinary least squares regression and multiple panel data regression analysis. They concluded that firm's debt-to-equity financing and earnings per share positively and statistically impact on stock market returns.

Tahmoorespour et al. (2015) studied the impact of capital structure on stock returns in eight countries drawn from Asia Pacific region namely Australia, China, Hon Kong, Japan, Malaysia, Singapore, South Korea and Taiwan. The researchers studied a sample of 1082 firms in different sectors in the eight countries. Secondary data for the firms for 22 year period from 1990 to 2012 was used in this study. The data was subjected to panel regression leading to a conclusion that the effect of capital structure on stock returns is dependent on the nature of industry and country. In Australia, China, and Korea, companies' stock returns had a negative relationship with debt to common equity while in Hon Kong, Japan, Malaysia, Singapore and Taiwan, stock

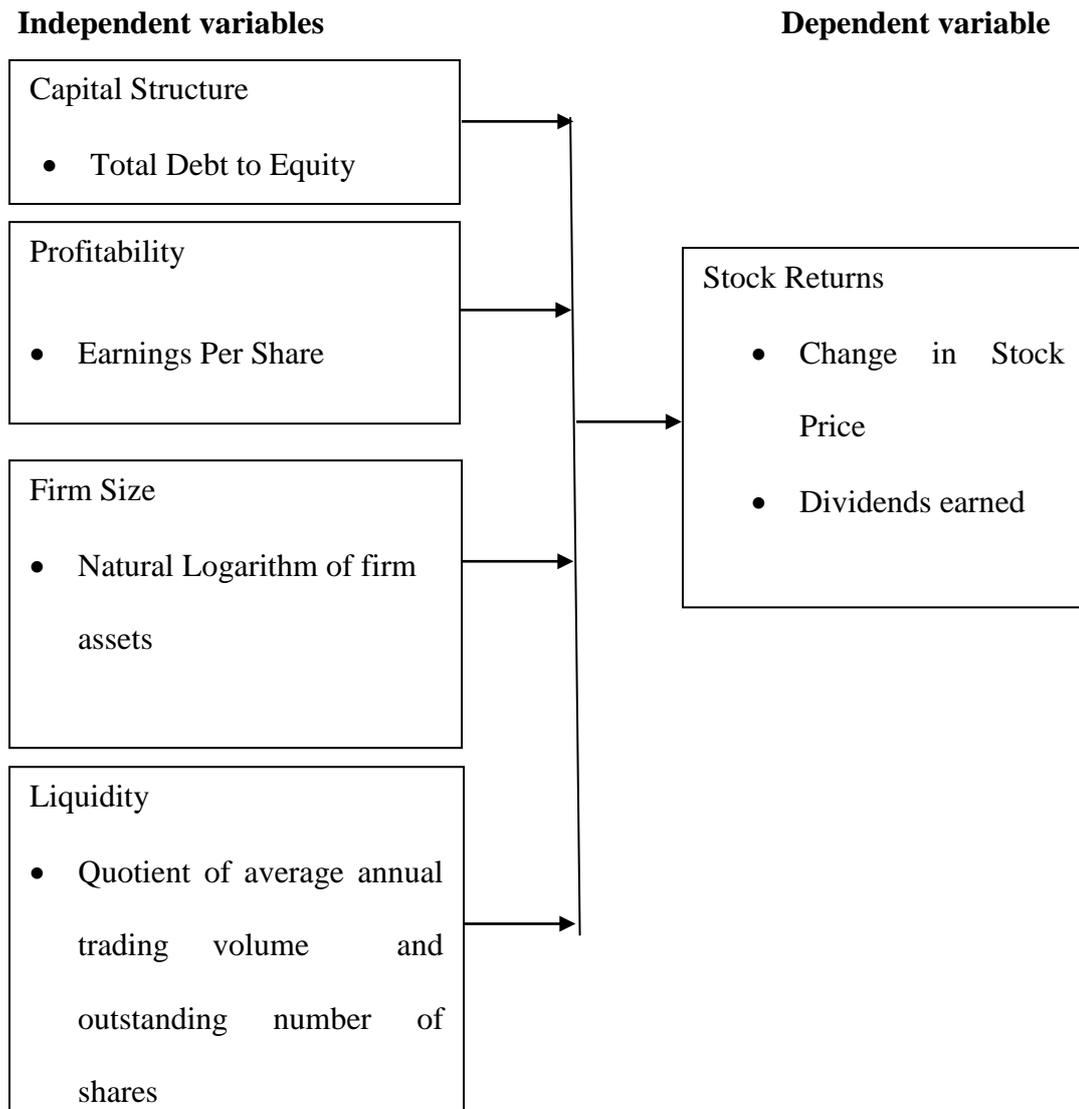
returns had a positive correlation with long-term debt to common equity. This research is more reliable given that the study was conducted across different countries and utilized data for more than 20 years.

Ogutu et al. (2015) investigated the weight of financial elements on the performance of commercial and services firms listed on Nairobi Securities Exchange. The study covered the ten year period from 2003 to 2013. The researchers utilized secondary data from nine commercial and services companies listed companies and adopted the descriptive research design in conducting the research. The data was subjected to panel multiple regression analysis and correlation analysis leading to a conclusion that increased financial leverage negatively affects the performance of commercial and services companies.

2.5 Conceptual Framework

The study probed the effect of capital structure on stock returns for firms listed on the Nairobi Securities Exchange. A review of similar works in this area points that stock returns are affected by various variables. The variables include capital structure, profitability, stock price volatility, liquidity and firm size. Capital structure is expected to have a positive correlation with stock returns implying that an increase in debt to equity ratio will be accompanied by an increase in stock returns for a particular firm. Other variables expected to have a positive correlation with stock returns include profitability and stock price volatility. Firm size and liquidity are expected to be negatively correlated with stock returns inferring that an increase in the firm size and liquidity results in reduced stock returns. Diagrammatically, the dependent variable, stock returns is related to the independent variables as per figure 1 below:

Figure 2.1: Study Conceptual Framework



Source: Researcher

2.6 Summary of Literature Review

While the three capital structure theories have served to explain selection of capital structure by firms, each theory has limitations. The assumptions that have to exist for Modigliani and Miller (1958) debt irrelevance to hold are unlikely to hold in the ideal world making the applicability of the theory somewhat impractical. As pointed out by Meyers (2003), the trade-off theory does not explain the low debt levels in some very

successful companies, yet they have the liberty to take up debt and reap the benefits of debt. Moreover, Myers and Majluf (1984) fail to explain inter-industry variances in debt ratios in their pecking order theory. The existing limitations have opened avenues for intense research in capital structure.

However, studies by the different researchers have yielded conflicting conclusions. Ogutu et al. (2015), Mumtaz et al. (2014) and Akeem et al. (2013) found an adverse affiliation between financial structure and stock returns or financial performance. On the contrary, Ndung'u (2014), Beigut et al. (2013), Idris and Bala (2015) found a favorable relationship between capital structure and financial performance or stock returns. Mohohlo (2013) and Maina and Ishnail (2014) deduced that no statistical association exists between financial structure and financial performance.

The most comprehensive research done on the association amid capital structure and stock returns or financial performance was done by Tahamoorespour et al. (2015) using a sample of 1082 firms across eight countries. The study concluded that the effect of financial structure on financial performance varies from industry to industry and from country to country. The existing differences in the studies touching on capital structure and stock returns or financial performance necessitate further research in this area. Moreover, the fact that studies on capital structure on Nairobi Securities Exchange have revolved on the link between capital structure and financial performance with few studies having been conducted to establish the effect of capital structure on stock returns of firms listed at the Nairobi Securities Exchange calls for increased research in this area.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology adopted in the study is highlighted in this chapter. The highlight commences with the research design followed by the target population and the sample. The data collection methodology is also outlined before the highlight of the data analysis procedure. The linear regression model adopted is also presented. Finally, the chapter outlines how the data analysis was done and how the results were presented.

3.2 Research Design

The conceptual arrangement in which a study is conducted constitutes a research design. It is the plan for the gathering, measuring, and analyzing data (Kothari, 2004). The study adopted a causal research design given that the research aimed at establishing the effect of capital structure of firms listed on the Nairobi Securities Exchange on the firms' stock returns over the five-year period from 1st January 2011 to 31st December 2015.

3.3 Population

Population denotes the full universe of items from which a sample is selected (Greener & Martelli, 2015). The population for this research was the 65 firms listed on the Nairobi Securities Exchange as at 31st December 2015.

3.4 Sample

Initially, the sample for the study was 48 firms having excluded the banking institutions and the insurance companies listed on the Nairobi Securities Exchange.

The banking institutions and the insurance companies were left out since the capital structure of these firms is regulated. Additionally, the firms which were not listed for some years within the period of focus or had no share transactions for an entire year within the period of focus were also left out as the gaps would have distorted the results.

3.5 Data Collection

For this study, the secondary data from the Nairobi Securities Exchange comprising of a financial reviews obtained from the NSE 2016 handbook. The study period chosen for the research was from 1st January 2011 to 31st December 2015. The period selected served to provide a more recent analysis of the effect of capital structure on stock returns of firms listed on the Nairobi Securities Exchange.

3.6 Data Analysis

For the purpose of this study, stock returns were the dependent variable. Capital structure, firm size, profitability, and liquidity were the independent variables. The independent variables are the factors that were discussed in section 2.3 as the determinants of stock returns of listed firms. The relationship was represented as in the equation below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y Represents Total Stock returns measured as follows $\frac{(MP_1 - MP_0)}{P_0} + \frac{D_1}{P_0}$

Where

MP_0 represented a firm's stock price at the initial day of the financial year

MP_1 represented ending stock price on the final day of the financial year

D_1 represented dividend per share at the end of the financial year

α represented the constant term which is the value of stock returns when the values of the independent variables are zero

X_1 represented capital structure computed as total debt for a firm divided by book value of equity for the firm.

X_2 represented the earnings per shares computed as earnings after tax and preference dividends divided the outstanding number of shares.

X_3 represented firm size which was obtained by computing the natural logarithm of a firm's total assets.

X_4 represented liquidity which was measured by computing the average annual trading volume of a firm's stock as a percentage of the number of outstanding shares for the firm.

$\beta_1, \beta_2, \beta_3, \beta_4$, represented the Coefficients of sensitivity of the dependent variable (Y) to a unit change in the independent variables (X_1, X_2, X_3 , and X_4).

ϵ represented the Standard Error which is the unexplained variations in the model

The data was regressed to establish whether the group of variables identified above can predict the dependent variable (stock returns). The data analysis was be done using Statistical Package for Social Sciences (SPSS). The coefficient of determination and Analysis of Variance (ANOVA) were computed as the tests of significance. The tests of significance were utilized to estimate the probability that a relationship exists amid the dependent and the predictor variable. For the purpose of this study, a 95%

confidence level was used for the Analysis of Variance (ANOVA) implying that if the computed p-value was to be less than 0.05 then, it would be concluded that model adopted can be used to explain the relationship between the dependent and the independent variables. Otherwise, it would be deduced that there is no significant statistical association between the dependent and the particular predictor variable. The coefficient of determination was computed to test the percentage at which the model explains the changes in the dependent variable.

The data analysis and presentation were centered on the aim of the research which was to explore the effect of capital structure on stock returns of firms listed on the Nairobi Securities Exchange.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents a discussion of the data analysis and the corresponding outcome. The discussion will commence with an analysis of the firms selected for analysis per industry before presenting the descriptive analysis for the data that was analyzed. After the descriptive analysis, the regression analysis and the statistical significance of the test results will be reviewed. The regression analysis and statistical significance discussions will be done per sector before the overall analysis is discussed.

4.2 Representation of the Firms Selected per Sector

Some firms had not been listed at the commencement of the first period of study while others delisted at some point within the period of study. Some firms also lacked information on the trading volumes and prices for several years. To curb the distortion that would result as a result of these gaps only firms that had all the required data for the five year period from 1st January 2011 to 31st December 2015 were selected for analysis. The total firms selected thus represented 77% of the initial firms that had been targeted. The representation of the firms selected for analysis is as per the table 4.1 below:

Table 4.1: Representation of Firms Selected for Data Analysis per Sector

Sector	Total Firms	Firms Selected	Representation
Agriculture	6	5	83%
Automobiles & Accessories	3	3	100%
Commercial & Services	10	8	80%
Construction & Allied	5	5	100%
Energy & Petroleum	5	4	80%
Investment	5	3	60%
Investment Services	1	0	0%
Manufacturing & Allied	10	7	70%
Telecommunication Technology	1	1	100%
Real Estate Investment Trust	1	0	0%
Total	47	36	77%

Source: NSE (2015)

4.3 Descriptive Analysis

An analysis of the different variables employed in the study was done. The results are analyzed as below. The minimum stock return for the firms studied was -80% while the maximum stock return for the firms studied was 125% over the period of study. The average return for the firms studied was 64.9%. The minimum debt to equity ratio was -26.33 is to 1 while the highest debt to equity ratio was 12.48 is to 1. The average debt to equity ratio was 1.18 is to 1. For Earnings per share, the lowest earnings per share -1697.23 while the highest earnings per share was 79.52 bringing the average earnings per share for the firms reviewed to -4.10. The average firm size was 19.65

with the minimum and maximum firm sizes being 12.16 and 15.87 respectively. Finally, the minimum liquidity was 0.003% and the maximum liquidity was 1108%. The average liquidity for the firms studied was 67.8%. The outcomes are as per the table below.

Table 4.2: Descriptive Analysis Summary for the Firms Studied

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis
Stock Returns (Dividend Yield + Capital Gains Yield)	180	-.80	1.25	.0649	.40899	.381
Capital Structure (Total Debt/Equity)	180	-26.33	12.48	1.1801	2.725	61.099
Profitability (Earnings Per Share)	180	-1697.23	79.52	-4.1074	127.417	177.064
Firm Size (Natural Log of Total Assets)	180	12.16	19.65	15.889	1.73710	-.711
Liquidity (Average trading volume/Outstanding Shares)	180	.003	11.08	.0678	.82543	179.959

Source: SPSS V20 Data Analysis Output

4.4 Correlation Analysis

Correlation Analysis was done between the predictor variables and the predicted variable. A weak positive correlation was noted between stock returns and capital structure, profitability, firm size and stock liquidity as evidences by correlation

coefficient of 0.016, 0.07, 0.03 and 0.0198. However, only liquidity had a statistically significant correlation as evidenced by a p value of 0.08. The rest of the predictor variables had a non-statistically significant correlation as evidenced by p values which are greater than 0.05. The above is summarized below. The results agree with Muiva (2014) who found a weak correlation between stock returns and assets size and Koech (2012) who found a weak correlation between liquidity and stock returns. Ndung'u (2015) also found a weak correlation between stock returns and profitability.

Table 4.3 Correlation Coefficients Between the Dependent and the Independent Variables

		Stock Returns	Capital Structure	Profitability	Firm Size	Stock Liquidity
Stock Returns	Pearson Correlation	1				
Capital Structure	Pearson Correlation	.016	1			
	Sig. (2-tailed)	.834				
Profitability	Pearson Correlation	.070	-.040	1		
	Sig. (2-tailed)	.349	.597			
Firm size	Pearson Correlation	.030	.010	.125	1	
	Sig. (2-tailed)	.689	.898	.095		
Stock Liquidity	Pearson Correlation	.198**	-.019	.003	.123	1
	Sig. (2-tailed)	.008	.805	.966	.101	
	N	180	180	180	180	180

Source: SPSS V20 Data analysis Output.

4.5 Regression Analysis

The regression analysis was done utilizing the Statistical Package for Social Sciences version 20 at 95% confidence level. Regression analysis was done per sector before the overall regression was developed. The analysis is as per the sections that follow

Multiple regression was done for firms in all sectors listed on the NSE in terms of stock returns consolidated over the period of 2011–2015. The summary of the findings were as per table 4.4 below.

Table 4.4 Overall Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.211 ^a	.044	.023	.40435

Source: SPSS V20 Data Analysis Output

The predictor variables studied explain 4.4% of difference in stock returns as signified by the value of adjusted R^2 . Other influences not included in this research are responsible for 95.6% of variation in the dependent variable.

Table 4.5 ANOVA for All the Sectors

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1.330	4	.332	2.034	.092 ^b
Residual	28.612	175	.163		
Total	29.942	179			

Source: SPSS V20 Data Analysis Output

From the analysis of variance in table 4.5 above, the p-value is greater than 0.05, thus indicating that the predictor variables, (capital structure, profitability, firm size and liquidity) do not explain the variation in the dependent variable which is Stock

Returns. Nevertheless, since the p value lies between 0.05 and 0.1, there is a trend towards statistical significance.

Table 4.6 Regression Coefficients for all the Sectors

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.068	.282		.240	.818
Capital Structure	.003	.011	.022	.301	.764
Profitability	.0003	.0004	.071	.950	.343
Firm size	-.001	.018	-.003	-.044	.965
Liquidity	.098	.037	.198	2.662	.008

Source: SPSS V20 Data Analysis Output

A regression coefficient of 0.22 was obtained for the first independent variable (capital structure). The results point that capital structure, measured by debt to equity ratio has a positive influence on the stock returns of firms listed on the Nairobi Securities Exchange. The findings thus agree with Idris and Bala (2015) and Tahmoorespour et.al (2015) findings that pointed to the existence of a positive relationship between Debt-to-Equity ratio stock returns. However since a p value of 0.764 was obtained at 95% confidence level as shown by table 4.6, the influence is not statistically significant for firms listed on Nairobi Securities Exchange.

A regression coefficient of 0.71 was obtained for the second independent variable, profitability. The results imply that profitability, as measured by earnings per share has a positive effect on the stock returns of firms listed on the Nairobi Securities

Exchange. A p value of 0.343 was obtained on computation of the statistical significance. Since the P value is greater than 0.05, the results are therefore not statistically significant. The absence of a statistical significance between stock returns and profitability contradict Sebnem and Vuran (2012) study which concluded that profitability can be used to explain stock returns.

From the results firm size has a negative influence on the stock returns for firms listed on the Nairobi Securities Exchange as supported by a regression coefficient of -0.03. An increase in firm size is thus likely to lead to a reduction in the stock returns. A p value of 0.965 was obtained for firm size statistical significance. Given that the p value is greater than 0.05, the results are thus not statistically significant. The results align with Ahmed et.al (2013) assertions that firm size has no significant impact on stock returns.

Regression of the stock returns against the fourth independent variable, liquidity yielded a regression coefficient of 0.198. The results indicate that stock liquidity has a positive influence on stock returns. Stocks with higher liquidity would result in higher stock returns. Given that a p value of 0.08 was obtained for the variable, the results obtained are statistically significant at 95% confidence level. The findings contradict Mwangi (2014) findings who found the relation between equity returns and stock liquidity not to be statistically significant. The summary is presented in table 4.6 above.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter begins by presenting a summary of the data analysis for this study. The conclusions arrived at from the data analysis will also be presented in this section. Further recommendations for further study will also be outlined before the limitations of the study are highlighted.

5.2 Summary of the Findings

Overall, the data analysis indicated that analysis revealed that capital structure, albeit the relationship not being statistically significant has a positive influence on the stock returns of companies listed on the Nairobi Securities Exchange. A positive association was noted between capital structure and stock returns. The results also indicate that stock returns increase with an increase in profitability for a particular firm profitability just as increase in a firm's stock liquidity is leads to an increase in the firm's stock returns. Conversely, the firm size, measured by a firm's total assets was found to have a weak negative influence on the firm's stock price.

The Sectorial analysis results were mixed with the variables having different levels of influence on stock returns of the firms in the different sectors. Statistically significant influence on the firm's stock returns at 95% confidence level was noted for stocks liquidity in the agricultural sector, for profitability in the investment sector and for all the four independent variables in the telecommunication sector as evidenced by p-values that were less than 0.05. Tendency towards statistical significance was also noted between stock returns and liquidity in the investment sector. The rest of the

relationships between stock returns and capital structure, profitability, firm size and stock liquidity were found not to be statistically significant. The model adopted was only significant at 95% confidence level in the telecommunication sector and the investment sector since the p-values computed for these sectors were less than 0.05.

5.3 Conclusions

The goal of the research was to investigate the effect of capital structure on stock returns for firms listed on the Nairobi Securities Exchange. The period of focus was from 1st January 2011 to 31st December 2015. The study adopted a causal research design and multiple regression analysis was used to investigate this effect. The outcome pointed that overall capital structure has a positive impact on stock returns for firms listed on the Nairobi Securities Exchange within the period the study was carried out. The Sectorial analysis also showed that capital structure has a positive effect on stock returns in the different sectors except for the agricultural sector, investment and telecommunication sectors. The results are however not statistically significant and can therefore not be used to meaningfully explain changes in stock returns for firm's listed on the Nairobi Securities Exchange. Nevertheless, the results were found to be statistically significant for the telecommunication sector even though only one firm was reviewed in the sector.

The results indicate that save for the telecommunication sector, stock returns are not significantly influenced by the capital structure for firms listed on the Nairobi Securities Exchange and management and investors such firms should not be concerned with the firms' capital structure for purposes of obtaining higher returns on the stocks held. Further, profitability only influences stock returns significantly in the investment sector and in the telecommunication and investment sector and management and investors in these sectors should be concerned with changes in

profitability as the same would influence the stock returns. Stock liquidity should also be a variable of concern for managers and investors in the agricultural sector as this had a significant positive association with the stock returns.

The regulatory agencies such as Capital Markets Authority should invest in researching major motives of investors in the Nairobi Securities Exchange. The necessity stems from the fact that the expected fundamental causes of changes in stock returns are not valid for the Kenyan context. The assertion is evidenced by the fact that the model adopted in this study only accounts for 4.4% of the variation in stock returns. Similar researchers such as Ndung'u (2014) and Muiva (2014) also found that the fundamental variables expected to influence stock returns for firms listed on the Nairobi Securities Exchange only accounted for 24.7% and 0.3% respectively of the variations in the stock returns

5.4 Limitations of the Study

The historical data for volume and stock price changes is not readily available and has to be purchased from the Nairobi Securities Exchange depending on the period the data is required. The more the volume of data required, the more costly it would be to obtain the data. If resources are available to obtain all the necessary data that could be required, a study covering a longer period of study should be pursued. A research extending to a longer period of time will help eliminate any short term stock return effects. Most companies also retain the financial statements information on their companies for just about five years. If data for more than five years were to be obtained, individuals companies would have to be consulted for this information and a longer period of time would be required.

The time and resources available for the purpose of this study led to a limitation of the study to the five year period from 1st January 2011 to 31st December 2011. Differences were also noted between the firm's year ends. Firm's whose financial year ends in February, March, June, July and September posed a challenge in analysis with other firms whose financial year end in December. It was not possible to make adjustments so as to obtain financial statements for uniform year ends for all the firms. The differences in financial year ends are likely to have had an impact on the study due to factors that might have been peculiar in selected months.

5.5 Recommendation for Further Study

As outlined in the conclusion, using capital structure, firm size, profitability and stock liquidity as the predictors for stock returns, the model adopted only accounted for 4.4% of the variation the stock returns. It, therefore, implies that there are some other firm-specific characteristics or other external determinants that influence specific firm's stock returns. Future researchers should consider carrying out a study on factors that may be the determinants of stock returns on Nairobi Securities Exchange. The above study could also be extended for a longer period of more than 10 years as the effects noted in this study may be short term effect.

There are different measures that can be used to measure the independent variables used in this study. For example firm size can be measured by total assets or market capitalization. Profitability has various measures including Earnings per Share, Return on Assets, Return on Capital employed among other measures. However, the research employed particular and singular measures for each variable. Future researchers can, based on resources available at their disposal, attempt a model that can incorporate different measures for the independent variables in the same study to account to assess the relationships between the different measurement methods.

REFERENCES

- Abor, J. (2005). The Effect of Capital Structure on Profitability: Empirical Analysis of Listed Firms in Ghana. *Journal of Risk Finance*, 6(5), 438-445.
- Ahmad, H., Fida, B. A., & Zakaria, M. (2013). The Co-determinants of Capital Structure and Stock Returns: Evidence from the Karachi Stock Exchange. *The Lahore Journal of Economics*, 18 (1), 81-92.
- Akeem, L. B., Terer, E. K., Wanjiru, K. M., & Adisa, M. K. (2014). Effects of Capital Structure on Firm's Performance: Empirical Study of Manufacturing Companies in Nigeria. *Journal of Finance and Investment Analysis*, 3(4), 39-57.
- Akram, N. (2014). The Effect of Liquidity on Stock Returns: An Evidence from Pakistan. *Journal of Business and Management*, 16(2), 66 -69.
- Ambunya, P. L. (2012). *The Relationship between Exchange Rate Movement and Stock Market Returns Volatility at the Nairobi Securities Exchange* (Unpublished Master's research project). University of Nairobi, Nairobi.
- Banz, R. W. (1981). The Relationship between Return and Market Value of Common Stocks. *Journal of Financial Economics*, 9(1981), 3-18.
- Baxter, N. (1976). Leverage risk ruin and the cost of capital. *Journal of Finance*, 22(1), 395 -403.
- Bhandari, L. C. (1988). Debt/Equity Ratio and Expected Common Stock Returns: Empirical Evidence. *Journal of Finance*, 43 (1988), 507-528.
- Buigut, K., Soi, N., Koskei, I., & Kibet, J. (2013). The Effect of Capital Structure on Share Price of Listed Firms in Kenya. A Case of Energy Listed Firms. *European Journal of Business and Management*, 5(9), 29 – 34.

- Butt, S., Khan, Z. A., & Nafees, B. (2013). Static Trade-off theory or Pecking order theory which one suits best to the financial sector. Evidence from Pakistan. *European Journal of Business and Management*, 5(23), 131 – 141.
- Chen, C. & Zhou, Z. (2001). Stock Returns, Volatility, and Trading Volume: Evidence from Chinese Stock Markets. *International Journal of Business* 6(2), 67 – 86.
- Chong, T. P., & Lal, M. M. (2011). An Empirical Evidence of Factors in Equity Selection Process in Malaysia. *African Journal of Business Management*, 5 (15), 6221-6232.
- Dalgaard, R. (2009). *Liquidity and Stock Returns: Evidence from Denmark* (Unpublished master's thesis). Copenhagen Business School, Frederiksberg.
- Davies, J. (2001). Explaining Stock Returns: A Literature Survey. Retrieved from <https://us.dimensional.com/library/articles/explaining-stock-returns-a-literature-survey.aspx>
- Espieh, G., & Moridipour, H. (2013). Investigation of the Relationship Between Capital Structure and Profitability of Firms Listed in Tehran Stock Exchange (TSE). *New York Science Journal*, 6(10), 100 – 105.
- Fama, E. F., & French, K. R. (2006). Profitability, Investment and Average Returns. *Journal of Financial Economics*, 82(3), 491 – 518.
- Foroghi, D., & Jahromy, S. M. E. (2015). Impact of Profitability on Stock Returns Based on Price, Return and Differenced Models in Tehran Stock Exchange. *International Journal of Applied Business and Economic Research*, 13(2), 955- 970.

- Gatuhi, S. K. (2015). *Macroeconomic Factors and Stock Market Performance in Kenya* (Unpublished doctorate thesis). Jomo Kenyatta University of Agriculture and Technology, Nairobi.
- Ghazouani, T. (2013). The Capital Structure through the Trade-Off Theory: Evidence from Tunisian Firm. *International Journal of Economics and Financial Issues*, 3(3), 625 -636.
- Har, W. P., & Ghafar, M. A. A. (2015). The Impact of Accounting Earnings on Stock Returns: The Case of Malaysia's Plantation Industry. *International Journal of Business and Management*, 10(4), 155 – 165.
- Heryanto (2016). The Effect of Liquidity and Profitability to Bank Stock Return in Indonesia Stock Exchange (IDX). *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(3), 131 - 138.
- Idris, I., & 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.
- Ikikii, S. M., & Nzomoi, J. N. (2013). An Analysis of the Effects of Stock Market Development on Economic Growth in Kenya. *International Journal of Economics and Finance*, 5(11), 145 – 151.
- Kinyae, A. M. (2013). *Economic Performance Indicators and Stock Returns at the Nairobi Securities Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.
- Kirui, E., Wawire, N. H. W., & Onono, P. O. (2014). Macroeconomic Variables, Volatility and Stock Market Returns: A Case of Nairobi Securities Exchange, Kenya. *International Journal of Economics and Finance*, 6(8), 214 – 228.

- Koech, P. (2014). *Relationship between Liquidity and Return of Stock at the Nairobi Securities Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.
- Koech, S. K. (2013). *The effect of Capital Structure on Profitability of Financial Firms Listed at the Nairobi Stock Exchange* (Unpublished masters' research project). University of Nairobi, Nairobi.
- Kothari, C. R. (2004). *Research Methodology: Methods & Techniques*. New Delhi: New Age International (P) Ltd.
- Levisauskaite, K. (2010). *Investment Analysis and Portfolio Management*. Kaunas: Vytautas Magnus University.
- 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.
- Marangu, K., & Jagongo, A. (2014). Price to Book Value Ratio and Financial Statement Variables (An Empirical Study of Companies Quoted At Nairobi Securities Exchange, Kenya). *Global Journal of Commerce & Management Perspective*, 3(6), 50 -56.
- Masereti, E. N. (2014). *Capital Structure and Stock Returns: Evidence from the Nairobi Securities Exchange* (Unpublished bachelor's research project). Strathmore University, Nairobi.
- Mathanika, T., Virginia, V. A. G., & Paviththira, R. (2015). Proceedings of the International Conference on Contemporary Management 2015: *Impact of Capital Structure on Firm Value: Evidence from Listed Manufacturing Companies on Colombo Stock Exchange (CSE) in Srilanka*.

- Meyers, B. (2003). *Principles of Corporate Finance (7th Ed.)*. New York. McGraw-Hill.
- Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporate Finance and the Theory of Investment. *American Economic Review*, 48, 261-297.
- Mohohlo, N. R. (2013). *Capital structure and its impact on firm value of JSE Securities Exchange listed companies* (Unpublished masters research project). University of the Witwatersrand, Johannesburg.
- Muchina, S., Namusonge, G., & Sakwa, M. (2015). Effect Of Dividend On Share Price Volatility In Frontier Exchanges: Kenya's Perspective. *Research Journal of Finance and Accounting* 6(14).
- Muiva, B. N. (2014). *Fundamental Analysis of Stock Returns of Non-Financial Firms Listed at the Nairobi Securities Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.
- Mukaria, H. K., Mugenda, N. G., & Akenga, G. M. (2015). Effect of Leverage on Performance of Non-Financial Firms Listed at the Nairobi Securities Exchange. *Journal of Finance and Accounting*, 3(5), 132-139.
- Mumtaz, R., Rauf, S. A, Ahmed, B., & Noreen, U. (2013). Capital Structure and Financial Performance: Evidence from Pakistan (Kse 100 Index). *Journal of Basic and Applied Scientific Research*, 3(4), 113-119.
- Murray, Z. F., & Vidhan, K. G. (2005). *Tradeoff and Pecking Order Theories of Debt* (Unpublished master's thesis). Tuck School of Business, Hanover.
- Musebe, B. V. C. (2015). *The Effect of Market Capitalization on Stock Market Volatility of Companies Listed at the Nairobi Securities Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.

- Musiega, M. G., Chitiavi, S. M., & Alala, O. B. (2013). Capital Structure and Performance: Evidence from Listed Non-Financial Firms on Nairobi Securities Exchange (NSE) Kenya. *International Journal for Management Science and Technology 1 (2)*.
- Mwangi, I. A. (2014). *Examining the relationship between Market Liquidity and Equity returns: A Study of Firms Listed on the Nairobi Securities Exchange* (Unpublished bachelor's research project). Strathmore University, Nairobi.
- 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)*, 72-90.
- Ndwiga, D., & Muriu, P. W. (2016). Stock Returns and Volatility in an Emerging Market. Evidence from Kenya. *European Scientific Journal, 12(4)*, 81 -97.
- Ndiwa, J. K. (2014). *An Examination of Effects of Capital Structure Decisions on Financial Performance of Manufacturing firms: A case of sugar firms in Kenya* (Unpublished master's thesis) Kabarak University, Nakuru.
- Nduku, K. G. (2015). *An Empirical Analysis of the Predictability of Stock Returns Using Price-Earnings Ratio and Price-to-Book Ratio. A Case Study of the Nairobi Stock Exchange* (Unpublished bachelor's research project). Strathmore University, Nairobi.
- 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). University of Nairobi, Nairobi.

- Njehu, A. W. (2008). *Influence of Market Capitalization of Nairobi Stock Exchange Listed Companies on Kenya's Economic Growth* (Unpublished master's research project). University of Nairobi, 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.
- Nyaga, B. G. (2014). *The Relationship between Price Earnings Ratio and Stock Return of Firms Listed at the Nairobi Securities Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.
- Oduma, C. O. (2015). *The Relationship between Earnings Management and Stock Market Returns among Companies Listed in Nairobi Securities Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.
- 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.
- Okanga, A. A. (2012). *Relationship between Illiquidity and Stock Returns of Companies Listed at the Nairobi Securities Exchange* (Unpublished master's research Project). University of Nairobi, Nairobi.
- Ondiek, S. O. (2012). *Factors Determining Stock Market Returns: A Case of Nairobi Stock Exchange* (Unpublished master's research project). University of Nairobi, Nairobi.
- Otweyo, S. O. (2014). *Market Factors that affect returns for companies quoted at the Nairobi Securities Exchange* (Unpublished master's thesis). KCA University, Nairobi.

- Pervan, M., & Visic, J. (2012). Influence of Firm Size on its Business Success. *Croatian Operational Research Review*, 3(1), 213 -221.
- Rosenberg, B., Kenneth, R., & Ronald, L. (1985). Persuasive Evidence of Market Inefficiency. *Journal of Portfolio Management*, 11(1), 9-17.
- Sebnem, E. R., & Vuran, B. (2012). Factors Affecting Stock Returns of Firms Quoted in ISE Market: A Dynamic Panel Data Approach. *International Journal of Business and Social Research*, 2(1), 109 – 122.
- Shen, P. (2000). *The P/E Ratio and Stock Market Performance*. Federal Reserve Bank of Kansas City Economic Review.
- 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.
- Voulgaris, F., Asteriou, D., & Agiomirgianakis, G. (2004). Size and Determinants of Capital Structure in the Greek manufacturing sector. *International Review of Applied Economics*, 18(2), 247–262.
- Welch, I. (2004). Capital Structure and Stock Returns. *Journal of Political Economy*, 112 (1), 106 – 131.

APPENDICES

APPENDIX 1: FIRMS LISTED AT THE NAIROBI SECURITIES

EXCHANGE

AGRICULTURAL

Eaagads Ltd

Kapchorua Tea

Kakuzi

Rea Vipingo Plantations

Sasini Ltd

Williamson Tea Kenya

AUTOMOBILES AND ACCESSORIES

Car and General (K) Ltd

Sameer Africa Ltd

Marshals (E.A) Ltd

BANKING

Barclays Bank Ltd

CFC Stanbic Holdings Ltd

I&M Holdings Ltd

Diamond Trust Bank Ltd

Housing Finance Co. Ltd

Kenya Commercial Bank Ltd

National Bank of Kenya Ltd

NIC Bank Ltd

Standard Chartered Bank Ltd

Equity Bank Ltd

The Co-operative Bank of Kenya Ltd

COMMERCIAL AND SERVICES

Express Ltd

Kenya Airways Ltd

Nation Media Group Ltd

Standard Group Ltd

TPS East Africa (Serena) Ltd

Scangroup Ltd

Uchumi supermarkets Ltd

Hutchings Biemier Ltd

Longhorn Kenya Ltd

Atlas Development and Support Services

CONSTRUCTION AND ALLIED

Athi River mining

Bamburi Cement Ltd

Crown Berger Ltd

E.A. Cables Ltd

E.A. Portland Cement Ltd

ENERGY AND PETROLEUM

KenolKobil Ltd

Total Kenya Ltd

KenGen Ltd

Kenya Power&Lighting Co Ltd

Umeme Ltd

INSURANCE

Jubilee Holdings Ltd

Pan Africa Insurance Holding Ltd

Kenya Re-Insurance Corporation Ltd

Liberty Kenya Holdings Ltd

British American Investments Company (Kenya) Ltd

CIC Insurance Group Ltd

INVESTMENT

Olympia Capital Holdings Ltd

Centum Investment Co. Ltd

Trans-Century Ltd

Home Afrika Ltd

Kurwitu Ventures

INVESTMENT SERVICES

Nairobi Securities Exchange Ltd

MANUFACTURING AND ALLIED

B.O.C Kenya Ltd

British American Tobacco Kenya Ltd

Carbacid Investments Ltd

East African Breweries Ltd

Mumias Sugar Co. Ltd

Unga Group Ltd

Eveready East Africa Ltd

Kenya Orchards Ltd

A.Baumann CO Ltd

Flame Tree Group Holdings Ltd

TELECOMMUNICATION AND TECHNOLOGY

Safaricom Ltd

REAL ESTATE INVESTMENT TRUST

Stanlib Fahari I-REIT

Source: Nairobi Securities Exchange (2015)