

**EFFECT OF CAPITAL INVESTMENT ON STOCK RETURNS AMONG  
SELECTED NON-FINANCIAL LISTED COMPANIES AT NAIROBI  
SECURITIES EXCHANGE, KENYA**

**BY**

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## DECLARATION

I, the undersigned, declare that this project is my original work and that it has not been presented to any other college, institution or university for academic credit. I further declare that all materials cited in this paper which are not my own, have been duly acknowledged.

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## ABSTRACT

Company's investments are one of the factors that affect the market capitalization mainly because investment decisions are associated with the decisions about the allocation and the use of funds for the short-term and long-term purposes. Capital investment decisions are also irreversible and highly risky, thus a wrong investment decision can lead companies even to financial distress, which may negatively affect the firm's stock returns. This study therefore sought to determine the relationship between capital investment and stock returns of non-financial firms listed at the Nairobi Securities Exchange. The free cash flow theory, the q theory of investments and the information asymmetry theory were explored as the key theories of the study. The study adopted a correlational research design and the population of this study was made up of 44 non-financial firms listed at the Nairobi Securities Exchange, out of which 8 firms were selected. This study used secondary data which was collected using a data collection sheet for a period of five years from (2011- 2015). To analyze the collected data the study used the multiple linear regression models. Research findings are presented using tables and graphs in form of inferential statistics. The study found that there was a positive relationship between stock returns( dividend per share) and real estate investment trust of the non-financial firms listed in the Nairobi securities exchange ,as evidenced by Pearson value of ( $r=0.442$ , Sig. 0.004), a negative relationship between dividend per share and fixed income investment of the non-financial firms listed in the Nairobi securities exchange, as shown by the Pearson value of ( $r=0.168$ , Sig. 0.299) and lastly a positive relationship between stock returns and capital expenditure investment of the non-financial firms listed in the Nairobi securities exchange as shown by the Pearson value of ( $r= -0.338$ , Sig. 0.013). The study therefore recommended that the management of non-financial firms should focus more on real estate investment trust and capital expenditure since both ensures that the firms have high stock returns, consider restructuring or replacement of fixed income investment for attainment of maximum yield.

## TABLE OF CONTENTS

TITLE PAGE.....	i
DECLARATION .....	ii
ABSTRACT.....	iii
TABLE OF CONTENTS.....	iv
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
LIST OF ABBREVIATIONS.....	ix
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.2 Statement of the Problem.....	5
1.3 Objective of the Study .....	6
1.3.1 Main Objective.....	6
1.3.2 Specific Objectives .....	6
1.4 Research Hypothesis .....	6
1.5 Scope of the Study .....	6
1.6 Justification of the study .....	6
1.7 Conceptual Framework.....	7
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>8</b>
2.1 Introduction.....	8
2.2 Theoretical Review .....	8
2.2.1 Free Cash Flow Theory.....	8
2.2.2 Information Asymmetry Theory .....	9
2.2.3 Q Theory of Investment .....	10
2.2.4 Concept of Capital Investment.....	11
2.2.5 Concept of Stock Returns .....	12
2.3 Determinants of Stock Returns .....	13
2.3.1 Interest Rates.....	13
2.3.2 Technological Innovation .....	13
2.3.3 State of Current Economy.....	14

2.3.4 Nature of Company dividend per share .....	14
2.3.5 Concept of real estate investment trust .....	15
2.3.6 Concept of dividend per share (DPS) .....	15
2.3.7 Real estate investment trusts (REITs) and Stock Returns .....	16
2.3.8 Fixed income investment and stock returns.....	17
2.4 Empirical Review.....	17
2.4.1 Effect of real estate investment trusts (REIT) on stock returns .....	17
2.4.2 Effect of fixed income investments on stock returns.....	22
2.4.3 Effect of capital expenditure investments on stock returns .....	24
<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>28</b>
3.1 Introduction.....	28
3.2 Research Design.....	28
3.3 Population of the Study.....	28
3.3.1 Sample and Sampling Procedures.....	28
3.4 Data Collection Procedure .....	29
3.5 Data Collection .....	29
3.6 Data Analysis .....	29
3.7 Analytical Model .....	29
3.8 Test of Significance .....	30
<b>CHAPTER FOUR: RESULTS AND DISCUSSION.....</b>	<b>31</b>
4.1 Introduction.....	31
4.2 Effect of Real estate investment trusts on stock returns .....	33
4.2.1 Correlation Analysis .....	33
4.2.2 Regression Analysis.....	34
4.3 Effect of fixed income Investment on stock returns .....	35
4.3.1 Regression Analysis.....	35
4.4 Effect of capital expenditure investment on stock returns.....	37
4.4.1 Regression Analysis.....	37
4.5 Interpretation of the Findings.....	39

<b>CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>40</b>
5.1 Introduction.....	40
5.2 Summary .....	40
5.3 Conclusions.....	41
5.4 Recommendations.....	41
5.5 Limitations of the Study.....	42
5.6 Suggestion for Further Research.....	42
<b>REFERENCES.....</b>	<b>43</b>
<b>APPENDECES.....</b>	<b>48</b>
Appendix I: Data Collection Sheet .....	48

## LIST OF TABLES

Table 4.1: Descriptive Statistics .....	33
Table 4.2: Correlations.....	33
Table 4.3: Model Summary .....	34
Table 4.4: ANOVA <sup>a</sup> .....	34
Table 4.5: Coefficients <sup>a</sup> .....	35
Table 4.6: Correlation analysis .....	35
Table 4.7: Model Summary .....	35
Table 4.8: ANOVA <sup>a</sup> .....	36
Table 4.9: Coefficients <sup>a</sup> .....	37
Table 4.10: Correlations.....	37
Table 4.11: Model Summary .....	37
Table 4.12: ANOVA <sup>a</sup> .....	38
Table 4.13: Coefficients <sup>a</sup> .....	38

## LIST OF FIGURES

Figure 1.1: Effect of capital investment on stock returns among selected non-financial listed companies at Nairobi securities exchange. ....	7
Figure 4.1: Dividend Per Share.....	32

## **LIST OF ABBREVIATIONS**

<b>CI</b>	Capital investment
<b>DPS</b>	Dividend per share
<b>NSE</b>	Nairobi security exchange
<b>NPV</b>	Net present value
<b>REIT's</b>	Real Estate Investment Trusts
<b>SG</b>	Standard Group
<b>NM</b>	Nation Media

## CHAPTER ONE: INTRODUCTION

This chapter presents the background, statement of the problem, objectives, limitations and the scope of the study and conceptual framework.

### 1.1 Background of the Study

Jung, Nicholas, Yih, & Zang (2015) in their study on capital investment increases and stock returns generalized that, the effects of an increase in capital investment on stocks returns were positive, and the capital investment -spread was negative. Donling (2004) in his study on the implications of Capital Investments for Future Profitability and Stock Returns-an Overinvestment Perspective concluded that Capital investment has a robust negative implication for future profitability and the negative association is stronger when firms have greater investment discretion, From the latter findings, it is evidenced that there are mixed results on the effect of capital investment on stock returns as one finding shows positive relationship between capital investment and stock returns while the other shows negative relationship between capital investment and stock returns. Being the inconsistency in findings, the results may not be used in generalization so as to apply to all firms.

Jensen (1986) noted that management could be prompt to invest in unnecessary, negative net present value (NPV) projects when there are too much free cash flows in the management's hands. He further concluded that a higher level of free cash flows would lead to more of unnecessary administrative waste and inefficiency. Specifically, this study is directed to examine the validity of the Free Cash flow hypothesis. Since early research findings simply regarded Free Cash flow as agency costs but did not build up the linkage between Free Cash flow and agency cost. The study intends to fill up the research gap by investigating how the Free Cash flow at management's discretion would influence the stock returns. The concept of asymmetric information which was first introduced by George A. Akerlof's 1970 is also relevant to the present study. From the perspective of the information asymmetry theory, increasing capital investment can elevate the economic scale and technological level of firms, thereby increasing firm value hence the stock returns. However, when the problems related to the free cash flow theory occur; increasing capital investment reduces firm value hence the stock returns. Therefore, increasing capital investment does not necessarily increase firm value. Whether the capital investment policies and actual behaviors of non- financial listed firms in Nairobi

securities exchange market favor the perspective of the information asymmetry hypothesis or encounter problems mentioned in the free cash flow hypothesis and substantially influences firm value and the interest of investors is an area that must be explored thus, further research is warranted.

The effect of capital investment on future stock returns has important implications for both assets pricing and corporate finance among non-financial firms. Recently, a number of empirical studies have highlighted a significantly negative relation between firms' capital investment and subsequent abnormal stock returns. Titman et al. (2004) document a negative relation between large increases in capital investment and subsequent benchmark-adjusted returns, and Cooper et al. (2008) show that this relation extends to asset growth, a gross measure of capital investment. Titman, Wei and Xie (2003a), report that the negative association between capital investments and future stock returns is stronger in firms with higher free cash flow and lower leverage. They interpret their evidence as investor under-reaction to the overinvestment behavior by managers with empire building incentives. However, there is little evidence as to what factors could explain this negative association specifically in relation to non-financial firms. Nairobi securities exchange.

Capital investment is the fixed assets' investment that usually has lengthy lifespans with measureable monetary value, which involves enormous firm's sources for longer term (Vaicondam, Anuar and Ramakrishnan, 2016). Donling (2004), noted that capital investments represent a fundamental signal claimed by analysts to be useful in predicting future profitability and stock return. Capital investment is therefore the spending of saved money on capital goods including assets and other productive equipment. Thus to make it economically viable to increase or improve the capital structure, a company must have adequate cash or funding through issuing debt (bonds) or equity stock to raise funds (Bureau of Economic Analysis 2016).

Capital investment is measured in terms of liquidity (free cash flow) Return on Capital Employed and Return on investment. Besides, it takes into consideration funds used to acquire and upgrade physical assets thus measured through capital expenditure. All expenses incurred on newly acquired capital assets are considered to be capital expenditures in nature or investments that will improve economic life of an asset

(Vengesai & Kwenda, 2017). The major proxies used to measure capital investment include the net of financial commitment in property, plant and equipment (PPE), overall capital, and total speculation in addition to research and development costs (R&D).

Biddle and Hilary (2006) have seen capital investment as assets that may generate internal fund to the firm. Additionally, the excess cash generated from capital investment is assumed would not all be returned to the investor but certain amount is retained in the firm as fund for future investment. Bellouma (2011) indicated that capital investment is the liquidity generator of the future compared to expenses that lower the liquidity position at present. Cheng (2001) indicates that on the day of capital investment announcement, stock prices of electronic and non-electronic firms' exhibit considerable and positive price movements.

Mugambi & Okech (2016) defines stock returns to consists of capital gains as well as any other income received by an investor from the stock. It includes change in the value of a stock (capital gain yield) and cash dividend paid during the period. It comprises any change in value of the investment, and/or cash flows which the investor receives from the investment, such as interest payments or dividends. It may be measured either in absolute terms (e.g., dollars) or as a percentage of the amount invested. The latter is also called the holding period return which Robinson and Stowe (2013) defined as the return earned from investing in an asset for a specified time period. Stock returns are used to predict output and investment since they are forward looking variables. They serve as indices to investors or government in making their investment decisions.

Over the years, researchers and practitioners have investigated the factors that drive stock returns in non-financial firms. Commonly observed factors include firm fundamentals, macro-economic factors, investors' sentiment and momentum indicators. Firm fundamentals refer to characteristics of a company related to its assets, profitability, financial strength, risk or growth, Muiva (2014). Security market prices reflect the market assumptions and expectations on the company underlying fundamentals. Fundamentals drive cash flows and the market value securities as the present value of the future cash flows discounted at the appropriate required rate of return (Pinto et al, 2013).

Trends and growth in the top line of a company's income statement are barometers investors use to assess the company's past performance and future prospects (Aghion and Stein, 2008). Putrakrisnanda (2009) also affirms that asset growth illustrates how changes in company's assets will affect the returns of the companies, and that the change of percentage in total assets is a better indicator in measuring the growth of the company. Pandey (2007) noted that the ratio of debt-equity has implications for the shareholders' dividends and risk; therefore this will affect the cost of capital and the market value of the firm. From the latter propositions, it is evident that the main elements that affect stock returns include assets, profitability, financial strength, and risk or growth.

Capital investments represent a fundamental signal claimed by analysts to be useful in predicting future profitability and stock return, Donling (2004). On the other hand, Stock return is defined as a profit on an investment (oxforddictionaries.com). It comprises any change in value of the investment, and/or cash flows which the investor receives from the investment, such as interest payments or dividends. It may be measured either in absolute terms or as a percentage of the amount invested. Capital investment is affected by the availability of cash and it is measured in terms of liquidity (free cash flow) and changes in asset levels. Factors that drive stock returns in non-financial firms commonly observed include firm fundamentals *visa viz*; company assets, profitability, financial strength, risk or growth, macro-economic factors, investors' sentiment and momentum indicators, Mwangi (2017). Capital investment increase firm values by elevating economic scale and technological levels of a firm. Capital Investments leads to competitive advantages, reduction in operational risks, and generation of more profits. Therefore, increasing Capital Investment of a firm increases firm value. Mwangi (2017) explains how capital investment is measured, however, the study does not focus on how the latter sub variables influences the stock returns in the long run and therefore the present study seeks to establish the relationship between the capital investment components and the stock returns components at NSE.

The exchange is also undergoing restructuring of its governance system through demutualization. Characterized by its liquidity, market capitalization and turnover, the NSE may be classified as both emerging market and frontier market. NSE is therefore a model market in view of its high returns, vibrancy and well developed market structure. It therefore, raises interest and sets a precedent for comparison with other emerging markets

in Eastern Africa and the world at large (Nyambura, 2005). (Mokua, 2003), Given the important role that a capital market plays in the economy, it is crucial to understand the significance of capital investment variables affecting stock returns in emerging markets such as the Nairobi Securities Exchange.

## **1.2 Statement of the Problem**

Given the importance of non- financial firms in facilitating the development in the business environment, several studies have been conducted in Kenya on the effect of capital investment, mostly to identify the effect of capital investment of on profitability of financial firms. Other studies engage in investigating the effect of capital investment on the increase in value of the firm .Others researched on the implications of capital investment in relation to stock returns in other economies but no research has been done in NSE between capital investment and stock returns thus the need of the present study with specific reference to Nairobi Securities exchange. Consequently empirical evidence is quite varied and largely inconsistent on the effect of capital investment on stock returns. Study conducted in japan on the effect of capital investment on stock returns concluded that during full period and the post financial period, the effects of an increase in capital investment on stocks returns were positive and the capital investment-spread was negative. Study conducted in California on the implications of Capital Investments on Future Profitability and Stock Returns, affirmed that Capital investment has a robust negative implication for future profitability and the negative association is stronger when firms have greater investment discretion, i.e., for those firms with higher free cash flow and lower leverage. Locally, a study on fundamental analysis on stock returns of non-financial firms listed at the Nairobi securities exchange, found that there was a weak positive correlation between stock returns and by change in total assets, while change in revenue and change in financial leverage exhibited a negative relationship with stock returns. From the latter studies, they exhibit mixed results explaining the relationship between capital investment and stock returns.

This study therefore, made an effort to bridge the literature gap by answering the question; what is the effect of capital investment on stock returns of non-financial firms listed in Nairobi securities exchange over the five year period, from 2014 to 2018?

### **1.3 Objective of the Study**

#### **1.3.1 Main Objective**

To establish the effect of capital investment on stock returns among selected non-financial listed companies at Nairobi securities exchange, Kenya.

#### **1.3.2 Specific Objectives**

The specific objective to:

- i. Determine the effect of real estate investment trusts on stock returns among selected non-financial firms listed in NSE, Kenya.
- ii. Determine the effect of fixed income investments on stock returns among selected non-financial firms listed in NSE, Kenya.
- iii. Determine the effect of capital expenditure investments on stock returns among selected non-financial firms in listed NSE, Kenya.

### **1.4 Research Hypothesis**

The study adopted the following research hypothesis;

- i. **H<sub>01</sub>**: Real estate investment trusts has no effect on stock returns among selected non-financial firms listed in NSE, Kenya.
- ii. **H<sub>02</sub>**: Fixed income investments have no effect on stock returns among selected non-financial firms listed in NSE, Kenya.
- iii. **H<sub>03</sub>**: Capital expenditure investment has no effect on stock returns among selected non-financial firms in listed NSE, Kenya.

### **1.5 Scope of the Study**

This study examines the effect of capital investment on stock returns. It is will be conducted in Nairobi stock exchange market. The main concepts in this study are profitability, economic growth and interest rates. The study is intended to take 5 years.

### **1.6 Justification of the Study**

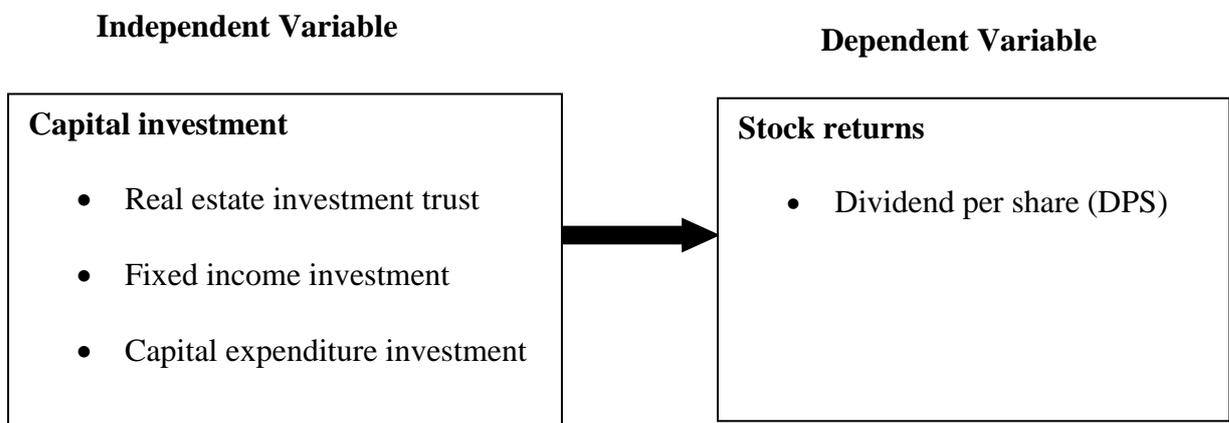
This study contributes to the literatures of agency theory in corporate finance, financial statement analysis, market efficiency, and finance theory and investment measurement. It provides evidence about how agency costs (proxied by free cash flow) affect the association between investments and future operating performance. The research outcomes may assist financial executives to come up with enhanced capital investment

policies on organizational financial of listed companies at NSE so as to increase on profitability of non-financial companies. The findings of this study will provide indication to investors whether it is possible to predict stock returns given increased capital investments and change in total assets. Investors are also able to evaluate whether details analysis of financial statement information is a worthwhile endeavor

### 1.7 Conceptual Framework

A conceptual framework refers to a graphical or diagrammatical representation of the relationship between variables in a given study (Abdi, 2018). The conceptual framework of this study will comprise of Capital investment, which will be the independent variable while stock returns will be the dependent variable which will include the holding period return.

The conceptual framework is diagrammatically illustrated by figure 1.1



**Figure 1.1: Effect of capital investment on stock returns among selected non-financial listed companies at Nairobi securities exchange.**

**Source: Adopted (Abdi 2018)**

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter discusses at previous literature that relates to the subject of study. The first Section discusses the theories of free cash flows and information asymmetry under the theoretical literature while the rest of the section talks about the concepts of capital investment and stock returns among non- financial firms and an empirical review of literature.

### **2.2 Theoretical Review**

Suwanna, T. (2012), A theory is a related set of concepts and principles about a phenomenon, the purpose of which is to explain or predict the phenomenon. It provides concepts to name what we observe and to explain relationships between concepts. Theory allows us to explain what we see and to figure out how to bring about change. Theory is a tool that enables us to identify a problem and to plan a means for altering the situation. This study is based on the theories of free cash flow and information asymmetry.

#### **2.2.1 Free Cash Flow Theory**

The classic propositions made by Modigliani & Miller (1958, 1963) ignore the presence of information, agency and bankruptcy costs. They assume that managers act exclusively for shareholder's benefits with no information asymmetry, so investors and management possess the same information about the firm's future potential investments. The dismissal of information and agency costs makes capital market perfect and consequently, capital structure irrelevant. Contrast to what has been suggested by Modigliani and Miller (1958; 1963), Jensen and Meckling (1976), Myers (1977), and Jensen (1986) amongst others, provide evidence suggesting that managers may place their personal goal or interests ahead of those of shareholders. As managers have more knowledge than outsiders, their investment and financing decisions may be interpreted by outsiders in a way that may increase the costs of issuing debt and equity, and accordingly increase the firms' reliance on internal funds (Myers, 1984; Myers & Majluf, 1984).

They suggested that the separation of ownership and management encourages managers to give the priority for their own interests or benefits. This situation creates agency costs incurred by the owners who should work effectively to reduce the effect of these costs on their wealth. Gillan and Starts (2003) pointed out that the agency problem may be

magnified by the disperse nature of corporate ownership. This is because small shareholders have no incentive for bearing the cost of controlling the management behavior, Zurigat et al (2014). The agency problem and its costs will be more severe in the presence of free cash under management control. Following the agency theory logic, it is reasonable to assume that managers might tend to invest in poor investment opportunities or to overvalue the investment requirements for their own benefits. Because of their information advantage, Grenadier and Wang, (2005) argue that managers may set investment financing requirements over their real value and use the difference between the real and dummy balances for their own benefits. The agency costs and its related problems led to the free cash flow issue since the agency costs are blamed on free cash flow. Jensen (1986) addressed the agency problem under conditions of the free cash flow theory. The free cash flows theory, proposed by Jensen (1986), states that management could prompt to invest in unnecessary, negative NPV projects when there are too much free cash flows in the management's hands. This theory is relevant to the study because it explains how managers make use of free cash flows to make investment decisions with the aim of enhancing stock returns.

### **2.2.2 Information Asymmetry Theory**

Akerlof (1970) first introduced the concept of asymmetric information in his paper *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*. In the paper, he develops asymmetric information with the example case of automobile market. His basic argument is that in many markets the buyer uses some market statistic to measure the value of a class of goods. Thus the buyer sees the average of the whole market while the seller has more intimate knowledge of a specific item. Akerlof argues that this information asymmetry gives the seller an incentive to sell goods of less than the average market quality. The average quality of goods in the market will then reduce as will the market size. Such differences in social and private returns can be mitigated by a number of different market institutions.

Information asymmetry hypothesis hence indicates that if a firm distributes stock dividends that exceed levels of market expectations, the firm's stock price increases; however, the market will eventually reflect the actual value of under-investment, resulting in stock price decline. It implies under-investment problems. Therefore, from the perspective of the information asymmetry hypothesis, increasing capital investment can

elevate the economic scale and technological level of firms, thereby increasing firm value.

Myers and Majluf (1984) further considers that a firm's managers possess more information regarding the firm than external investors do. If a firm issues new shares to raise capital for investment projects, the firm's stock price may be underestimated. To maximize the benefits of original stockholders, managers tend to relinquish advantaged investment projects, which reduce firm value and cause deadweight losses. Therefore, as regards to information asymmetry hypothesis, managers conduct underinvestment by distributing additional stock dividends to satisfy stockholders or potential investors. It therefore implies that CI has positive influence on the firm's stock returns. Information asymmetry theory is relevant because it explains that capital investment decisions have positive influence on the firm's stock returns because it elevates the economies of scale and technological level of firms, thereby increasing firm value hence stock returns.

### **2.2.3 Q Theory of Investment**

This Q theory of investment originated from the workings of Brainard and Tobin (1968). This Q theory suggests that a company's choice to invest highly is dependent on the capital market value capital in the ratio to the cost or replaced capital which is called the marginal Q.

Organizations will invest more when there is a high marginal Q and when the marginal Q is less, they will invest less. Just the same as, high capital costs will result to minimized investment while low capital cost results to high investment (Asad & Cheema, 2017). This q theory of investment shows that when the fixed investment costs are not available and the market friction is absent, the company will decide to invest in order to balance the capital marginal value with the capital marginal costs which comprises of capital costs too (DeMarzo et al., 2012).

This q theory of investment links the goods and services market with the financial market. The theory proposes that the investment rate is mostly dependent on the market value ratio of the organization's cost of capital to its cost of replacement (Asad & Cheema, 2017). The Q-theory of investment puts into consideration the benefits in terms of profits expected in the future, and should thus be accountable for the uncertainty effect which

come along with the variables of the future and are in line with the decisions to invest (Bo, 2009).

This theory of investment encourages that the expected returns on stock are connected with these 3 factors; book-market equity ratio, profits expected as well as the expected investment. The book-market equity ratio as well as the profits expected and the investment rates which are high all result to expected returns being low (Armand, 2016).

The Q theory of investment tries to clarify the existence of a correlation between prices of stock and the investment made corporately. The Tobin's Q gives a measure of the prices of stock as compared to the investment made corporately. It goes ahead to give a measure of the price of stock with regards to the organization's assets (Armand, 2016). An empirical evaluation of the Q-factor model by Asad and Cheema (2017) realized that companies add their investments; while the returns on stock reduces and therefore, they summarized that the decision of a company is dependent on its expected profitability levels in the future (Fricke, 2010).

In regards to this research, the Q theory presumes the high returns on stock are achieved by the increase in the prices of goods which finally leads to an increase in the capital investment. Also, the capability of returns on stock to foretell the growth of capital investment which results to low returns on the stock as well as on their prices. The theory propels the need to investigate the effect that capital investments have on the stock returns of non-financial firms listed in the security exchange. The Q theory of investment is relevant because it tries to clarify the existence of a correlation between prices of stock and the capital investments made by companies.

#### **2.2.4 Concept of Capital Investment.**

Investment of Fixed Capital is elaborated as the ongoing use of resources for some time with a hope of acquiring future benefits which are expected to add value to the invested resources with the time consideration in regards to the current inflation rate as well as the risks involved (Chau & Hirth, 2010). Investment can also be considered to be a decision-making process with several steps from the identification of an investment related opportunity to the assessment of its viability and finally the approval of the investment project (Ogilo & Ali, 2015). The decision to invest is interrelated to establishing all the

assets of an Organization, their structure and the associated risks (Efni, 2017). Organization's investment decision is the current worth of the capital assets as it looks forward to gain benefits from in the future (Silva et al., 2013).

Organization's decision to invest is inclusive of extension, gaining, advancing as well as the refurbishing the capital assets. The agreement to sell a division or the entire business venture is also classified as an investment (Geng & N'Diaye, 2012). Firms can invest in the latest systems for extension while looking forward that the return on investment will be enticing in the economic sense. This decision to invest is also made for the modernization of systems to ensure efficiency (Tewolde, 2008). Investments are majorly to get profits. With the investment decision highly dependent on risk factors, investors cannot really tell the highest rewarding investment within the stipulated time frame which they would all prefer. But with uncertainty, it's all a matter of risk taking and taking a chance (Efni, 2017). When a firm decides to take the investment option, it is required to put in its capital assets effectively in the future assets with eagerness to get more value over a time frame. This Investment decision is a representation of the resources utilized by an organization so as to buy or ensure quality property and plants (Putintica & Bonaci, 2013). Decision to invest commands maximum consideration since it will determine the company's development and potential risks. These decisions are hard as well as undoable while they demand large sums of resources (Geng & N'Diaye, 2012). The company's choice of investment may be considered by the use of the Investment Index that indicates the worth stated as the future investment and the capital assets and less the sold assets or those who have been given away as put in the Financial Statements divide according by the sum of all assets averaged (da Silva et al., 2013).

### **2.2.5 Concept of Stock Returns**

Stock return is defined as a profit on an investment. Mugambi & Okech (2016) defines stock returns to consist of capital gains as well as any other income received by an investor from the stock. It includes change in the value of a stock (capital gain yield) and cash dividend paid during the period. It comprises any change in value of the investment, and/or cash flows which the investor receives from the investment, such as interest payments or dividends. It may be measured either in absolute terms (e.g., dollars) or as a percentage of the amount invested. The latter is also called the holding period return

which Robinson and Stowe (2013) defines holding period return as the return earned from investing in an asset for a specified time period.

Stock returns are used to predict output and investment since they are forward looking variables. Over the years, researchers and practitioners have investigated into the factors that drive stock returns in non-financial firms. Commonly observed factors include firm fundamentals, macro-economic factors, investors' sentiment and momentum indicators. Firm fundamentals refer to characteristics of a company related to its assets, profitability, financial strength, risk or growth, Muiva (2014). Security market prices reflect the market assumptions and expectations on the company underlying fundamentals. Fundamentals drive cash flows and the market value securities as the present value of the future cash flows discounted at the appropriate required rate of return (Pinto et al, 2013). This study considers three firm fundamentals drivers of stock returns namely revenue growth, assets growth and change in leverage.

## **2.3 Determinants of Stock Returns**

### **2.3.1 Interest Rates**

Banks can raise or lower interest rates to stabilize or stimulate the economy. This is known as monetary policy. If a company borrows money to expand and improve its business, higher interest rates will affect the cost of its debt. This can reduce company profits and the dividends it pays shareholders. As a result, its share price may drop. And, in times of higher interest rates, investments that pay interest tend to be more attractive to investors than stocks Modigliani (2006). Mbugua (2003) who examined factors that influenced the development of the corporate bond market in Kenya and his findings indicated that corporate bonds have high yields since interest payments were taxable.

### **2.3.2 Technological Innovation**

New ideas and new ways of doing things may result of share price changes hence capital gain and high dividend. A company's share price may change if there has been a technological breakthrough that suggests strong growth in the future (Luketero, 2008) efficient allocation of resources and rapid accumulation of physical and human capital is achieved with faster technological advancements which in turn feed economic growth.

### **2.3.3 State of Current Economy**

A country with a consistently higher rate of economic growth, then generally stock markets will perform better than in a country with lower rates of growth (Gumbs, 2001). The stock market will reflect the economic conditions of an economy. If an economy is growing, then the output will be increasing, and most firms should be experiencing increased profitability. This higher profit makes the company shares more attractive – because they can give bigger dividends to shareholders. If the economy is forecast to enter into a recession, then stock markets will fall. This is because a recession means lower profits, less dividends and even the prospect of firms going bankrupt, which would be shocking news for shareholders. Also, in a period of uncertainty, investors may prefer to buy bonds for the greater security and avoid shares, because of the increased risk involved.

### **2.3.4 Nature of Company dividend per share**

Investors need to understand the impact of corporate actions events initiated by a company that impacts its share price to get their investment strategy right. A good understanding of these measures gives a clear picture of the company's financial health, its ethical business conduct, and helps determine whether to buy or sell a particular stock. Larsen, 2003), some of the prominent corporate actions and how they impact stock prices, include, Stock repurchase.

Stock repurchase is an event when the company purchases its shares from shareholders, usually at a premium to the market price (Larsen, 2003). Companies go for buybacks to consolidate their stake in the enterprise and for greater control, to support the share price from declining, to improve earnings per share (as it reduces the number of outstanding shares in the market), or/and to build investor confidence in the promoters. A buyback may lead to a short-term spike in the share price (Larsen, 2003).

One of the important criteria that are used to assess a firm's financial performance is the profitability of the firm. The profit that is left over with a firm after paying tax and preference dividend is the earnings available to the equity shareholders of the firm, and firms utilize these earnings to distribute dividends to shareholders. Higher the profit after tax, higher is the earnings available to the equity shareholders and hence, higher is the scope for increased dividend payouts. The higher dividend payouts would in turn enhance

the market price of the firm's share and this way, a positive relationship is expected to exist between share price and profitability.

### **2.3.5 Concept of real estate investment trust**

Real estate investment trusts are form of financing instruments from companies that source funds to build or obtain property which are then sold or rented to create income for the investors who invested their money in the company. The income that is generated by the firm over the period is then shared among the shareholders at the end of the financial year. Real estate investment trusts (REITs) are closed investment organizations that are extensively classified as Equity REITs or Mortgage REITs (Larsen, 2003). Equity REITs contribute no less than 75% of their aggregate resource in creating land properties while Mortgage REITs put 75 % of their aggregate resource in private home loans, business home loans and development credits.

Ordinarily, by the review of its operations, REITs posit features of equity segment's products. Given this scenario, it is expected that risk averse investors are more willing to invest in the REITs which has a guaranteed earnings as opposed to investing in equities. REITs therefore can be seen to provide a new alternative for investment in the property market, which is considered as a secured, scarce, and expensive but low liquid vehicle for risk averse investors (NSE report, 2015). This will certainly lower the volatility in the market. Several benefits accrue from the introduction of REITs which would be motivating factor behind their introduction in the capital market (oxford business group, 2015). What REITs do therefore is to make it more affordable t, via the dividends( stock returns) distributed by the REITs, as REITs are typically required to distribute 90% of income earned by their investors, thus giving regular income streams.

### **2.3.6 Concept of dividend per share (DPS)**

Angie Mohr (2017), the annual dividend per share, is the total amount of dividend paid to the shareholders for holding each share of the company; it is paid out at the end of the financial year. Outstanding shares can be used in the calculation of earnings per share of a company. The amount that is paid to each shareholder is dependent on the number of shares that is owned and is guided by the company's payout policy. Usually, once a company intends to make a dividend payment, its board of directors will make a declaration after gaining the requisite approval from shareholders.

A Company can distribute its profits to shareholders as dividends in several ways. These include: (i) cash dividends in the form of either regular, extra (irregular) or liquidating dividends, stock dividend, stock splits, and reverse stock splits. When a company consistently pays regular cash dividends over a long period of time, this usually sends a positive signal to the financial markets, indicating that the company is growing and should continue to grow and pay dividends in the future. Companies tend to maintain or increase their cash dividend payments so as to build shareholder confidence and positively impact share price.

### **2.3.7 Real estate investment trusts (REITs) and Stock Returns**

Empirical studies and early seminal works regarding equity markets and REITs market yields controversies. One body of empirical work tends to support the idea that the two markets are segmented. Schnare and Struyke (1976), Goodman (1978, 1981), Richardson and Thalheimer (1982), Miles et al. (1990), Liu et al. (1990), and Geltner, (1991) all document the existence of segmentation within various real estate markets and equity markets. They, therefore, assert that REITs bring about market segmentation within the stock market. However, other authors seem to disagree with this proposition.

For instance, Liu et al. (1990) and Ambrose et al. (1992) postulate that mortgage and equity REITs displayed similar return generating characteristics to the equity market and they concluded the real estate and equity markets were integrated. They, therefore, negate the assertions of market division between the REIT market and equity market.

Causality tests show that although the equity and the fixed income segment markets are related. The level of deviations between these two can be extensive displaying a meager degree of mean reversion. These mixed findings are also confirmed by later works of Glascock et al. (2000) and Lee and Chiang (2001).

REIT is a contemporary venture vehicle that appreciates tax exemption on the wage appropriated to its investors (90%) and anticipated that would contribute at least 75% of its reserve in Land Resources for appreciate the expense exception (Larsen, 2003). Throughout the years, the execution of REIT has been contemplated and investigated to

distinguish the contributing factor(s) to REIT yield as being proven by profit appropriated to financial specialists.

These examinations have in many circumstances considered determinant factor at once while others are thought to be consistent or of no simultaneous impact, a situation that once in a while exists, in actuality, speculation advertise in this manner a gap for the study of concurrent impacts of all factor determinants on REIT performance (Boshoff and Bredell, 2013).

### **2.3.8 Fixed income investment and stock returns**

Announcements of new bond issues have been seen to have a negative effect on stock prices leading to capital gain or loss hence low dividend per share. Potential explanations of this negative effect - the price-pressure, wealth-redistribution, and information-release hypotheses - imply different share-price reactions to the announcements of bonds (Kalay, 1987).

The investigation of bond offerings to the public has been an interesting area of academic corporate finance research because bonds are gradually becoming an important corporate financing alternative. It is therefore necessary to investigate the effect that these issues have, on the stock returns.

## **2.4 Empirical Review**

### **2.4.1 Effect of real estate investment trusts (REIT) on stock returns**

Gumbs (2001) did a study on the viability of the REIT structure as a vehicle for real estate development. Past studies on the effects of development on REIT performance, industry articles, and interviews with the essential personnel of the REITs and private development firms were reviewed in this paper. It was noted that proficient management is vital to exploiting the inherent potential of the REIT format as an effective vehicle for real estate development. The development and construction of both commercial and residential properties could be funded by a REITs investment.

Lee and Stevenson (2004) researched the case for REIT in the mixed-asset portfolio in the short and long run. When the U.S. stock market was performing poorly in 2003 REITs was seen as a promising addition to the mixed-asset portfolio. The study was undertaken

between 1980 to 2002. The aim was to determine if REITs could be used over different time horizons in the efficient portfolio. The differing time horizons were estimated over a range of four alternate rolling periods. The outcome of the study showed that, over both different time horizons and holding periods, REITs does play a significant role. As the holding period increases so does the attractiveness of REITs as a diversification asset. This study views REITs as a diversified investment for the various investors and could be used as an investment plan in various mixed-asset portfolios and earn returns for such portfolios. For investors who normally have a diversified portfolio REITs investment could act like a diversified investment.

Muchiri (2006) did a study that examines the attitudes of Kenyans towards real estate securitization. The research design used in the study was an exploratory study and was mainly qualitative. This design was chosen since the concept is relatively new and had not taken root in the country. This study takes into consideration every potential investor in the stock exchange in Kenya. A real estate owner whose value is equal to, or exceeds the minimum required share capital and net asset value for listing at the Nairobi stock exchange qualify as potential promoters of a securitized real estate IPO. The sample of the study consisted of both institutional investors would be the most conveniently placed to provide insight into the questions raised, property consultants, in their capacity as advisors, this group can influence investment in a particular direction and trustees of some of the pension funds and officials of co-operatives that hold substantial property. This information was obtained using an in-depth interview. Such an interview provided opportunities to probe answers and allowed the interviewee to build on their answers. The qualitative data was used in the analysis of the findings from this research. The study found that professionals and ordinary investors would be willing to put their money in securitized real estate. However, the readiness to invest in shares of property companies went down as the amount involved went up. Also, compared to owning property, most of the respondents favored owning a rental house to shares in a property company. The study goes on to state that investors would invest in the issues of REITs IPO given the amount required to invest in REITs.

Konagai (2009) researched Japan-REIT performance which intended to recognize the performance of REITs in Japan (J-REITs). The research conducted two separate studies. The first study employed the Fama-French three-factor model for monthly J- REIT

returns from September 2001 to September 2008. The model resulted in a limited explanatory power for the J-REIT performance, which was probably due to too short a market history, as in the past research. The second study applied the Pure Play Indices to the J-REITs for office, residential, and retail segments since January 2006 when the J-REIT market became sizable enough for the study. The study concluded that as the market matures with more data accumulated this two-fold study that shows a demonstration of returns from J-REITs will become more valuable to derive a risk of J-REITs and diverse types of information of properties. The performance of REITs can only be seen once they become mature with a good historical background on the same.

Muchuki (2010) did a study on real estate as a major investment asset class, but it posed considerable problems for portfolio managers in valuing direct real estate investment. Real estate illiquid nature increases transaction costs yet it is assumed to be a safer asset for long-term investment. Real estate can be purchased (direct investment), or the investment can take place through land held by listed or unlisted companies (indirect investment). REITs are the only truly liquid assets related to real estate investment. Indirect investment in real estate investment trusts (listed REITs) transforms the illiquid nature of direct real estate and offer more liquid investment vehicles thus forms part of a well-diversified investment portfolio. Public REITs did not exist in Kenya at the time. This study investigated whether there exist REITs needs among institutional investors trading at Nairobi Stock Exchange. A sample of 30 institutional investors consisting of pension fund managers and unit trusts was used. The findings showed that investors would invest in REITs if they were to be introduced at the exchange and therefore confirmed that REITs needs do exist among institutional investors at the NSE.

Alias and Tho (2011) analyzed the performance of REITs comparison between M-REIT and UK-REITs. The United Kingdom was one of the recent countries to enter the tax efficient REITs regime. This took place early in the year 2007. Now, it ranks fourth regarding market capitalization based on the Global REITs report 2008. Malaysia, with a long history of Unit Trust Funds with some recently converting to REIT, has yet to achieve the size of UK-REITs. This research analyzed the performance of six selected REITs in both countries. Nevertheless, before the performance analysis, the mechanism, as well as the legislation adopted in regulating the several REITs regime, was discussed. Also, factors which contributed to the variance of performance of REITs are presented,

and further discussions are made based on the performance analysis done. The findings and analysis of the study showed that the total revenue was the main factor affecting the performance for both the largest M-REITs and UK-REITs. Furthermore, the study views demonstrated that for every billion increases in market capitalization, the profit margins generated by the REITs would rise by approximately 9%. This study was a basic comparison of REITs growth in the various countries since it took off in the U.S. and had concluded that's the REITs investment is quickly catching up in the different countries.

Hoesli and Oikarinen (2012) did a study, and this study aims to examine whether securitized real estate returns reflect direct real estate returns or general stock market returns using international data for the U.S., U.K., and Australia. In the U.S., the research included four real estate sectors which were apartments, offices, industrial, and retail while for the U.K. it included just two real estate sectors which were offices and retail in the study analysis. For the Australian market, the researchers used the overall REIT and direct market indices given that no reliable sector data were available. For securitized real estate, the FTSE/NAREIT Equity REIT sector level indices are used for the U.S. and the S&P/ASX 200 A-REIT index for Australia. For the U.K., the study constructed the REIT indices from the company level price, dividend and market cap data provided by EPRA. It estimated the vector error-correction models and investigated the forecast error variance decompositions and impulse responses of the assets. Both the variance decompositions and impulse responses suggest that the long- run REIT market performance is much more closely related to the direct real estate market than to the general stock market. Consequently, REITs and direct real estate should be relatively good substitutes in a long-horizon investment portfolio. This study was testing the securitizing of real estate assets and if such a venture would generate returns to the public as it does in the private sector. The two sectors both private and public are closely linked, and through the private sector, one can be able to analysis if the securitizing of such real estate assets would generate returns to the public investors.

Nzalu (2013) did an assessment which looked at the factors that affected the growth of the real estate sector in Kenya. The study investigated factors such as GDP Growth, the influence of interest rate, inflation rates, and population growth. The design of the study used both quantitative and descriptive research design to obtain information. The study, therefore, investigated the contribution of the current status of the phenomenon. The

population in this study was real estate investors while the target population included private and public property investors. Data for analysis was based on the real estate and renting businesses as sourced from the various Economic Surveys and Kenya Statistical Abstracts Issues. The data obtained were analyzed by use of the Statistical Package for Social Sciences (SPSS) to get descriptive statistics and a regression model. From the results, the contribution of the factors affecting real estate growth as measured by Pearson correlation coefficients indicated that GDP took the highest share with a value of 83% followed by inflation growth at 78% while interest rate came third with a value of 75%. Population growth contributed the least to the growth in real estate investment with a value of 29%. The data supported the study hypothesis that GDP is the most significant contributor to the growth in real estate. Also, GDP growth, interest rate variation and increase in inflation were found to be a statistically significant determinant of real estate growth. A summary of the regression results showed that the variables considered could explain up to about 70% of variations in the investment growth. The study recommended that Policy measures geared toward improving the economic growth and curbing rising inflation rates and interest rates should be undertaken as they increase the investment levels. This shows the need for growth in the real estate developments across the country and this can be facilitated by the use of REITs as a financing vehicle for such properties that are required.

Mwathi (2013) did a study on the effect of funding sources on real estate development in Kenya. The purpose of this study was to establish the sources of funding real estate in Kenya. In specific terms the study reviewed whether funding in the real estate originates from; mortgage financing, savings, venture capital and equity financing. This study employed the descriptive survey design since it was conducted to describe the present situation, what people currently believe, what people were doing now and so forth. The population of the study was all the real estate firms in Nairobi. This study used secondary data for five years. Data were analyzed using Statistical Package for Social Sciences (SPSS), and results were presented in frequency tables and charts. The findings indicated that mortgage financing is the most used source of funding, with equity and venture capital being the least source of financing used. The findings also stated that there is a significantly positive relationship between mortgage financing and real estate development. However, the findings recommended that to increase use of equity and venture capital as a source of funding will require businesses to sell their ideas to people who have money to invest.

From the foregoing, one would be persuaded to have a biased opinion favoring a positive relationship between return on stock and Real Estate Investment Trust. Indeed, Lee and Stevenson (2004) showed through their study that, over both different time horizons and holding periods, REITs does play a significant role on companies' portfolios and hence stock returns. Their study showed that as holding period increases so does the attractiveness of REITs as a diversification asset. A study by Machuki (2010) partially supports this view when it concluded that real estate illiquid nature increases transaction costs yet it is assumed to be a safer asset for long-term investment. The study further found that indirect investment in real estate investment trusts (listed REITs) transforms the illiquid nature of direct real estate and offer more liquid investment vehicles thus forms part of a well-diversified investment portfolio for non-financial companies. Satisfying as this may seem, other research findings give divergent views on the effect of REITS on stock returns. For example, Muchiri (2006) found that professionals and ordinary investors would be willing to put their money in securitized real estate. However, the same study also found that, most of the respondents favored owning a rental house to shares in a property company. Be that as it may, Konagai (2009) contended that the performance of REITs can only be seen once they become mature with a good historical background on the same.

#### **2.4.2 Effect of fixed income investments on stock returns**

Gebhardt et al (2005), in their study, indicate that bonds and stocks have the same underlying operating cash flows and are affected by the same company fundamentals. In the study, it is shown that over a ninety day period, any abnormal returns on a company's stock matched by better performance of short term notes with floating interest rates. Therefore, bonds cannot evolve independently of equities.

Barclay and Smith (2005), adding more debt to a company's capital structure can serve as a credible signal of higher expected future cash flows. The managers of companies that have raised their levels of debt are, in effect, signaling to the markets that they are aware of the states of their companies, which are favorable, and they are confident that the companies' performances will allow them to pay off their additional debts. The study shows that there is a positive correlation between the degree of leverage and the forecast performance of the stock of the firm.

Uwuigbe et al. (2012) examined the determinants of share prices in the Nigerian stock exchange market. Using the judgmental sampling technique, a total of 30 companies were selected and data (2006 to 2010) collected from the stock exchange and annual reports of the firms. The paper modeled the effects of financial performance, dividend payout and financial leverage on share price of listed firms by using regression analysis.

The study concluded that financial performance and dividend payout had a significant positive relation with share prices while financial leverage (proxied by debt-equity ratio) had significant negative influence on the market value of share prices in Nigeria

Eckbo (1985) studies the stock effect to corporate debt offerings during the period 1964 through 1981. He finds the two-day (day -1 to day 0) abnormal return to the initial announcement of the bond issuance is significantly negative. With the analysis of cross-sectional regression, the negative stock price reaction is found having no relationship with the bond issue, particularly with the size of the issue. This result is inconsistent with the Asquith and Mullins (1986) model in which the offerings size has a negative correlation with the stock abnormal return.

Thiong'o (2012) sites both advancements made in the recent years towards trading of bonds at the NSE as well as hindrances that may have seen a below par subscription of corporate debt. Thiong'o further points to the oversubscription of two recent bond issues (KenGen, 2010 and Safaricom, 2011) and the subsequent profits recorded in the corresponding financial periods as an indication toward the relationship between firms issuing debt and an increased revenue.

According to Ringui (2012), companies could proceed to perform better if the political, macroeconomic and regulatory factors in the country are favorable for the corporate bond market to thrive. What's implied here is that if companies are encouraged by all these factors to pursue debt financing, then positive gains could be seen in these companies' performance. Ringui (2012) puts it forward that bond issues could make these companies more profitable. 21

Buigut et al. (2013) on their study on the relationship between capital structure and share prices in NSE assessed the effect of debt, equity and gearing ratio on share price. Using

panel data pertaining to the energy sector over the period 2006 to 2011 and employing multiple regression analysis, the results indicated that debt; equity and gearing ratio were significant determinants of share prices for the sector under consideration. Further, gearing ratio and debt were found to positively affect share prices while equity negatively affected share prices Machel (2013) conducted a study on the effect of bond issues on the stock price performance of firms listed at the Nairobi Securities Exchange and came to a conclusion that bond issues do not have a significantly positive effect on the stock prices of issuing firms.

Empirical literature on fixed income investment has focussed on two components, mainly debt and equity. As shown by a study by Uwuigbe *et al* (2012) in their paper in which they modeled the effects of financial performance, dividend payout and financial leverage on share price of listed firms by using regression analysis, financial performance and dividend payout has a significant positive relation with share prices while financial leverage 20 (proxied by debt-equity ratio) has significant negative influence on the market value of share prices in Nigeria. Before this finding, Barclay and Smith (2005) had found that adding more debt to a company's capital structure can serve as a credible signal of higher expected future cash flows. Their study had showed that there is a positive correlation between the degree of leverage and the forecast performance of the stock of the firm. But Buigut *et al* (2013) got study results indicating that even though debt, equity and gearing ratio were significant determinants of share prices for the sector under consideration, gearing ratio and debt were found to positively affect share prices while equity negatively affected share prices. A study by Machel (2013) investigating the effect of bond issues on the stock price performance of firms listed at the Nairobi Securities Exchange further found that bond issues do not have a significantly positive effect on the stock prices of issuing firms. Findings by Machel (2013) and Buigut *et al* in a way supported earlier findings by Gebhardt *et al* (2005) that bonds cannot evolve independently of equities in essence saying that stock return is independent of the two.

#### **2.4.3 Effect of capital expenditure investments on stock returns**

The first is of the view that just like any other well researched analyzed and executed investment, capital expenditures translate to returns manifested through increased financial performance. Lev and Thiagrajan (1993) stated that capital expenditure represent a fundamental signal claimed by analysts to be useful in predicting future stock

returns. A large number of studies relating to capital expenditure and financial performance make use of stock returns as the measure of financial performance understandably because any measure of an organization's performance must be linked to the goal of shareholders wealth maximization as evidenced by the firm's stock price. Few studies utilize accounting based measures of financial performance ostensibly because of the ability of these measures to be manipulated through creative accounting and/or revenue/cost recognition.

The foregoing review of empirical studies presents findings of studies that evaluated financial performance using both accounting measures and stock return measures of financial performance.

McConnell and Muscarella (1985) indicate that announcements of increases in planned capital expenditure are generally associated with significantly positive excess stock returns. They find that on average, the stock market reacts positively to announcements of increases in planned capital expenditures and negatively to decreases in planned capital expenditures. This view is supported by Woolridge (1988) who observed that the current literature which is mostly focused on managerial behavior in advanced economies, reports evidence that shareholder wealth is positively affected when firms make capital spending decisions. Woolridge (1988) further reports positive stock price reaction to a variety of long-term strategic investments such as joint ventures, plant and 16 equipment purchases, new product introductions, and research and development expenditures.

Martin and Kensiner (1990) studied the share-price response to announcements of increases in research and development spending. They find that on average, there are significant positive reactions even when the announcement occurs in the face of an earnings decline. In follow-up studies, Blose and Shieh (1997) find a significant positive relation between the magnitude of the stock market reaction to capital investment announcements and the level of new investment. Chung, Wright and Charoenwong (1998) argue that financial performance as measured by share price reaction depends critically on the market's assessment about the quality of a firm's capital expenditure decisions. They postulate that for firms with high quality investment opportunities, announcements of increased capital spending decisions are accompanied by increases in

the firm's share prices. The reverse is true for firms without what the market perceives as quality investment opportunities.

Fama and French (1999) studied the relationship between firm investment and profitability for the aggregate non-financial U. S. corporations by computing the overall internal rate of return on investment. A positive internal rate of return led them to conclude that “on average corporate investment seems to be profitable” Ching-Hai, Hsiang, Chen and Yen-Sheng (2006) examine the relationship between capital expenditures and corporate earnings for 357 manufacturing firms listed on the 17 Taiwan Stock Exchange over a 10 year period. The findings indicate a significantly positive association between capital expenditures and future corporate earnings even after controlling for current corporate earnings. Brooke (2014) disaggregated capital expenditure between maintenance CAPEX and growth CAPEX. They find that growth CAPEX exhibited a more positive association with future financial performance than maintenance CAPEX. They further postulate that this positive association is decreased by agency costs. The second school of thought documents a negative relationship between capital expenditure and financial performance. Abarbanell and Bushee (1997) show that capital expenditure conveys a negative signal for future earnings and conclude that there seems to be a negative relation between capital investment and future profitability. They conjectured that capital expenditures could be a bad signal for future earnings hence negative stock returns, if poor performing firms take on excessive projects. They further report that industry-adjusted capital expenditure growth is negatively associated with future returns.

Titman, Wei and Xie (2004), report that there exists a negative association between capital expenditure and future stock returns. This negative association is stronger in firms with higher free cash flow and lower debt ratios. They interpret their evidence on the backdrop of the free cash flow theory and attribute the negative relationship to the overinvestment behavior by managers with empire building incentives. They compare Japanese Keiretsu (intertwined) firms and independent firms and find that in the former 18 groups, there is a negative association between investment in fixed assets and future returns while in the latter, the association is positive. The result is consistent with the idea that keiretsu firms, which have low-cost access to capital, tend to over invest. Fairfield, Whisenant and Yohn (2003) study the relationship using return on assets, an accounting

based measure of financial performance. Following a financial statement analysis study, they document a negative association between growth in net long term operating assets and one year ahead future return on assets. Richardson, Richard, Sloan and Irem (2006) find a similar association and attribute it to the lower reliability of long term asset accruals. Chen, Yao, Yu, and Zhang (2008) examine the effect of corporate asset growth on stock returns using data on nine equity markets in the Pacific-Basin region. They find a pervasive negative relationship between asset growth and subsequent stock returns during the sample period from 1981 to 2004. Similar findings are documented by Cooper, Gulen, and Schill (2008) who studied firm asset growth and subsequent stock return. The study ranked firms in the U.S market during the period 1968 to 2003 into rankings based on their level of asset growth. They show that firms with high asset growth had a 20% lower return than firms with low asset growth or capital expenditure.

The widely held view by many scholars is that capital expenditures translate to returns manifested through increased financial performance. Indeed, as illustrated in the foregoing empirical literature review of this proposal, Lev and Thiagrajan (1993) stated that capital expenditure represents a fundamental signal claimed by analysts to be useful in predicting future stock returns. Blose and Shieh (1997) further reinforced this view when they found a significant positive relation between the magnitude of the stock market reaction to capital investment announcements and the level of new investment. However Chung, Wright and Charoenwong (1998) averred that financial performance as measured by share price reaction depends critically on the market's assessment about the quality of a firm's capital expenditure decisions. They postulate that for firms with high quality investment opportunities, announcements of increased capital spending decisions are accompanied by increases in the firm's share prices. Other researchers have however found different results. For example, Abarbanell and Bushee (1997) show that capital expenditure conveys a negative signal for future earnings and conclude that there seems to be a negative relation between capital investment and future profitability. They conjectured that capital expenditures could be a bad signal for future earnings hence negative stock returns, if poor performing firms take on excessive projects. Additionally Fairfield, Whisenant and Yohn (2003) after studying the relationship using return on assets, an accounting based measure of financial performance, documented a negative association between growth in net long term operating assets and one year ahead future return on assets.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

The introduction section describes the research design, the targeted population, sample and sampling procedures, the methods of collecting data and finally the techniques of analyzing the data.

### **3.2 Research Design**

A research design is the blueprint of research that acts as a guideline in the method of research starting with the formulation of research questions and hypotheses to the reporting of research findings (Zikmund et al., 2011). This study assumed a correlational research design. Correlational design is a type of non-experimental research method, in which study measures two or more variables and assess the statistical relationship between them. Correlational research design is therefore specifically suitable for this study as it helped in determining prevalence and relationship concerning capital investment and stock returns of non- financial firms listed at the Nairobi Security Exchange which can therefore be used in decision making and generalization.

### **3.3 Population of the Study**

A population can be explained as groups, individuals, organizations, events, human, and the situation to which that population covers (Zikmund et al., 2011). The population of this study entails the 44 non-financial firms that are registered in the NSE.

#### **3.3.1 Sample and Sampling Procedures**

A sample is a manageable section of a population but elements of which have common characteristics. Also, it refers to any portion of a population selected for the study and on whom information need for the study and whom information need for the study is obtained (Awoni; A deranti and Tayo, 2011, Akinade & Owolabi, 2009; Adedokun, 2003). It is the element making up the sample that are actually studied and generalizations or inferences about the population are made. Out of 44 non- financial firms listed in NSE a sample size of 18% representing 8 firms was selected for this study.

### 3.4 Data Collection Procedure

Panel data on real estate investment trusts, fixed income investments, capital expenditure investments and stock returns was obtained from selected non listed firms repeatedly. The data can be withdrawn from surveys, official statistics and other sources .These covered a period of five years from 2011 to 2015

### 3.5 Data Collection

Secondary data was used which was be extracted from the targeted non- financial firms. Secondary data was considered essential, since it is impossible to conduct a new survey that can adequately capture past change or developments. Data on real estate investment trusts, fixed income investments, capital expenditure investments and stock returns was obtained from reports, public records or statistical and historical documents of the non-financial firms. The secondary data covered a period of five years from 2011 to 2015.

### 3.6 Data Analysis

Analysis of data was carried out through correlation analysis and the multiple linear regression analysis. Correlation and regression examination was employed in ascertaining the degree of association as well as the relationship between the variables respectively.

### 3.7 Analytical Model

The regression model was adopted as the analytical model for the research.

$$Y_{(It)} = \beta_0 + \beta_1 X_{1 (It)} + \beta_2 X_{2 (It)} + \beta_3 X_{3 (It)} + \mu_{(It)}$$

Where Stock returns,

$\beta_0$  = Constant of the model,

$\beta$  = Coefficients of the regression equation (1,2&3) ,

$X_1$  = Real estate investment trust,

$X_2$ =fixed income investment,

$X_3$ = Capital expenditure investment,

$\mu_{(It)}$  = Tolerable error i= 8 non – financial listed firms

t= time duration (2011-2015)

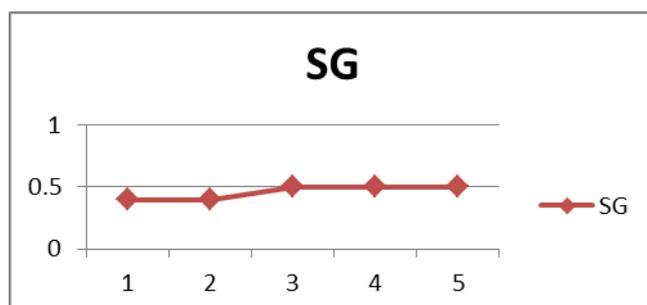
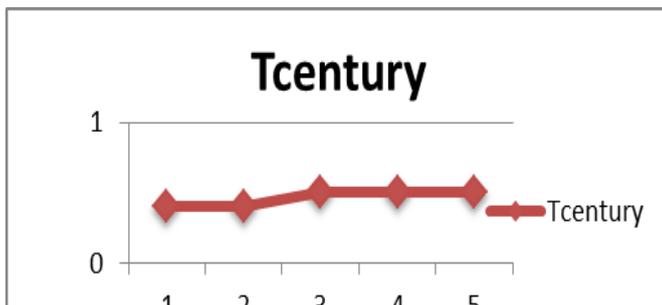
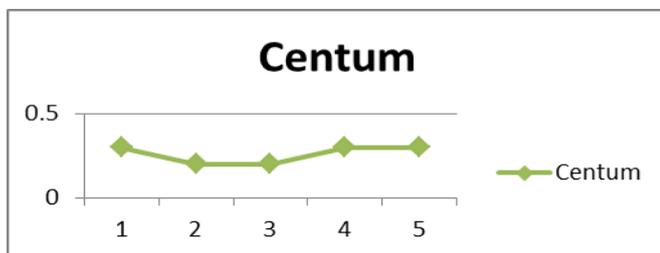
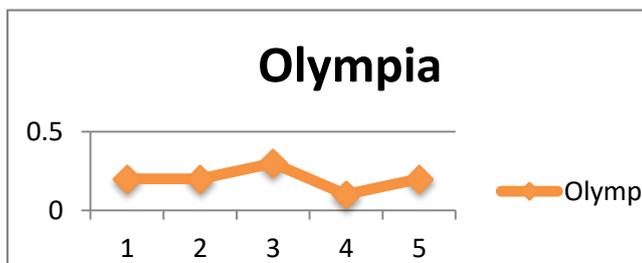
### **3.8 Test of Significance**

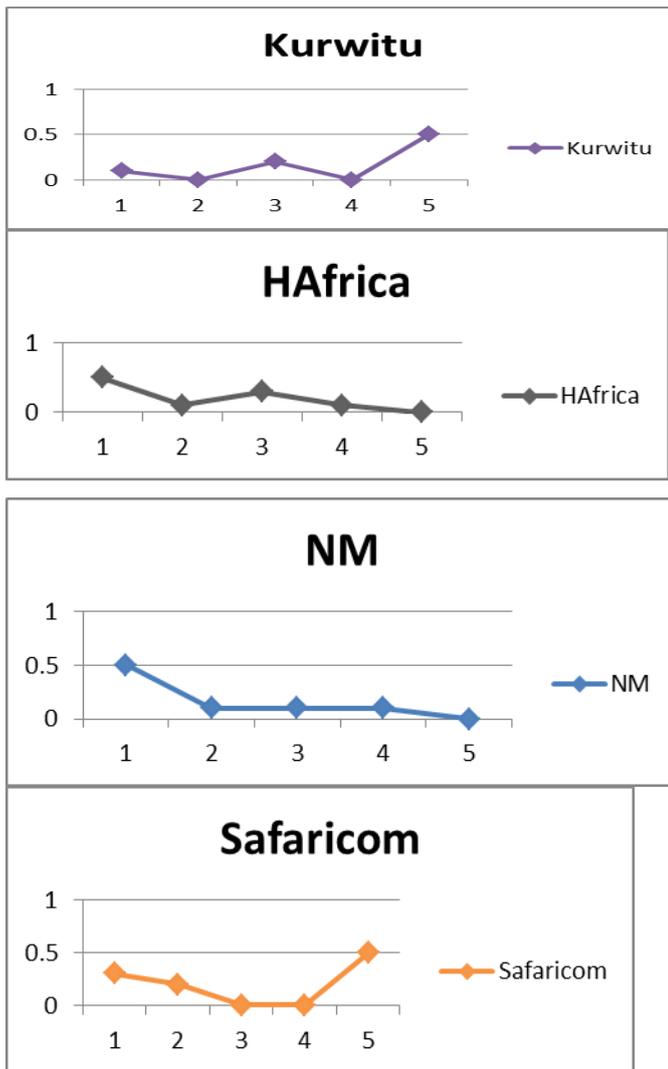
The F and t test statistics was largely applied in testing the statistical impact of the regression equation and coefficient respectively. The test was carried out as 95% confidence level.

## CHAPTER FOUR: RESULTS AND DISCUSSION

### 4.1 Introduction

This chapter represented the study results based on the research objective on the data collected from annual income statements and statements of financial positions. The results of the study were analyzed using descriptive statistics which included skewness, mean and standard deviation, and inferential statistics was also used and included; correlation analysis and regression analysis, the results of the study were presented in table and figure forms as shown in the following sections.





**Figure 4.1: Dividend Per Share**

Centum had a dividend per share of 0.5 in year 1. This was the highest across the five year period. Dividend per share hit an all-time low in both years two and three at 0.2. In the following years (four and five), it stagnated at 0.3.

Olympia had its highest dividend per share at year three at 0.3 and it's lowest at 0.1 in year four. It maintained a dividend per share of 0.2 for years one, two and five. Trans Century had of 0.5 dividends per share across the years three, four and five and 0.4 for years one and two. Home Africa had the highest at 0.5 in year one and an all-time low of 0.0 in years five. Kurwitu's highest dividend per share of 0.5 was in the last year and 0.0 for all the remaining years. Standard Group had a DPS of 0.4 for years 1 and 4 and a DPS of 0.5 for the subsequent years. Nation Media had its highest DPS in year 1 at 0.5 and its

lowest in year 5 at 0.0. Safaricom’s highest DPS was in year 5 at 0.5 and lowest in both years 3 and 4.

**Table 4.1: Descriptive Statistics**

<b>Descriptive Statistics</b>				
	N	Mean	Std. Deviation	Skewness
Real estate investment trusts	40	118220310	195946863	1.873
Fixed income investment	40	3564721	6646351	2.287
Capital expenditure investment	40	540104528	1083227188	2.068
Dividend per share	40	0.2360	0.18000	0.201

**Source: Field data**

## 4.2 Effect of Real estate investment trusts on stock returns

### 4.2.1 Correlation Analysis

**Table 4.2: Correlations**

		Real Estate Investment Trusts
	Correlation	0.442**
Dividend Per Share	Sig. (2-tailed)	0.004
	N	40

**Source: Field data**

Correlation was employed to analyze the level of association between dependent variable and the independent variables selected for this study. The results show that there was a positive relationship between dividend per share and real estate investment trust of the non-financial firms listed in the Nairobi securities exchange of the Pearson value of ( $r=0.442$ , Sig. 0.004). This implies the more the investment in the real estate investment trusts the higher the dividend per share, which may result into higher market price per share, hence maximization of the value of the firm.

## 4.2.2 Regression Analysis

**Table 4.3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Change	F Change	Sig. F Change
1	0.89	0.79	0.82	0.17899	0.79	9.248	0.004

### a. Predictors: (Constant), Real Estate Investment Trusts

Source: Field data

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in table above the value of adjusted R squared was 0.82 an indication that there was variation of 82% on the dividend per share of non-financial firms is due to changes in real estate investment trust at 95% confidence interval. This shows that 82% changes in dividend per share of non-financial firms could be accounted for by real estate investment trust. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between the study variables as shown by 0.442.

**Table: 4.4: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.296	1	0.296	9.248	0.004 <sup>b</sup>
1 Residual	1.217	38	0.032		
Total	1.514	39			

### a. Dependent Variable: Dividend Per Share

### b. Predictors: (Constant), Real Estate Investment Trusts

From the ANOVA statistics, the processed data, which is the population parameters, had a significance level of 0.004 which shows that the data is ideal for making a conclusions on the population's parameter as the value of significance (p-value ) is less than 5%. The significance value was less than 0.05, an indication that the model was statistically significant.

**Table 4.5: Coefficients<sup>a</sup>**

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	0.299	0.035		8.604	0.000
Real Estate Investment Trusts	4.187E-010	.000	0.442	3.041	0.004

**a. Dependent Variable: Dividend Per Share**

At 5% level of significance and 95% confidence level, real estate investment trust had a 0.004 *p* value. This shows that real estate investment significantly affects the performance of non-financial firms listed at NSE.

**4.3 Effect of fixed income Investment on stock returns****Table 4.6: Correlation analysis**

		Fixed Income Investment
Dividend Per Share	Pearson Correlation	-.0.168
	Sig. (2-tailed)	0.299
	N	40

**Source: Field Data**

Correlation was used to analyze the level of association between dependent variable and the independent variables selected for this study. The results show that there was a negative relationship between dividend per share and fixed income investment of the non-financial firms listed in the Nairobi securities exchange of the Pearson value of ( $r = -0.168$ , Sig. 0.299).

**4.3.1 Regression Analysis****Table 4.7: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Change	Square F Change	Sig. F Change
1	.168 <sup>a</sup>	.028	.003	.19674	.028	1.109	.299

**a. Predictors: (Constant), Fixed Income Investment**

Adjusted R squared which is the coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in table above the value of adjusted R squared was 0.003 an indication that 0.3% variation in the dividend per share of non-financial firms is due to changes in fixed income investment, at 95% confidence interval. This shows that 0.3% changes in dividend per share of non-financial firms could be accounted for by fixed income investment. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a negative relationship between the study variables as shown by -0.168.

**Table 4.8: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.043	1	.043	1.109	.299 <sup>b</sup>
Residual	1.471	38	.039		
Total	1.514	39			

**a. Dependent Variable: Dividend Per Share**

**b. Predictors: (Constant), Fixed Income Investment**

From the ANOVA statistics, the processed data, which is the population parameters, had a significance level of 0.299 which shows that the data is not ideal for making a conclusions on the population's parameter as the value of significance (p-value ) is more than 5%. The significance value was more than 0.05, an indication that the model was not statistically significant.

**Table 4.9: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.257	0.036		7.127	.000
Fixed Income Investment	- 4.600E- 009	0.000	-0.168	-1.053	0.299

**Source : Field Data****a. Dependent Variable: Dividend Per Share**

At 5% level of significance and 95% confidence level, fixed income investment had a 0.299 *p* value. This shows that fixed income investment insignificantly affects the dividend per share hence the value of the firm of non-financial firms listed at NSE.

**4.4 Effect of capital expenditure investment on stock returns****Table 4.10: Correlations**

		Capital Expenditure Investment
	Pearson Correlation	0.838*
Dividend Per Share	Sig. (2-tailed)	0.013
	N	40

**Source: Field Data**

Correlation was used to analyze the level of association between dependent variable and the independent variables selected for this study. The results show that there was a positive relationship between dividend per share and capital expenditure investment of the non-financial firms listed in the Nairobi securities exchange of the Pearson value of ( $r= 0.838$ , Sig. 0.013).

**4.4.1 Regression Analysis****Table 4.11: Model Summary**

Model	R	R Square	Change Statistics				
			Adjusted R Square	Std. Error of Estimate	R Square Change	F Change	Sig. F Change
1	0.838 <sup>a</sup>	0.70	0.678	0.18398	0.150	6.723	0.013

**Source : Field Data****a. Predictors: (Constant), Capital Expenditure Investment**

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in table above the value of adjusted R squared was 0.678 an indication that a variation of 67.8% on the dividend per share of non-financial firms is due to changes in capital expenditure investment, at 95% confidence interval. This shows that 67.8% changes in dividend per share of non-financial firms could be accounted for by capital expenditure investment. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between the study variables as shown by 0.838, which means that capital expenditure investments can be relied upon in order to maximize stock returns and hence the value of the firm

**Table 4.12: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.228	1	.228	6.723	.013 <sup>b</sup>
Residual	1.286	38	.034		
Total	1.514	39			

**a. Dependent Variable: Dividend Per Share**

**b. Predictors: (Constant), Capital Expenditure Investment**

From the ANOVA statistics, the processed data, which is the population parameters, had a significance level of 0.013 which shows that the data is ideal for making a conclusions on the population's parameter as the value of significance (p-value ) is less than 5%. The significance value was less than 0.05, an indication that the model was statistically significant.

**Table 4.13: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	0.281	0.034		8.360	0.000
Capital Expenditure Investment	6.556E011	0.000	0.388	2.593	0.013

**Source: Field Data**

**Dependent Variable: Dividend Per Share**

At 5% level of significance and 95% confidence level, capital expenditure investment had a 0.013  $p$  value. This shows that fixed income investment significantly affects the stock returns of non-financial firms listed at NSE.

#### **4.5 Interpretation of the Findings**

The study established the following regression analysis to determine the effect of capital investment on stock returns among non-financial listed companies at NSE, Kenya.

$$Y_{(it)} = 0.185 + 4.187 X_{1(it)} - 4.60 X_{2(it)} + 6.55 X_{3(it)} + 0.035$$

From the regression analysis, the study found that there was a positive relationship between real estate investment trust and dividends per share, negative relationship between fixed income investment and dividends per share, and a positive relationship between capital expenditure investment and dividends per share of non-financial firms listed in Nairobi security exchange. The findings of the study concur with McConnell and Muscarella (1985) who indicated that announcements of increase in planned capital expenditure investments are generally associated with significantly positive excess stock returns. They found that on average, the stock market reacts positively to announcements of increases in planned capital expenditures and negatively to decreases in planned capital expenditures. This view is supported by Woolridge (1988) who observed that the current literature which is mostly focused on managerial behavior in advanced economies, reports evidence that shareholder wealth is positively affected when firms make capital spending decisions. Woolridge (1988) further reports positive stock price reaction to a variety of long-term strategic investments such as joint ventures, plant and 16 equipment purchases, new product introductions, and research and development expenditures. The study also concurs with a study by Machel (2013) investigating the effect of bond issues on the stock price performance of firms listed at the Nairobi Securities Exchange further found that bond issues do not have a significantly positive effect on the stock prices of issuing firms. Findings by Machel (2013) and Buigut *et al* in a way supported earlier findings by Gebhardt *et al* (2005) that bonds cannot evolve independently of equities in essence saying that stock return is independent of fixed income investments. The study also concurs with study by Lee and Stevenson (2004) .Through their study that, over both different time horizons and holding periods, REITs does play a significant role on companies' portfolios and hence stock returns.

## CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS.

### 5.1 Introduction

This section presents a summary and the conclusions of this research and recommendations for the study. It as well indicates the limitations of the paper and suggestions concerning new study.

### 5.2 Summary

Capital investments are the major investments undertaken by corporates and therefore investigating its effect on the stock returns is inevitable. Therefore, the purpose of this paper is to contribute to the literature that might result to further development in this sector by investigating the effect, if any, that capital investments have on the stock returns of the non-financial firms listed in Nairobi security exchange. Quantitative data was entered into Statistical Packages for Social Scientists (SPSS Version 20.0). Analysis was, then, based on descriptive statistics. Multiple regression analysis was used to establish the effect of capital investment on stock returns.

The first objective of the study was to establish the effect of real estate investment on stock returns. Based on the linear regression model, the study established a positive relationship between real estate investment and dividends per share (*coeff* =4.187, *p*=.165). Each unit rise in real estate investment increases dividends per share by a factor of 4.187. An  $R^2$  of 0.82 indicates 82% of variation in dividends per share is attributed to real estate investment trusts

The second objective of the study was to establish the effect of fixed income investment on dividends per share. Based on the regression analysis, the study established a negative relationship between fixed income investment and stock returns (*coeff* =-4.60, *p*=0.000). Every unit decrease in fixed income investment leads to a reduction in dividends per share by a factor of - 4.60. An  $R^2$  of 0.03 indicates 0.03 variation in stock return is attributed fixed income investment.

The last but not least objective of this study was to establish the effect of capital expenditure investment on stock returns and based on the regression results, it was found that there exist a positive relationship between capital expenditure investment and stock

returns ( $coeff = 6.55$   $p=0.041$ ). Every unit increase in capital expenditure investment triggers a spike in stock returns by a factor of 6.55). An  $R^2$  of 0.678 indicates that 67.8% variation in dividend per share is attributed to capital expenditure investment.

### **5.3 Conclusions**

The study findings revealed that there is significant connection existing between real estate investment trusts and stock returns, insignificant relationship between fixed income investments and stock returns and significant relationship between capital expenditure investments and stock returns of non-financial firms listed at the NSE. The study therefore concludes that real estate investments trust had the greatest effect on stock returns, consequently capital expenditure investments have significant effect on the stock returns and on the other hand fixed income investments had the least effect on stock returns, of non-financial firms listed in the NSE.

### **5.4 Recommendations**

Based on the research findings the study concluded that real estate investment trust had significant impact on stock returns of listed non-financial firms, It therefore recommends that the management of non- financial firms should increase significantly the investment in real estate investment trusts in order to maximize the stock returns and hence the value of the firm .

The study also concluded that fixed income investment had an insignificant relation with stock returns. To exploit the potential that the fixed income investment could attain, it would be wise for targeted interventions to be undertaken to encourage high stock returns, further recommendation would be, that the management of non-financial firms should reduce significantly the level of fixed income investments to ensure that they do not affect stock returns hence reduction in the value of the firm.

In regards to capital expenditure investments, it was concluded that capital expenditure investments have significant effect on the stock returns, hence consideration must be taken to ensure that, if at any given time the assets are financed by borrowed funds, the returns must be sufficient enough to cover the cost of the related borrowing and still provide a return to the stockholders. Failure to do this, would lead to an erosion of reserves in servicing debts hence financial distress due to high financial risks. This would

contribute to zero or negative stock returns to stockholders if not well managed and mitigated.

### **5.5 Limitations of the Study**

This study put focus on non-financial companies listed at the NSE thus the findings are limited to the targeted non-financial firms and may not be applied to all non-financial firms since they were not the focus of this study. In addition, the findings are limited to the considered research variables, which include real estate investment, fixed income investment, capital expenditure investment and stock returns of the non-financial firms. Finally, the findings are applicable within the research period, which was considered by the study.

### **5.6 Suggestion for Further Research**

The model summary results established that the considered variables only explained 82% and 67.8% respectively, of the variation in stock returns of non-financial firms. This indicates that there are factors, which affect stock returns of non-financial firms at the NSE. Finally, the study recommends a further research on the effects of fixed income investment on stock returns of non-financial firms listed at NSE. The study recommends an additional research of the effect of capital expenditure investment on stock returns on non-financial firms listed at NSE with much focus on the best financing criteria which would not increase the finance risk of the firm.

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## APPENDECES

### Appendix I: Data Collection Sheet

<b>Year</b>	<b>Firm</b>	<b>Real estate investment trusts</b>	<b>Fixed income investment</b>	<b>Capital expenditure investments</b>	<b>Dividends per share</b>
2011					
2012					
2013					
2014					
2015					