

**FACTORS AFFECTING INVESTMENT DECISIONS AMONG LISTED FIRMS IN  
THE NAIROBI SECURITIES EXCHANGE**

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KENYA METHODIST UNIVERSITY**

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## DECLARATION

This thesis is my original work and has not been presented for a degree in any other university or for any other award.

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This thesis has been submitted for examination with my approval as the university Supervisor.

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## **DEDICATION**

To the Almighty God for seeing me through, to my parents for the moral support they provided me throughout my academic journey. A special appreciation goes to Dr. Timothy Brown and family for all the supports accorded me. I also wish to dedicate this research to Raja Kaul, Josephine Worzi, Alvin Worzi, Benetor Worzie, Princess Worzie, Tim Worzie, Dakar Johnson, Korpo Johnson, and my late brother Robert Worzie.

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## **ABSTRACT**

Making effective and well-informed investment decisions cannot be emphasized enough because many reasons that are responsible for a firm's achievement or failure are mostly attributed to the quality of decisions made. This is because when incorrect investment decisions are executed, they may be unchangeable, and if the firm continues and reverses them the outcomes may result in bigger losses. Therefore, this is the reason that this research sought to investigate factors that are affecting investment decisions among listed firms in the NSE. The researcher adopted the following factors: financial market information, investment risk, investor's financial knowledge, and investment profitability to establish their effects on investment decision-making. The study adopted a descriptive research survey design and targeted 178 managers in all the listed firms listed on the NSE. For sampling, purposive and stratified sampling methods were employed in this study and a questionnaire was used as the research instrument to collect data. For analysis, descriptive and inferential statistics were used to analyze data collected from the field. The Statistical Package for Social Sciences (SPSS 23.0) helped to categorize results gathered and presented using tables. Effects of investment risk were found to be statistically significant, while financial market information also had a strong positive effect on investment decisions. Both investor's financial knowledge and investment profitability had strong positive effects on investment decisions. From the results, it can be concluded that financial market information, investment risk, investment profitability, and investor's financial knowledge (being the research variables) significantly affect investment decisions of firms listed on the NSE. It is recommended that for investment managers to succeed in their investment activities, they must cautiously examine those factors that affect investment decisions as identified in this study. Investor's financial knowledge is particularly important for making better investment decisions because the ability to analyze and interpret the market indicators and economic variables is critical to a firm's growth and success.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

<b>AIMS</b>	Alternative Investment Market Segment
<b>CAPM</b>	Capital Asset Pricing Model
<b>CMA</b>	Capital Market Authority
<b>EMH</b>	Efficient Market Hypothesis
<b>IECS</b>	International Economic Conference of Sibiu
<b>KeMU</b>	Kenya Methodist University
<b>MIMS</b>	Main Investment Market Segment
<b>MPT</b>	Modern Portfolio Theory
<b>NACOSTI</b>	National Commission for Science Technology and Innovation
<b>NSE</b>	Nairobi Security Exchange
<b>R&amp;D</b>	Research & Development
<b>ROA</b>	Return on Asset
<b>ROE</b>	Return on Equity
<b>ROI</b>	Return on Investment

# CHAPTER ONE

## INTRODUCTION

### **1.1 Background of the Study**

Baker and Noinger (2010) opined that investment decision-making has become multifaceted and dynamic than ever before. Therefore, effective investment decisions are vastly correlated with the level of an investor's financial knowledge and skill. Financial knowledge refers to the scope to which an individual understand the basic financial concepts, which includes the confidence and the ability to make a range of investments both short and long term whereas keeping in mind the consistently changing nature of the economic environments (Nye et al., 2013).

The decision to invest typically starts with determining the required rate of return or the minimum return expected on a given investment. Most investments have listed market prices and expected cash flows. An investor then forecasts the amount expected for a given investment to establish if the market price is adding up with the intrinsic worth (Reilly & Brown, 2011). Usually, investors would decide to invest or not after a complete analysis of the investment proposal. A significant factor to consider when making this decision is determining the level of risk that is associated with the given investment project. This risk is present because it is unknown to investors whether the amount of capital invested will be recovered and that profits will be earned (Avram et al., 2009).

A tradeoff is an essential finance principle that exists between risk and return which is crucial for making sound investment choices. Simply, the amount that is expected as return on investment relies on the level of risk incurred. Nye et al. (2013) infers that return is an important factor that is directly linked to the final measures of an investment project. The decision to invest is usually a daunting process of action that involves identifying what to invest, analyzing risk, assessing future performance, and deciding whether to commit or not

depending on some standard requirements adopted at a company level (Baker & Filbeck, 2013).

An investment plan is an important component to consider when deciding to invest and can be hindered by several factors; some of the organizational factors which affect an investment plan include the size of a firm. Buonanno (2005) strongly debated the significance of this factor with his associates when conducting an investment plan. The researcher held that different investment strategies should be employed in different industries and firms. The proponent added that there should be a correlation between the size of the organization and the total number of firms that conduct a similar investment plan. Lastly, the researcher argued that there should be senior management backing which is an important factor that helps with the implementation of a successful investment plan.

According to the International Economic Conference of Sibiu (2013), the decision to invest is generally as a result of an investor's prior earning experience and the prospects of profit opportunities. Investment decision-making is typically an uphill battle for investors, particularly in this changing environment where there are a variety of options to choose from. These decisions should be made collectively and not by relying on available assets and sophisticated financial models only. Investors must have the right information and remain focused if they are to achieve the desired goals (Farooq & Sajid, 2015).

In the United Kingdom, Souza and Aste (2019) researched the composition of financial market information on social-media and the ways it can be used to effectively predict investment results. This was done by putting together financial information found in the past with sentimental social-media information based on an experiment. The findings indicated that the views on social media are less reliable compared to the financial market composition. The study further indicated that financial market composition offered greater performance

when equated to the challenges of forecasting social view edifice using the available financial information gathered.

Hung et al. (2010) investigated risk disclosure and investment choices in the US and revealed that risk information, for the most part, affects an individual's confidence and his views on risk. The proponents argued that the correlation between these and the change of behavior was found to have a weak correlation. The proponents established that there is little indication that the provision of this information otherwise benefits or hurts individuals who have a less financial education. The researchers concluded that the disclosure of risk information proposed an important tradeoff. In the case of summary risk-ratings, it was observed found to be in the consumers' favor, but was also the least straightforward to provide, requiring an explicit and direct formula.

Osabutey and Okoro (2015) researched the influence of political risk and foreign direct investment in Africa. They identified various elements of political risk and analyzed their impacts on the inflows of FDI into the Nigerian communications sector for the period between the years 2002 – 2011. The findings revealed that minimizing political risk by people in authority brought about an increase in the FDI net inflows into the Nigerian communications industry.

In Zambia, Kefela (2010) discovered that investor's financial knowledge is strongly related to self-beneficial financial performance. Thus financial knowledge is crucial for making sound investment decisions and making the right choices. The researcher argued that financial education should be taught in schools including the basics since the lack of knowledge of financial principles and concepts would lead to the making of uninformed financial decisions. In the words of Kefela, individuals who have little financial educations are more likely to

face challenges with incremental debt, high cost of mortgages and lack of savings and are therefore more likely to make poor investment decisions.

In Kenya, Makori and Jagongo (2013) investigated the correlation which exists between working capital management and profitability using survey data of listed firms on the NSE between the years 2003 – 2012. Their findings showed a strong and significant relationship between what the firms earn in return, the period of inventory, and disbursement. Nevertheless, the researchers discovered opposing relationships between profitability, the time it took for accounts receivable and also the period for converting investment into inventory. The researchers concluded that the increase in sales, the scope and size of a company and fiscal leverage profoundly influence firms' profitability.

### **1.1.1 Investment Decisions**

The decision to invest usually involves a large sum of capital. These decisions cannot be made by managers alone they require the approval of the board of directors and key players in a firm. Accountants and finance managers are particularly important in the decision making process because they determine the amount of capital required and the time it takes for a give investment project to mature using various decision making models. These models are centered on cash flows that are expected on a given investment project. The decision about investment horizon typically takes several years because the time value of money is an important characteristic of management consideration (Magni, 2009).

Obamuyi (2013) researched the various aspects that impact the decision-making process of investors and how these aspects correlate with the investors' socio-economic features in the NCM or the Nigeria Capital Market. The study covered a range of investors using a convenient sampling technique to gather information from a population of 297 participants using a questionnaire that was reviewed. The findings indicated that the most important elements that motivated investors' investment decisions in Nigeria included the preceding

performance of the firm's stock, expected stock, dividend policy, and corporate earnings, and lastly, get-rich-quick during the time of the research.

Omokhomion et al. (2018) examined ways in which firms and corporations govern themselves and the levels of investment decision-making in the real estate sector. The study found that firms with a strong corporate governance framework will have managers make informed investment decisions that are paralleled with shareholder's goals, leading to better performance. The researchers revealed that investment decisions are carried out through a thorough analysis of various influences regardless of the different information available that validates the needs and relationality to invest taking into account the risk associated with the decision-making process.

A research on the analysis of decision making in the stock investment by Yuniningsih et al. (2017) concluded that investors will be willing to take more risks called risk seekers if they expect more in return. The risk seekers tend to hold for a lengthy period or could decide not to sell their shares in spite of the drop in the stock prices from the previous purchase. This is because selling shares when stock prices are lower result into making losses. The way to avoid losses is simply not selling the shares when prices are dropped as investors hope that the stock prices will ultimately increase in the future. Another reason is that the risk seekers have feelings of shame because the loss will demonstrate their incompetence and weakness in making adequate stock investments.

Tewelde (2008) showed that a well-planned investment strategy is important for generating shareholders' value and must be assessed both in the appropriate context and using sound analytical tools. Whether the decision demands the commitment of firm's resources to new environment, research, and research & development (R&D), marketing projects, deployment of further working capital, acquisition of new facilitates, investment in new project, etc., and

a monetary trade-off must be made between the available resources employed now so that expectation of future rewards can be attained.

A study on investment decision-making that is characterized by a high level of risk and uncertainty by Hallegatte et al. (2012) discovered that investment decision making has become difficult for any diverse group of investors with different investment goals and world views. The existence of a risk that linked to climate change further challenges the decision-making structure by questioning the strength of all supposedly the best results. Jagongo and Mutswenje (2014) also observed some key features that trigger individual investment decision-making at the NSE, which are as follows: the firm history and reputation over time, what the firm amounts to in that industry, the amount the company is expected to earn, incomes and situations of statement, previous performance of companies' stock, quoted price per share, the condition of the economy, and the anticipated amount in the form of dividends.

In an economic theory (decision analysis), it is argued that the process of making investment decisions has both objective and subjective components. In many cases, investments have lesser or greater risks. Risk is usually subjective and perceived by different individuals and involved mental and emotional aspects to it. Neuro-economic evidence proves that the mental and emotional influences on making investment decisions may have an informative and supportive role in ways investment decisions are made (Mărcuță et al., 2013).

### **1.1.2 Profile of Nairobi Securities Exchange**

The Nairobi Securities Exchange (NSE) having registered and licensed under the Societies Act of Kenya 1954, the association was initially made voluntarily of individuals known as stockbrokers, had the aspiration of developing the securities market and putting in measures to regulate and facilitate the trading activities in Kenya. The Nairobi Securities Exchange



functions under the authority and supervision of the Capital Markets Authority of Kenya (CMA).

The NSE plays a significant role in the development of the Kenyan economy by mobilizing domestic or internal savings and allocating financial resources from savers to users of funds. These kinds of exchanges have made it possible for many Kenyans and the world at large to participate and own shares rather than being spectators in this growing economy (Kimeu et al., 2016).

The NSE is essentially categorized into three distinct market fragments: the Main Investment Market fragment or the MIMS, the Alternative Investment Market fragment or the AIMS, and the Fixed Income Market fragment or the FIMS as per the Nairobi Securities Exchange handbook 2009. Sectors quoted in the NSE include the following: technologies, automobile accessories, insurance, banking, agriculture, commercial services, investment, manufacturing, and joint ventures.

To maximize shareholders' wealth at the NSE, companies invest in a range of assets that earn them the maximum return possible – thereby minimizing risks. Experienced fund managers are employed to make decisions as relates to investment activities. These individuals are responsible for managing a large sum of the fund in assets on behalf of their employers. The financial performance of investment companies generally depends on the choices of asset classes selected considering the market forces (Aduda et al., 2012).

## **1.2 Statement of the Problem**

In the classical economic theory, it suggests that investors (both individual and intuitional) are rational and capable. Therefore, investors' shared similar characteristics such as having the same options, perfect knowledge of the financial market, and an understanding of the outcomes of their decisions (Maria, 2019). Financial markets are assumed to be efficient and proficient. Technical or fundamental analysis cannot guarantee the possibilities of an investor

earning more than what would be earned by holding arbitrarily selected stocks of assets with almost the same risk levels (Kamuti & Omwenga, 2017).

The Nairobi Securities Exchange has provided major incentives to listed firms such as the expansion of the scope of foreign investment, the introduction of incentives for capital markets by the government, the facilitation of tax-free capital funds, the exclusion of capital gains tax, and licensing of listed companies to improve market liquidity favoring investments. In spite of this, individual investors have been cautious of investing in them – thought-provoking the sentiment that improved market performance attracts new investments. As a result, the obvious candidates into these investment grids are corporates and high net worth individuals.

Related research conducted in Kenya so far includes the following: Karanja (2007) investigated the risk-minimizing portfolio at the NSE; Amisi (2012) examined the effect of financial education and investment decisions made by pension fund managers at the Nairobi Securities Exchange; Kamwaro (2013) established factors that impact portfolio expansion on financial performance of investment firms listed on the NSE; Brigham (1999) investigated the CSR or the social corporate responsibility and the performance of firms investment portfolio at the NSE, and Karanja (2007) examined the factors influencing investment companies portfolio choice at the NSE.

The majority of past research have mostly considered developed countries, especially in Europe and the United States. Those studies which have taken place in Kenya have mostly paid attention to the behavioral factors affecting investor decisions. However, to the researcher's understanding, no studies have investigated the factors that are affecting investment decisions among listed firms in the NSE. Therefore, this research sought to fill the gaps by investigating these factors.

### **1.3 General Objective**

To investigate the factors that are affecting investment decisions among listed firms in the NSE

#### **1.3.1 Specific Objectives**

The specific objectives of this study included the following:

- i. To assess the extent to which financial market information affects investment decisions among listed firms in the NSE
- ii. To analyze the extent to which investment risk affects investment decisions among listed firms in the NSE
- iii. To establish the extent to which investment profitability affects investment decisions among listed firms in the NSE
- iv. To find out the extent to which investor's financial knowledge affects investment decisions among listed firms in the NSE

### **1.4 Research Hypothesis**

The following hypotheses below were tested.

**H<sub>01</sub>** Financial-market information has no statistically significant effect on investment decisions among listed firms in the NSE

**H<sub>02</sub>** Investment risk has no statistically significant effect on investment decisions among listed firms in the NSE

**H<sub>03</sub>** Investment profitability has no statistically significant effect on investment decisions among listed firms in the NSE

**H<sub>04</sub>** Investor's financial knowledge has no statistically significant effect on investment decisions among listed firms in the NSE

## **1.5 Significance of the Study**

The outcomes of this research would enable investment firms, researchers, policymakers, shareholders, financial managers, and investors to develop appropriate strategies that would help them in making smart investment decisions to minimize risks thereby maximize investment returns.

### **1.5.1 Investment Firms and Finance Officers**

The study will give investment firms and finance practitioners a broader understanding of investment decisions that trigger positive investment returns. This will compel them to arrive at well-thought-out competitive stratagems that will help them achieve investment objectives and retain a competitive advantage over their rivals.

### **1.5.2 Researchers**

Research and Development (R&D) plays a critical part in all financial institution or economy. The results of this research would help emerging scholars and academics who would study related subjects. Therefore, it formulates a foundation for future research. Financial professionals and experts research market performance to acquire reliable information that would enable them to offer appropriate advice when deciding on future investment. The research findings will also help future researchers in terms of understanding the various factors that affect investment decision-making.

### **1.5.3 Policymakers**

The study will assist policymakers across all sectors (public and private) to identify the best investment strategies towards achieving investments that produce the highest returns possible. Also, managers in state establishments may learn these important investment strategies that are meant to facilitate and maintain firms' performance as well as managing national resources for greater benefits to societies at large. Moreover, the study will be

beneficial to the CMA as it will establish the best investment practices and strategies for the investment fund managers, shareholders, companies and the Kenyan government.

#### **1.5.4 Shareholders**

The study will provide information regarding decisions made by managers to maximize shareholders' returns. Most investment firms pay timely dividends to shareholders based on the performance recorded in the previous financial year of the company, which varies based on what was contributed by each individual proportionately to determine fair-shares. The earnings shortfalls are usually factors that lead to falling of investment returns.

#### **1.6 Scope of the Study**

The reach of this study included population, time, geography, and limitations. The researcher focused on all the firms categorized on the NSE. Nairobi County was particularly selected for this research because the majority of listed firms in Kenya have their head offices situated in Nairobi County. Data collected was from the firms' head offices.

The study analyzed how investors approach investment decisions. The research concentrated on financial market information, investment risk, investment profitability, and investors' financial knowledge. Questionnaires, as an instrument, were employed to gather research data. The scope of this study emphasized the years from 2011 – 2018.

#### **1.7 Definitions of Key Terms**

Terminologies used in this study are defined as follows:

##### **1.7.1 Investment Decisions**

Investment decisions relate to those decisions initiated or spearheaded by senior-level management and individual investors concerning the projected amount of funds to be employed in a particular investment opportunity. In a simple term, an investment decision is

determining the kind of holdings or stocks that would demand the amount of capital to be invested by fund managers (Coen & Maritan, 2011).

### **1.7.2 Investment Risk**

A risk is a possibility of making a loss or the probability that the amount invested in a given investment project will not be recovered. Brigham (1999) observed that risk lessens when a portfolio of assets is held rather than when an asset is isolated. If an investor can tolerate higher risk, there is an increase in the number of investment paths available to the investor.

### **1.7.3 Financial Market Information**

Financial market information guides individuals on when and when not to purchase and vend financial instruments in the form of securities such as stocks & bonds, merchandises, etc. at a lesser transaction cost that represent the actual market value (Pilbeam, 2018).

### **1.7.4 Investment Profitability**

Profitability is a measure that investigates the number of additional returns generated due to a certain investment. The basis for investment returns generally relies on economic growth. Investment returns are inseparably tied to any financial goal attainment planning function that includes education and retirement objectives. The understanding and projections of future returns are insignificant without the knowledge and understanding of risk (Afonso & Aubyn, 2019).

### **1.7.5 Investor's Financial Knowledge**

Investor's financial knowledge refers to the skills one possesses in making informed and effective investment decisions with the available financial resources. Individuals with financial knowledge can make sound financial choices regarding saving, investing, borrowing, etc. without the understanding of the basic financial principles and concepts, it is impossible to make informed decisions involving financial management (Klapper et al., 2015)

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In this chapter, the researcher builds on the content used in the previous chapter. It primarily comprises the following subtopics: the theoretical framework, empirical reviews, conceptual framework, and operational framework. Works of literature and review of past research done on the same subject are also included. The reviewed literature in this research essentially include material gathered from journal articles, periodicals, seminars, past studies and on the web (google scholars).

#### **2.2 Theoretical Framework**

This research was guided by theories that are central to the factors that are affecting investment decisions among listed firms in the NSE. These theories included the Efficient Markets Hypothesis, the Capital Asset Pricing Model, and the Modern Portfolio Theory as explained below.

##### **2.2.1 The Efficient Market Hypothesis**

The EMH was pioneered by the American economist Fama (1970). This theory postulates that in markets that are highly characterized by information asymmetries (security market), the prices at equilibrium aggregate information efficiently. Therefore, an investor can easily gather all that he desires to know about other information simply from monitoring other prices (Laffont & Maskin, 1990). When the market produces new information, such news spreads rapidly and is immediately captured into the prices of stocks without delay. The technical or the fundamental analysis cannot guarantee the prospects of the investor earning much more than what would normally be attained by holding an arbitrarily selected portfolio of stocks and assets with almost the same risk levels (Kamuti & Omwenga, 2017).

Clarke and Mandelker (2001), explained the three versions of the Efficient Market Hypothesis as categorized by financial researchers. Namely; the weak form efficiency which holds that the current price of the market fully integrates information that is reflected in the past; the semi-strong efficiency holds that the current market price completely integrates the entire publically existing info (historical and current information), and the strong form efficiency holds that the existing price entirely integrates all the existing information in all the sectors both the public and the private, and it is observed to have the past, present and future information reflected in a stock value.

Zargar et al. (2014) revealed that the EMH is closely linked to the idea that is characterized as the random walk. This occurs when price changes in the market represent random departures from the past market prices. For instance, if the flow of information is distorted and cannot be reliable, but still reflected in the security prices, then it is observed that the change in tomorrow's price will mirror tomorrow's news and will be independent of the changes in today's price. According to Malkiel (2003), security prices entirely reflect all the available information hence an average investor who has little information, can still strike a deal that is expected to earn him good return similar to what expert investors would.

The principle of EMH is not perfect; it can be contradicted due to the inefficiencies presented in the security market. The reason behind this is derived from the short-term momentum and the lack of investors reacting to existing news. Lo, et al. (2002) showed that short-term serial correlations cannot be zero, and the movements in single direction help investors decide whether to reject or accept the hypothesis put forward when the prices of the stock mirror the behaviors of a random walk. In the short-run, it is believed that expected returns on stock may start to reveal a positive relationship as proven by previous studies showing a negative correlation over a long period of time.



The fundamental values of security prices systematically digress over-time due to the excitement of an investor, or his lack of confidence in the prices presented in the market. This goes hands-in-hands with the argument put forth by behavioral theory, which holds that individual investors, over-time, fall into a trap of being over-enthusiastic in their abilities to predict future stock prices and potential corporate earnings.

Rao (2005) described the three related concepts of EMH as follows: the allocative-efficiency, which is representative of an efficient market where capital is allocated in ways that benefit the participants involved; the operational-efficiency refers to a typical market scenario where members can transact and in return, receive services at a price that equates to the real price that should be provided to them; and the informational efficiency which holds that the actual market price of shares always reflect its inherent value.

The Efficient Market Hypothesis assumes that profiting from predicting the movements of the price is almost impossible. Price changes occur when there is new information available in the Market. A market that is efficient is said to have prices that adapt quickly and in normal condition, without any biases to the new information. The existing prices of securities and stocks represent information which is available at all time. Therefore, one cannot speculate that stock prices are valued too high or low. The prices of securities or stock, on average, normalized before an investor has time to invest (Clarke et al., 2001).

The EMH had long received universal acceptance. However, the intellectual dominance of the hypothesis had been challenged by critics from the start of the twenty-first century. The critics argued that the prices of stocks are partially analyzing the performance of past stock behavior and using some other valuation metrics to enable future prediction, which is contrary to the principle of the EMH. A number of these critics further argue that the methods

used to predict stocks, and techniques used for stock valuation facilitate investors to profit from the extra risk-adjusted rates of return (Malkiel, 2003).

Investors required information in order to venture into any capital commitments hence the decision to invest cannot be made in isolation. The EMH enables investors to filter different versions of information that facilitates rational decision-making. Guiso and Jappelli (2006), hold that in an effort to avoid the issue of asymmetric information, investors should spend most of their time and resources to acquiring financial information that supports their investment initiative (information improves portfolio performance).

According to Kofarbai and Zubairu (2016), the EMH fully reflects all available information in the stock market. This implies that it is almost impossible to outperform the market on a regular risk-adjusted basis. This is because prices in the market should only respond to new and existing information. The EHM correlates well with this study, particularly the first objective – financial market information. Financial market information guides investors on when to trade financial securities well as other commodities such as gold or agricultural produce and other valuables with low transaction costs, but still reflects the underlined principle of EMH (Pilbeam, 2018). Financial-market information, therefore, enables investors to make informed investment decisions about investment choices at their disposal.

### **2.2.2 Capital Asset Pricing Model**

The CAPM promulgated by Sharpe and Lintner between the years 1964 – 1965 forms the basis for the growth and development of the asset pricing theory. The model is used to gauge the performance of a managed portfolio and determines the capital cost and evaluates the overall value of a firm. The model gives investors the tool and intuition to predict risk satisfyingly and determine the correlation which exists between the expected return and its related risk (Fama & French, 2004).

According to Modigliani and Pogue (1974), the CAPM is centered on primary reasoning and a simple economic principle. It identifies two major types of investment risks; the systematic risk, which is mainly related to the market in general, and the unsystematic risk, which is uniquely precise and specific to firms. Investors can eliminate unsystematic risk by holding a diversified portfolio. Unlike the unsystematic risk, the systematic risk cannot be eliminated even by practically holding all the stocks in the market.

The CPM is fundamentally built on the theory yielded by Harry Markowitz – portfolio choice (1959). The model offers a mathematical promise on asset weights of the mean-variance efficient asset portfolios. The CAPM changes this mathematical statement to forecast risk and what is expected as return on investment by determining an investment collection, which is efficient if the prices are to clear the market of all stocks and securities. Elbannan (2015) explained that the CAPM is generally used to measure the expected rate of return and links it to potential risk. However, evidence from the empirical analysis reveals that misapplications of asset pricing theory plunge its contribution meaningless (Fama & French, 2004).

The simplicity of the CAPM has made it popular and well known with the overall market information taken into consideration. It gives a glance of how the investment return is likely to perform within a short period. However, the model fails to integrate other significant information that may contribute to the return of security. There are more sophisticated models which have been developed already. For example, the Carhart and the Fama-French Model, which integrates several sources of alpha, unlike the CAPM that has only one source (Fama & French, 2004).

Investment firms face risk in about everything they do. Therefore, assessing risk are essential task financial managers perform regularly (Kaplan & Mikes, 2012). The understanding of the different types of risk, their measurement, and the various approaches used to reduce or

compensate risk could mark the difference between success and failure. Risk cannot be avoided entirely; that is why investors must make sure that the expected return justifies the assumed risk. The CAPM guides financial managers in understanding the risk-return relationship, the appraisal of managed portfolio, the determinant of cost of capital, and the evaluation of firms' performance which is relevant to the overall objective of this study.

### **2.2.3 Modern Portfolio Theory**

The MPT was proposed by Markowitz in the year 1952. This theory holds that individual investors are rational and risk-averse. The implication of this is that when faced with two investment opportunities with the same expected returns, an investor would intuitively prefer the one that has fewer risks. Therefore, an investor who desires a higher return must agree to higher risk as a tradeoff. This is usually the same for all shareholders and investors, although different investors would measure the trade-off inversely depending on individuals' appetite for risk. The modern portfolio theory is crucially important for financial decision making in economics and the field of finance and investment.

The main idea behind the MPT is that the selections of assets must not base on the characteristics that are unique to the assets. Instead, investment managers must establish the correlation of each security in a given arrangement of assets. The correlations of assets are crucially significant because they facilitate the construction of an investment portfolio that produces the same expected return and fewer risks. This is not the same for a portfolio of assets that are not correlated (Elton & Gruber, 1997).

Portfolio risk is an important discussion in the (MPT) and it can be reduced by simply holding a portfolio of securities that are not positively linked. Intuition argues that in a bull market (where share prices are rising), investors must seek as many volatilities as possible, which must not be the same for the bear market (where share prices continue to fall). It is

known that investors are more concerned with avoiding losses than seeking profits (Rom & Ferguson, 1994).

The modern portfolio theory has proven useful in the area of asset allocations. Investment managers determine the best portfolio for their firms or clients through an analysis using a set of classes that start with the following: small-cap stocks, long-term bonds, and global stocks. To measure expected returns, risk, and asset correlations, investors typically begin with analyzing firms' past performance represented in the various asset classes. The forecasts are treated as inputs in the so-called mean-variance optimization. An investor then uses some financial modeling techniques to predict the value of an investment portfolio. After predictions are made, an investor then selects the best portfolio that can be implemented using an index or actively managed funds (Fabozzi et al., 2002).

Despite the theoretical importance of the Modern Portfolio Theory, critics have questioned its applicability as an investment tool simply because its model does not support real-world investment decision-making. The calculation used by the MPT in establishing risk, return, and correlation is centered on values that are expected, which indicates that the investment is based on mathematical projection about the future. In the real-life scenario, managers have to make decisions based on past calculations of return, and risk not only the expected (Otuteye & Siddiquee, 2017).

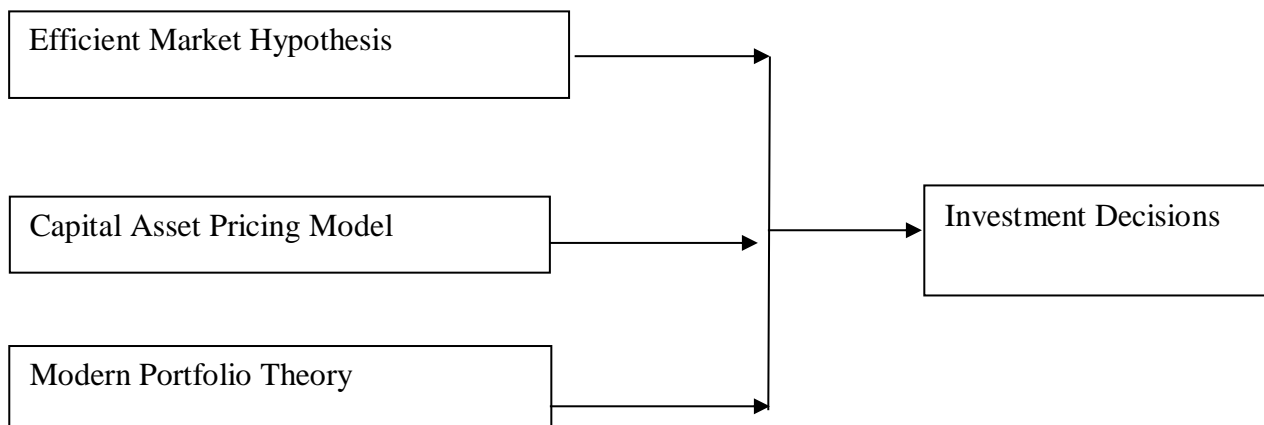
At the core of investment philosophy, every investor would like to attain the highest return possible in the long-term without enduring any extreme short-term market risk. As promulgated by the MPT, an investment manager can hold an individual stock that has a high risk, but when put in one basket with various forms of assets, the entire portfolio is adjusted in ways that lessen potential risks (Maginn et al., 2007).

The modern portfolio theory relates well with the overall objective of this study because the theory guides investors on the importance of diversification of assets as a means of reducing risks to maximize returns. The theory also emphasizes the concept of the tradeoff between risk and return which is important for investment decision-making. As Nofsinger (2017) puts it, if an investor is willing and prepared to incur more risk, the prospects for future returns are equally expected to be high.

### 2.3 Theoretical Framework

**Figure 2.1**

*Theoretical Framework*



**Source: (Author, 2019)**

### 2.4 Empirical Review

#### 2.4.1 Financial Market Information and Investment Decisions

The challenges in the global business environment have increased firms' demand concerning information on financial performance, corporate governance and the prospects of sustainable growth (Frias et al., 2014). Brigham (1999) revealed that companies' annual reporting should be about providing relevant, useful, and reliable financial information to investors, shareholders and concerned parties regarding the financial performance and position of a company as well as its future directions that would help investors make more informed

decisions. Using full data of individual investors, Lawrence (2013) concluded that individual investors invest in companies with full financial disclosure.

To learn more about information in the financial market, predicting economic growth, analyzing the rise in market prices and the rate of exchange, Junttila and Korhonen (2011) found that dividend provides significant information that is used to predict the future performance of firms. This kind of prediction is most accurate during tough economic times; both in the financial market and the general economy. The proponents revealed that this was a new research finding compared to past studies done on the same subject.

Goldstein and Yang (2017) assessed information disclosure in the financial markets in Indonesia. The analysis identified important factors relating to the availability of information in the money market that hamper the quality of the marketplace, the kinds of information provided, the effectiveness and protections of market participants. The study showed that there are some factors to consider when establishing the efficiency in which information is revealed. The researchers revealed several factors that can be presented analytically to understand the financial market and the role of information.

Rosa (2013) investigated the minute of the Federal Open Market Committee which captured useful information about the market through the analysis of asset price deviation, the volume of market transactions in the shortest period during the release of the minute. The study discovered crucial factors in both the precariousness in the values of assets and the volumes of transactions. The scales of these results can be compare to that of the money market outcomes of a macroeconomic production index released from the Institute for Supply Management.

Asongu et al. (2019) analyzed the role information-sharing offices play in minimizing the strength and authority of the market from assessing funds in the African banking sector. The

study analyzed data from 162 banks selected from 42 African countries between the years from 2001 – 2011 of intensive research. Findings showed that the sharing of information from these offices were playing a significant role in minimizing the power of the market to facilitate access to fund in the banking industry in Africa. The study results agreed with Boateng (2016) who argued that offices that share financial information are yet to minimize the strength of the market. According to the researcher, the relationship between market power and information shared from various offices would be effective if there is a secondary appraisal to financial access.

Chiang and Yang (2015) revealed that the relationships between stocks and bonds in the financial market are essentially the issue of time and the occurrence of in-between variations. These relationships were found to have a negative correlation with stock enforceability as analyzed by the conditional adjustment and the deviation of the S&P 500 catalog. On the results of the bond, the study found positive correlations on the part of market improbability. Further evidence inferred that the correlation between stock and bonds are caused by nonpayment or default risk.

According to Hsu et al. (2016), forecasting the financial market and the probability of realizing profit based on some transitional models, which are expressively characterized by the growth and development of the market, the method used to predict it, time factors when making this prediction, and the method used to replicate trading based on models. The researchers found prove against information like the value of indicators being the product of technical analysis. In all, the study confirmed that cutting-edge methods of predictions can be utilized to better estimate changes in the prices of most financial markets and if for any reason these outcomes are withheld in doubts, the existing views remain that the money markets would be efficiently adequate.



Doran et al. (2010) showed that the perception of academics, or professors concerning financial market effectiveness and strategies employed to make better investment decisions, were observed to be dissimilar. The researchers revealed that deciding to invest is mostly triggered by personal factors. Hibbert et al. (2016) put it that even though finance professors seem to know a lot about the investment industry; nevertheless, most of them do not invest. Several studies claim that financial literacy has less to do with investment outcomes (Gathergood, 2012).

To explore more on the factors that influence the decision-making process of an investor, Sachse et al. (2012) revealed several of those factors that include the following: personal finance, unbiased information, approval from finance expert, information generated from financial transactions, and most importantly, the firm's perceived image from the outside environment. Even though all of those factors are crucially important for a firm to succeed, however, some are most significant than others. For instance, accounting information was valued most significant than the rest.

Preis et al. (2013) empirically examined the measuring of trading behavior in the money markets using google drifts. The analysis involved deviation in google search capacities for terminologies that identify finance. The proponents detected signs that may be regarded as the predications of normal market changes. The results indicated that integrating a range of behavioral data groups suggests a good grasp of the ways humans behave generally. The researchers concluded that the new data groups offered presented will improve the understanding of the shared behavior in the world.

Using panel data to investigate the importance of financial market information regarding the prices of shares offered, payments in the form dividends, firms' earning capacity and the value of the total asset of firms listed on the NSE. Nyabundi (2013) showed a strong positive

correlation between the real prices of stock and the payout in the form of dividends, the amount the firms are getting, and the actual value on the balance sheet. The dividend was observed to have possessed more descriptive power when considered the other two (what the firm earns and statement on the balance sheet). Mathuva (2016) learned that the ways in which accounting information is presented in Kenya lack effectiveness. Companies should consider both voluntary and non-voluntary disclosures of financial information on their websites for transparency purposes (Hashim et al., 2014).

#### **2.4.2 Investment Risk and Investment Decisions**

Researchers Sachse et al. (2012) showed that the two ways of mitigating investment risks are by providing enough information about the structure of the financial market and the measuring of risk derived from statistics. The process of identifying the sources of investment risks and treating them in a timely fashion are important for the success of an investment project as much as expected returns are concerned. The proponents argued that providing sufficient information about the risks of various investment proposals would require a thorough understanding of risk itself. Therefore, for an investment to yield a better result, the different kinds of risk must be understood for better risk treatment.

Erkekoglu and Kilicarshan (2016) established whether political risk affects foreign-direct investment inflows to the host country. The study enclosed the years from 2002 – 2012 and collected sample data from 91 countries. The researchers employed various methods of inferential statistics to analyze the collected data. The findings revealed that the rise of political risk, the stability as a risk of politics, the existence of normalcy and the effectiveness of government lead to a decline in the foreign direct investment. However, foreign investment accelerates when goods, people, and services are carried across or exported.

Gupta and Ahmed (2016) revealed that the investment decision-making process of individual investors is generally driven by emotional factors. To establish the impacts of emotional factors when deciding to invest through the acuity of risk, the researchers showed that the most significant setback encountered by fund managers are making those decisions based on rationalities, emotions and gut feelings. The proponents further discovered that an investor's decision-making process depends on how he perceives risk and the motivating factor in making these decisions. The study concluded that investor's decision making is subjective to the quality of information available, and the appetite for taking a risk.

Due to the complexity and scale of risks that companies have to deal with regularly, Verbano and Venturini (2013) examined the two major classifications of risks put forth by academics; the pure risk, which is usually beyond the control of any individuals or managers and it is normally a natural occurrence characterized by accidental events. This type of risk is normally associated with the insurance sector. The second classification of risk is a speculative risk, which affects the future earnings of firms or individuals. They affect individuals' undertakings, typically an investment that has not generated any income.

In an attempt to ascertain whether risks originating from politics affects the amount of funds generated from foreign investment to the countries of the host. Utilizing the twelve categories of political risk directory, which was put together by the country guide, Erkekoglu and Kilicarslan (2016) showed that risk emulating from the political environment is a vital determinant of foreign investment in either the developed or the developing countries. However, it is worth noting that not all that affects political risk also affects foreign investment stocks in the developed and developing nations the same way. As the researchers compared the different outcomes of the various political factors, it was found that since the bombing attacks on the US soil in 2001, risks originating from politics have crucially become an important element of foreign investment inflows.

A recent study carried out to assess investment risk in the energy industry in China (Duan et al., 2018) revealed that the sources of investment risk in the energy sector are both China's effects and the potential reserve. Other important reasons to consider are the ecological limitations and political risk which must also be considered when deciding to invest. The researchers concluded that most major countries in the Middle East and Russia are the ultimate choices for China's energy investment initiatives leveling the prospects of resource and investment atmosphere.

Hellström and Stålnacke (2017) studied investment managers' attitudes towards risk and expected rewards in the form of returns. The researchers observed that investors can speculate risk that is either overestimated or the opposite, but what is certain is that it is difficult to determine the exact measure of risk in whatever methods applied. Therefore, the deviation in what is expected is largely based on answers from questions being asked instead of methods used to attain what is expected. According to Olsen (1997), investment managers share a general idea on the different types of risk identified in investment and other sectors. These discussions usually centered on losses, fear of not achieving the target objectives, issues of management, and general expectations for being in charged.

Hoffmann and Post (2017) sought to establish what investors look for and what they prefer when dealing with the issue of risk and expected return on investments. Utilizing an actual panel discussion with experienced investors, the researchers provided evidence on risk and return as a discussion point and gathered their views on perceptions of risk and thoughts on expected return as a final investment measure. The findings revealed that what initiates investor's beliefs is their positive experience on expected return and it is also negatively obstructed by the ways they perceived risk.

Nguyen et al. (2019) investigated the extent in which one is willing to tolerate investment risk and the perception individuals have when allocating asset that is of high risk along with other variables that constitute the knowledge of finance, the duration of confidence and relationships. In their findings, the issue of risk tolerance had two aspects; direct and indirect correlations when making the decisions to allocate assets that are riskier. As they concluded, the ways in which people perceive investment risk expressively intervenes when dealing with assets that are characterized as high risk. In the case of those investors who avoid risk and those that seek to minimize risk, they are likely to ascertain an investment proposal with fewer risk.

### **2.4.3 Investment Profitability and Investment Decisions**

Popa and Ciobanu (2014) studied the factors that affect small and medium enterprises in Romania between the years 2009 – 2012. The researchers investigated the relationship between firms and profitability. The analysis was significant for the most part and the regression models were valid with a coefficient of determination of 60%. The objective was to find out the factors affecting SMEs' operations and the driving force behind firms' profitability. The results showed that decisions made by management affect the earning prospect of SMEs, especially during the time of economic hardship. The study revealed that SMEs in Romania represent about 99% of the total firms in the country hence contributing to nearly one-half of the county's gross domestic product.

Afrifa and Padachi (2016) researched the alternative investment market and focused on the listed small medium enterprises between the years 2005 – 2010. The proponents examined the maximum level of working capital at which firms maximize profits and also investigated whether changes made in working capital lead to a decrease in firm's profitability. The study showed a dipped between working capital employed and profit made by firms. Further

analysis revealed that for firms to maximize profits, working capital employed must be at equilibrium level.

Research by Gill et al. (2010) investigated the correlation which exists between working capital management and investment returns. The researchers explored 88 North America corporations between the years 2005 – 2007. The results showed a strong positive correlation between cash conversion cycle and profit earns as established by the operating turnover. The proponents concluded that for firms to earn the desired profit, managers should properly manage the cash conversion circle. This can be done by recording all accounts receivables at their highest hence profit earning is only possible if working capital is put into proper use.

On their journey to understand more about the effects profitability has on companies in the Philippines, Sucuahi and Cambarihan (2016) collected a sample of 86 different companies and analyzed their yearly financial reports in 2014, on the nation's securities Exchange to achieve the research objective. Using inferential statistics to ascertain the impact which exists between the study variables, the researchers emphatically concluded that having a good firm's value attracts more investors.

Calcagnini et al. (2015) studied factors of market limitations, the output of the firms in terms of profits and capital outflows in various investment projects. The results of the study showed that the rules of market hinder firms' profitability. Moreover, the growth of financial market generates an increasing number of competitors, which affect a firm's profitability. The study concluded that the development of a financial market suggests better access to funds through credit which may be used to fund future investment projects.

Babalola (2012) investigated the implication of social corporate responsibility and the impact it has on a firm's growth and expected returns in the form of profit. The research adopted the ordinary least-square method to analyze raw data gathered from ten yearly financial reports

between the years 1999 – 2008. The analysis showed that the participating companies invested fractions of their earnings towards corporate social responsibility. As the study concluded, companies that are earning a lot more hardly give back to the society that made them hence their perpetual existence is unlikely.

Wasiuzzaman (2015) examined 160 samples from companies in the manufacturing industries in Asia, Malaysia. The study employed a statistical approach to attain the research objective. The findings presented an opposing relationship between what the firms employed as working capital and the amount earned in profit. Apart from the undesirable connection, other links widely presented expectations consistent with the globally accepted finance model. The study revealed that the relationship between working capital and profitability may rely on much bigger factors such as the economic dogmas considered.

A panel data of 431 Spanish industrial companies was examined between the years 2000 – 2006 by Kotlar et al. (2014). The researchers revealed that the crucial importance of profitability and control objectives follow a linear progression in family businesses. They further showed that businesses owned by families have more supplier bargaining influence once they are aware of their future profit margin. However, other reference indicators such as control and investment decisions formed a crucial part in making their businesses more successful.

Kodongo et al. (2015), explored the concept of leverage and its relationship with profitability of firms listed on the NSE. The researchers examined the yearly financial reports from 2002–2011. The study employed several statistical methods to analyze the available data and they found evidence that leverage both positively and negatively influence firms' profitability in Kenya. The proponents concluded that physical assets, the increase in sales, and the scope of a company are crucially significant for establishing the profitability of a company. For

smaller companies, the researchers concluded that the increase in sales volume and the scope of a company are important indicators for driving the value of companies in Kenya.

Makori and Jagongo (2013) used several methods of inferential and descriptive statistics to examine the existing correlation between firms' venture capital management and profitability in Kenya between the years 2003 – 2012. The results showed a strong correlation between what the firm earns as profit, the length of inventory and the amount payout. The researchers further discovered no relationship between financial return and the time it took for accounts receivable, and the period for converting investment into inventory. The study concluded that the increase in sales, the scope and size of a company, and fiscal leverage significantly influence a firm's profitability.

#### **2.4.4 Investor's Financial Knowledge and Investment Decisions**

Van et al. (2011) used data from 2005 – 2006 to examine the influence of financial knowledge on stock market participation. The analysis constituted information relating to different features of individuals including economic status in terms of wealth and the ability to save. The data set was characteristic of the Dutch population (comprising over 2,000 households). The results showed that the basic economic concepts were lacking among the studied individuals. Hence the knowledge of stocks, bonds, risk diversification and working of financial markets were inadequate. The proponents concluded that individuals who lack the basic financial knowledge are less likely to make any better monetary decisions.

In South Africa, Roberts et al. (2012) researched the level of financial knowledge of South Africans – results of a baseline national survey. They used a sample of 2,972 adult South Africans (16 years and above). The researcher adopted a statistical multivariate regression to analyze the relatedness between the set of variables (dependent and independent). The findings indicated that having control over finances, making effective monetary decisions,



and choosing the right choices of investment had no relationship between men and women as far as financial literacy is concerned. In their conclusion, financial success purely relies on informed individuals who understand the financial environment and can adjust quickly as per market demands.

In Ghana, Mireku (2015) investigated a large number of students on the scope of their financial awareness and literacy. The researcher surveyed 3,932 students from a range of different universities across the nation. Using descriptive and explorative research designs, the study focused on financial awareness between and among students, factors leading to students being financially educated and how students who financially educated go about making financial decisions. The study revealed that financial education and training is lacking among students. To effectively address financial education and literacy, particularly among the university youth in Ghana, the researcher concluded that the intervention of national authority must be called to immediate action.

A Rwandan researcher, Sindambiwe (2014) used a sample size of 126 to explore the financial knowledge of executives and directors of finance through the security market awareness and their involvement in the money market. The study adopted SPSS to analyze the study data. The results showed a strong positive relationship between the directors' knowledge of how the stock market operates and the scope of companies' involvement in the country's stock exchange. Based on these findings, the researcher concluded that the capital market authority should provide awareness on a matter relating to financial education, aiming at larger sectors to maximize stock management among traders and participants.

Gupta and Kaur (2014) examined financial literacy among micro-entrepreneurs in Kangra, Kenya. The proponents employed questionnaires to gather primary and secondary data from the sample consisting of 100 entrepreneurs in the district. Research data which was collected

was analyzed using an excel spreadsheet. The results showed that micro-entrepreneurs in district Kangra were less financially literate as demonstrated by their lack of proper bookkeeping, lack of adequate cash control, lack of discipline to save, and limited knowledge on various products available in the financial market. The study concluded that programs directed to financial education and awareness by the national authority should be decentralized in all the major sectors in the country.

Muchiri (2015) employed a descriptive survey design to study the statistical correlation between financial knowledge of investors in making investment decisions regarding their level of involvement in the stock market. The researcher used a sample of 46 participants, which was chosen from the five stock brokerage firms in Kenya. The collected data was analyzed using mean, median and mode. The findings showed that the decision to invest mainly depends on several economic factors including expected dividends, capital appreciation, affordability of shares, and fluctuations in the market performance. The study concluded that there was a strong correlation between an investor's financial knowledge and the participation in the stock market.

A study carried out by Thomas and Luca (2015) examined three factors including financial awareness of managers, stock of competences and the level of security market participation. The proponents discovered that investors who are highly financially skilled and literate are much more likely to take part in the financial market. Jacobs et al. (2014) showed that the ability to make better and informed financial decisions are directly correlated to investing in funds that are characteristically low-cost. Stolper and Walter (2017) on their study financial education, financial advice, and financial behavior showed that financial education programs must include methods that would save transaction costs and the ability to set financial objectives and goals.

Arianti (2018) employed a questionnaire and a sample of 100 university students to examine the impacts of financial awareness and education, financial performance and behavior, and income on investment. Data were analyzed using various statistical methods including mean, mode, standard deviation, and a computer-based software program (the popular SPSS version 22). The research findings revealed that financial awareness and education had no link with investment decision-making. Regarding financial performance and behavior, and income on investment, both had positive correlations on investment decision-making.

Financial knowledge is an important skill that facilitates individuals to effectively participate in the financial market. The growth and dynamics in the financial market have led to the growing concerns of financial education around the world. Considering the many financial challenges faced by women, it is suggested that one of the brilliant ways of financial literacy education is to target women and men in different approaches and to offer programs that would be unique to both genders in terms of financial needs and behaviors (Hasler & Lusardi, 2017).

## **2.5 Research Gaps**

The review has captured various theories and literature that this study is built upon which are important in explaining factors that affect investment decisions generally. It should be noted, however, that these theories and past studies have not focused on factors that are affecting investment decisions specifically among firms listed in the NSE, hence providing a research gap.

Other research conducted locally includes: Kimeu (2015) examined the impact of portfolio diversification on the financial performance of investment firms listed in the NSE and found that the financial performance of an investment is affected by how it is constructed; Kamuti & Omwenga (2017) researched the factors influencing investment decision-making in the

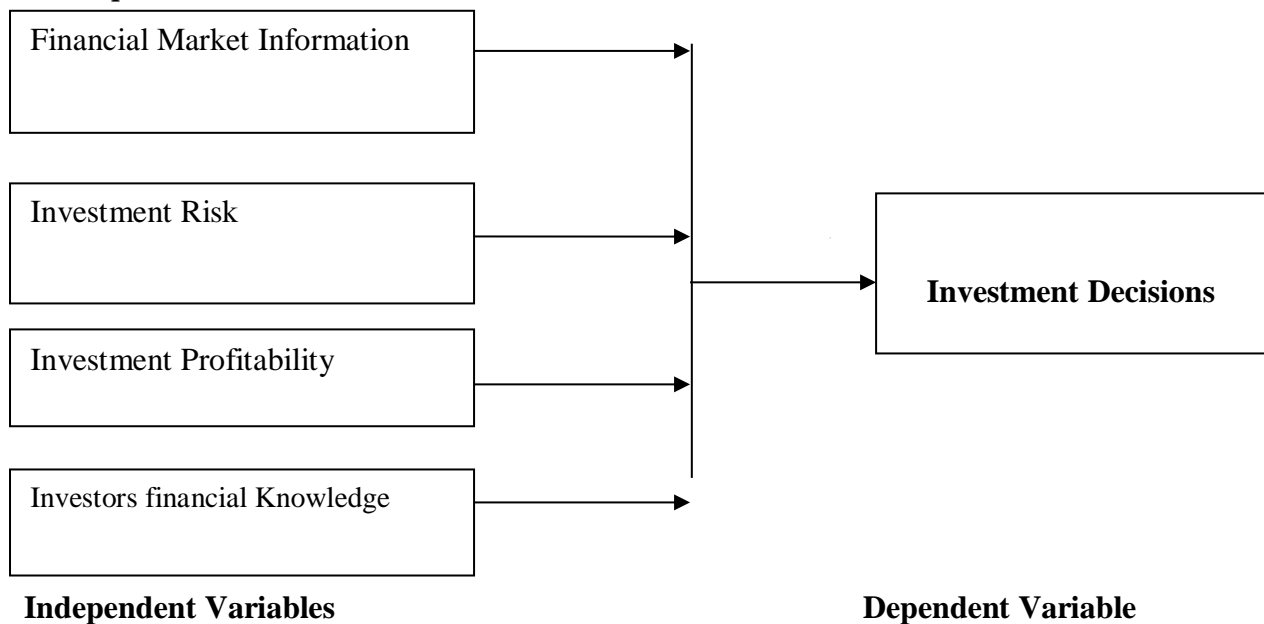
NSE and concluded that firms' financial statements are used effectively by investors at the Nairobi Securities Exchange; Kimeu (2015) studied the correlation between investment diversification options and financial return of firms listed on the NSE and found that investment is by far more than just the selections of stocks; it is about choosing the right asset classes.

## 2.6 Conceptualization

Conceptualization provides shows the relatedness that exists between dependent and independent variables. The independent variables used in this study included the financial knowledge information, investment risk, investment profitability and investor's financial knowledge. The dependent variable is the investment decisions.

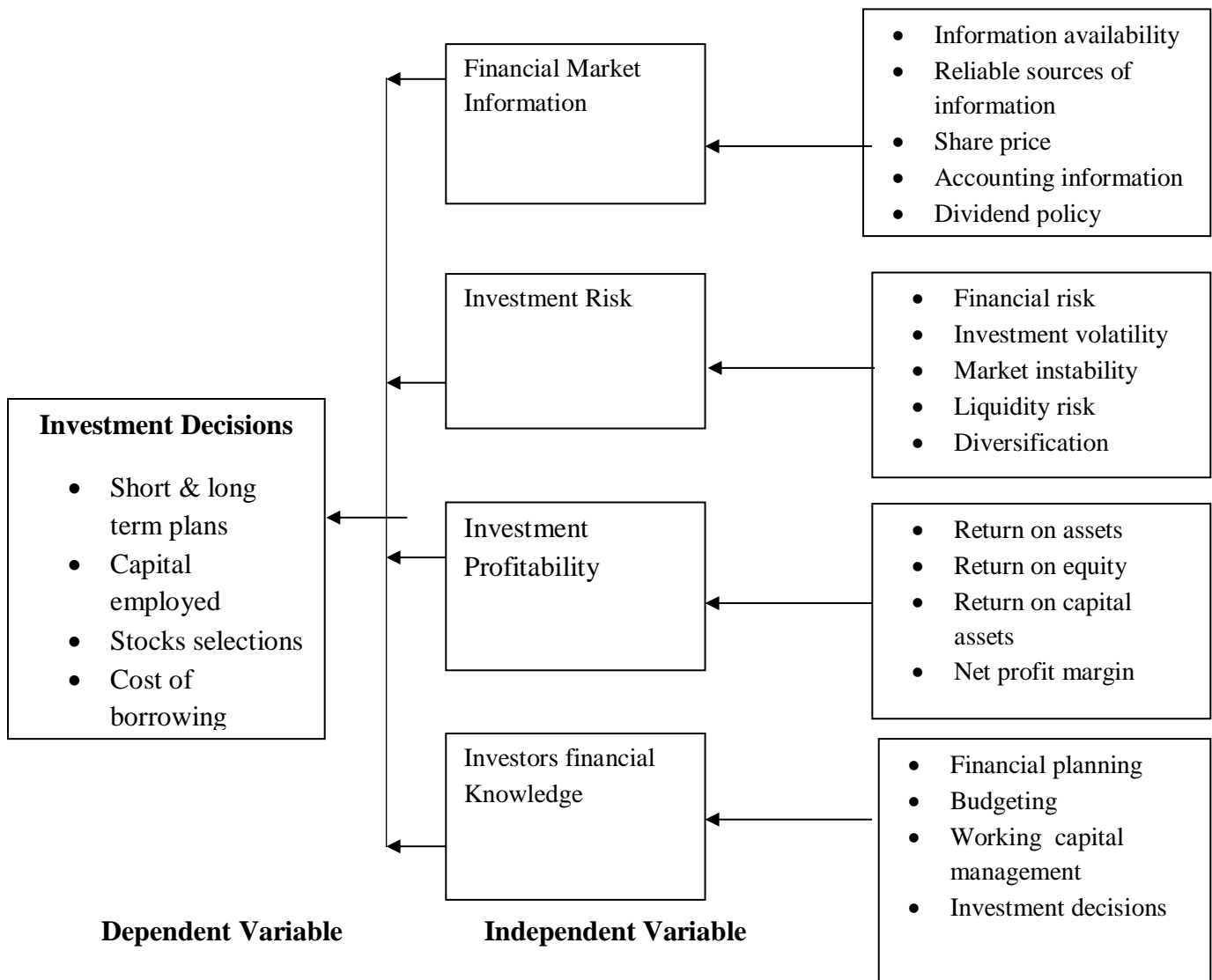
**Figure 2.2**

***Conceptual Framework***



*Source: (Author, 2019)*

**Figure 2.3**  
*Operational Framework*



*Source: (Author, 2019)*

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter provides different methods that can be used to conduct research. Research methodology is simply a manual guide that the researcher uses to conduct a study. It provides methods that applicable to a specific study. It is the scientific principles for planning, organizing, gathering, and finally executing the study (Kumar, 2019). In this study, the approaches used in this study followed the research design, the target population, the sampling procedure, study instrumentation, data analysis and presentation, and ethical considerations.

#### **3.2 Research Design**

Research design is primarily a stratagem for connecting the conceptual research problem to the most important empirical research (VanWyk, 2012). For this research, the researcher used a descriptive research design because it is cost effective as compares to other kinds of designs because enables a researcher to gather larger research data from a group of population that is characteristically larger. This technique is also appropriate for collecting qualitative data, which can be studied numerically. Hence, this design was employed to investigate the factors that are affecting investment decisions among listed firms in the NSE.

#### **3.3 Target Population**

Research population, in statistics, refers to the groupings of individuals, or subjects in which samples are selected from using desired formula. Mbokane (2009) opined that population in research is the sum total of all the subjects, or members that meet given standards, or requirements. The target populations for this study covered the following: the finance directors, the finance managers and the finance officers in the various finance and investment

departments of the 67 firms listed in the NSE. The researcher targeted 178 finance directors, finance managers, and finance officers working in all the 67 firms listed in the NSE. The population is illustrated below.

**Table 3.1**

***Target Population***

<b>Target population (Firms)</b>	<b>No. of firms</b>	<b>Top Manager</b>	<b>Middle Manager</b>	<b>Lower Manager</b>	<b>Target population</b>
Agricultural	6	6	6	6	18
Automobile and accessories	1	1	1	1	3
Banking	12	12	12	14	38
Commercial and Services	13	13	6	13	32
Construction and allied	5	3	2	2	7
Energy and Petroleum	7	6	5	8	19
Insurance	6	6	6	7	19
Investment	5	4	1	5	10
Investment and service	1	1	0	1	2
Manufacturing and allied	8	8	7	6	21
Telecommunication	1	1	1	1	3
Real Estate and investment trust	1	1	1	1	3
Exchange trade funds	1	1	1	1	3
<b>Total</b>	<b>67</b>				<b>178</b>

*Source: (HR Records Firm Listed in NSE, 2019)*

### 3.4 Sampling Procedure

Mugenda (2011) mentioned that sampling is basically a review frame with available persons, events and records that can be examined in a particular way in which a research data can be collected conveniently. The purposive sampling technique was adopted in this study.

The sample size was determined according to the formula presented by Yamane.

$$n = \frac{N}{1+N(e)^2}$$

Whereby:

$N$  represents the total population,  $n$  indicates sample size, and  $e$  represents the level of accuracy.

At 95% confidence level at  $p = 0.05$  and  $N = 178$ .

Sample size  $n = 178 / 1 + 178 (0.05)^2$

Sample size  $n = 123$ .

**Table 3.2**

*Sample Size*

Target Population	Sample Size
Senior level Finance Manager	26
Middle level Finance Manager	26
Lower level Finance Manager	71
<b>Total</b>	<b>123</b>

*Source: Researcher (2019)*

### 3.5 Instrumentation

Research instrument used to gather information on variables of key interests in a systematically and methodically fashion that assists a researcher to answer the research questions or hypotheses, to tests, and to analyze the study results. To achieve this, data collection plays an important part in gathering the needed information. Chenail (2011) emphasized that the instruments used in research to gather data are critically important for both qualitative and quantitative studies. There are different kinds of research instruments that are accessible to the researcher with each having its own merits and demerits.

The study is primary research which employed questionnaires to collect data. This method was thought necessary because the participants, being managers, never had the time for personal interactions or interviews due to their respective busy schedules. The benefit of this method is that a large number of participants can be reached easily at a lower cost. Moreover,



the participants were able to comfortably fill in the questionnaires without being pushed or forced which, in the researcher's view, increases more honest answers to the stated questions since participants' names were not required in the questionnaires.

The structure of the questionnaire was divided into two major sections A and B. Section A focused on demography, i.e. personal information such as age, gender, management position, length of employment and educational level. Section B emphasized the contextual data, which included closed-ended questions that address the research objectives in chapter one. These questions were presented on the five-point scale Likert options as illustrated in the fourth chapter of this study.

### **3.5.1 Pilot Testing**

Pilot studies can be viewed as an investigation designed to find out the feasibility of methods and procedures used in future research. The importance of conducting pilot studies gives a researcher a prior indicator or warning on where the main research proposal could go wrong and identifies those areas that the research procedures or guidelines may not be considered. Pilot studies enable a researcher to establish whether the proposed instruments used satisfy the study objective (Van & Hundley, 2001).

Questionnaires in this study were piloted in the selected companies listed on the NSE in Nairobi County. The pre-testing was administered randomly to ten junior and senior finance officers. Piloting in this study was critical to give signs or warnings on whether carrying out this study was necessary. This technique further helped the researcher to determine whether the independent variables of the study were appropriate. Moreover, the pilot studies assisted the researcher to know whether the participants understood the instructions and what they were being asked about on the questionnaires. Adequate changes and adjustments were made promptly to avoid wasting time and resources.

### **3.5.2 Validity of the Research Instrument**

Validity is essentially concerns with whether the instruments used in the study truly represent the study outcomes. The validity of research is determined by a researcher asking several questions and usually search for answers from past research studies (Golafshani, 2003). There are three types of validity which include the following: the construct validity, which involves finding out the truthfulness of what the researcher hypothesized; the internal validity, which is when the research reveals positive associations between the study variables; lastly, external validity which determines whether the research findings can be generalized in other relevant sectors or groups. The external validity emphasizes the representativeness of the sample if it is viable enough to generalize the entire population.

To ensure the validity of this study, the researcher first carried out pilot testing to establish the study feasibility. Appropriate random sample size was used to represent the study population. Biases and manipulation of data to influence the research findings was strictly avoided at all time. And lastly, questionnaires were re-examined to ensure that questions were not offensive and ambiguous to the participants. This led to more reliable and valid outcomes of the study.

### **3.5.3 Reliability of the Research Instrument**

Reliability means getting consistent results by using an instrument to measure something more than once. In research, reliability is simply the extent to which research methodology produces stable and consistent outcomes and demonstrates a true depiction of the population that is being investigated (Golafshani, 2003). The measure of reliability is of unquestionable importance in both theoretical and applied research because reliability establishes an important step towards ensuring construct validity, i.e., truly measuring what the research claims to measure (Iacobucci & Duhachek, 2003).

For this study to be reliable, the researcher adopted a systematic approach to gather data from the relevant sources. Maintaining an audit trail by precisely detailing the flow and processing of data was needed to guarantee the reliability of the study. With the support of supervisors constantly examining the consistency of the study, the researcher collected data firmly following the prescribed method to ensure reliability. The researcher carefully selected the appropriate sample size and administered pilot testing to establish whether the study was reliable.

### **3.6 Data Analysis and Presentation**

Raw data gathered from the field has to be converted and processed to be a good fit for the intended application. Data analysis helps the researcher to interpret the collected data for decision-making or simply to answer the research questions. Processed data is helpful for obtaining relevant information compared to working with unprocessed data, which is not comprehensive and cannot be otherwise summarized for better presentation (Bloomfield et al., 2016).

In this study, before the processing of the gathered responses, the completed questionnaires were reviewed for completeness and consistency. Content analysis were used to ensure the necessary inferences through interpreting and coding of written and other forms of oral materials gathered from the participants on their views of the factors affecting investment decisions among listed firms in the NSE. Content analysis is a technique employed to convert data with qualitative characteristics into quantitative data which is more useful for statistical analysis.

Responses obtained in this study were grouped into various categories. The mean and the standard deviation was utilized to summarize the study results and regression analysis was also employed to examine the correlation between the study's dependent and independent variables. Excel and other computer-based programs (SPSS version 23.0) were utilized to generate the required information for analysis and presentation. For simplicity and convenience, the outcomes of the study were summarized and presented using tables.

### **3.6.1 Regression Analysis Model**

The research adopted linear regression analysis as the analytical study model to determine which variables had more influence compared to others. The regression model allowed the researcher to confidently determine which factors matter most and how these factors related to each other – a genuine concern for this study. Below is the illustrated formula that was used to determine the existing correlation between the study variables.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \text{ Where;}$$

Y= Represents the dependent variable (investment decisions)

$\alpha$  = Denotes constant and a Y value when all the predictor values ( $X_1$ ,  $X_2$ ,  $X_3$  and  $X_4$ ) are nil.

$\beta_1$ ,  $\beta_2$ ,  $\beta_3$  and  $\beta_4$  = Are constants regression factors representing the state of the independent variables to the dependent variables.

$X_1$ = Financial market Information

$X_2$  = Investment risk

$X_3$  = Firms' profitability

$X_4$  = Investors financial Knowledge

$\varepsilon$  = Error term explains the spread in variables resulting from factors not accounted for.

### **3.7 Ethical Considerations**

Before commencing the fieldwork, a letter of authorization for the study was obtained from Kenya Methodist University and the National Commission for Science Technology and Innovation (NACOSTI). The introduction letter was accompanied by the questionnaires. At all times, the study adhered to confidentiality, anonymity, right of withdrawal and correct data handling procedures. Contribution was made voluntarily. The researcher circumvented activities which could result in physical or emotional harm to the respondents. The researcher further avoided any personal biases and opinions that could undermine the objective of this study. The general objective of the study was revealed to the participants before the participants started answering the questionnaires.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND DISCUSSION**

#### **4.1 Introduction**

This fourth chapter presents the results gathered from the study questionnaires. It further provides characteristics of the responding managers and their beliefs and opinions grounded on the purpose of the research that was to investigate factors that are affecting investment decisions among listed firms in the NSE. Mean and standard deviation were both employed to digest the responses attained from the field and presented using tables.

#### **4.2 Response Rate**

The target population for this study comprised the finance directors, finance managers and finance officers in the various finance and investment departments of the 67 firms listed in the NSE. Overall there were a total of 178 top, middle and lower-level finance managers. From the sample of 123 questionnaires presented to the selected managers, a total of 86 were filled and returned – giving a response rate of 69.91%.

#### **4.3 Reliability Analysis**

The study employed Cronbach's alpha coefficient to establish the consistency of the research instruments. This was instituted by measuring whether certain factors within the parameter measure the same construct validity as expected. Kothari (2012) opined that for research to be reliable and consistent, the alpha value thresholds must be at least 0.7. The below table 4.1 shows that the entire five scales surpassed the 0.7 point of reference. This demonstrates that the instrumentation used in this research was reliable enough for further analysis and to make a conclusion.

**Table 4.1*****Reliability Analysis***

<b>Determinant</b>	<b>No of items</b>	<b>Cronbach's</b>	<b>Verdict</b>
Financial Market Information	5	.734	Reliable
Investment Risk	5	.976	Reliable
Investment Profitability	5	.893	Reliable
Investors' Financial Knowledge	5	.925	Reliable
Investment Decisions	6	.781	Reliable

*Source: Research Data (2019)*

The above Cronbach's Alpha outcomes suggested that the data collection instrument (questionnaire) had consistency because all values presented were all above the benchmark value of 0.7. This confirmed that the instrumentation applied was reliable.

#### **4.4 Personal Information of the Respondents**

The research findings captured personal information of the responding managers concerning gender, age, level of education, lengthy experience in years, and designation in the listed firms on the NSE.

##### **4.4.1 Gender Distribution of the Respondents**

The researcher gauged gender proportion of the responding managers. The outcomes were summarized and presented in table 4.2 below.

**Table 4.2*****Gender of the Respondents***

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	58	67.44
Female	28	32.56
<b>Total</b>	<b>86</b>	<b>100</b>

*Source: Research Data (2019)*

The findings of the research show that the percentage of male response rate was 67.44%, while the percentage of female response rate was 32.56%. This infers that male managers are in the majority in the listed firms on the NSE hence gender disparity is still an issue.

#### 4.4.2 Age Brackets of the Respondents

The study examined the age variation and distribution of the responding managers. Table 4.3 below summarizes the results.

**Table 4.3**

*Age Brackets of the Respondents*

Age brackets	Frequency	Percentage
21-25 years	9	10
26-30 years	36	42
31- 36 years	28	33
37-42 years	5	6
Above 42 years	8	9
<b>Total</b>	<b>86</b>	<b>100</b>

*Source: Research Data (2019)*

The age bracket which was most represented was between the ages of 26 – 30 years were 42%. Those in the age bracket of 31 – 36 years were 33%, while 21 – 25 years were 10%. The age bracket of 37 – 42 years was 6%, and above 42 years were 9%. This implies that the majority of senior management position in the listed firms on the NSE was above thirty years.

#### 4.4.3 Working Experience in the Company

The researcher established the duration and years of work experience of managers in their respective firms. Their responses are summarized and presented in table 4.4 as shown below.



**Table 4.4*****Working Experience in the Company***

<b>Age brackets</b>	<b>Frequency</b>	<b>Percentage</b>
Below 2 years	14	16
2-6 years	46	53
7-10 years	24	28
Above 10 years	2	3
<b>Total</b>	<b>86</b>	<b>100</b>

*Source: Research Data (2019)*

The analysis in table 4.4 suggests that 53% of the responding managers have functioned in their respective firms between 2 and 6 years, 16% of them have worked for their respective firms below 2 years, while 28% of them have worked in their individual firms between 7-10 years, 3% have worked for their individuals firms for above 10 years. Thus the majority of the respondents (84%) have worked over two years which should be long enough to be conversant with factors affecting that are significantly investment decisions among listed firms on the NSE. It is assumed, therefore, that their responses were well-informed and reliable for analysis and make a conclusion.

**4.4.4 Education Level**

The responding managers were asked to stipulate their highest level of education. The results obtained were summarized and presented in table 4.5 below.

**Table 4.5*****Education Level***

<b>Age brackets</b>	<b>Frequency</b>	<b>Percentage</b>
Diploma	15	17
Bachelors	46	53
Masters	22	26
PhD	3	4
<b>Total</b>	<b>86</b>	<b>100</b>

*Source: Research Data (2019)*

The analysis in table 4.5 implies that 53% of the responding managers had Bachelor’s degrees as their utmost degree, 17% had diplomas, and 26% had a master’s degree, while 4% of the respondents had a doctoral degree. This infers that the responding managers were well educated to understand and respond to the research objectives accordingly.

#### 4.4.5 Level of Management

The responding managers were asked to indicate their current management positions. The results are analyzed and presented in table 4.6 below.

**Table 4.6**

*Level of Management*

<b>Age brackets</b>	<b>Frequency</b>	<b>Percentage</b>
Lower	37	43
Middle	23	27
Senior	26	30
<b>Total</b>	<b>86</b>	<b>100</b>

*Source: Research Data (2019)*

The results show that 43% of the responding managers were in the lower level of management, 30% were in the senior level of management, and 27 were at the middle neck of management. This infers that the study participants were representative to air out their views and opinions on the research objectives.

#### 4.4.6 Working Experience in the Current Position

The study ascertained the length of time the responding managers have worked in their respective firms. The results were analyzed and presented in table 4.7 below.

**Table 4.7*****Working Experience in the Current Position***

<b>Age brackets</b>	<b>Frequency</b>	<b>Percentage</b>
Below 5 years	20	23
5-10 years	42	49
11-15 years	17	20
Over 15 years	7	8
<b>Total</b>	<b>86</b>	<b>100</b>

*Source: Research Data (2019)*

The above table 4.7 infers that 49% of the responding managers have functioned in their current position between 5 – 10 years, 23% of them have functioned for their current position below 5, while 20% have functioned in their respective positions between 11 – 15years, 8% of them have functioned for their respective firms for over 15 years. The results imply that the responding managers have functioned for a lengthy time in their respective positions and were conversant with the factors that are significantly affecting investment decisions among listed firms on the NSE: therefore, they provided reliable information for the study.

#### **4.5 Descriptive Analysis**

Descriptive analysis was adopted in this research to ascertain the findings of both the independent (financial market information, investment risk, investment profitability, and investor's financial Knowledge), and dependent, which is the investment decisions.

##### **4.5.1 Investment Decisions**

The researcher gauged the level of agreement of the responding managers with the statements relating to investment decisions. The results are analyzed and presented in table 4.8 below.

**Table 4.8*****Descriptive Statistics for Investment Decisions***

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Short and long term investment plans affects investment decision-making	86	3.80	1.566
The amount of capital to be invested in a given project affects investment decisions	86	4.32	.956
Handiness of capital from banks and other borrowing agents influences investment decisions	86	4.50	1.062
A positive net present value (NPV) of an investment influences investment decisions	86	4.29	1.246
The development of technology enhances investment decisions making	86	4.75	.477
The selections of assets of investment affects investment decisions	86	3.81	.642
<b>Valid N (list wise) – Overall Mean</b>	<b>86</b>	<b>4.245</b>	<b>.9915</b>

**Source: Research Data (2019)**

The analysis in table 4.8 infers that there was general agreement on all the six statements involving investment decisions. In particular, the analysis shows that the responding managers most strongly agreed that development in technology contributes to investment decisions (with highest mean of 4.75 and lowest standard deviation of 0.477). This was closely followed by managers agreeing that availability or handiness of funds from borrowing agents affects investment decisions (with mean of 4.50 and standard deviation of 1.062). The next agreement by the target respondents was that the amount of capital invested in a given project affects investment decisions affects investment decisions (with mean of 4.32 and standard deviation of 0.956). This was persued by the agreement that a positive net present value influences investment decisions (with mean of 4.29 and standard deviation of 1.246). The managers were also in agreement that short and long term investment plans affects investment decisions (with mean of 3.80 and standard deviation of 1.566). Finally, the least strong agreement was that the selections of assets affects investment decisions affects investment choices (with mean of 3.8 and standard deviation of .642).

#### 4.5.2 Effects of Financial Market Information on Investment Decisions

The researcher established the level of agreement of the target respondents with the statements concerning the effects of financial market information on investment decisions.

The results are analyzed and presented in table 4.9 below.

**Table 4.9**

*Effects of Financial Market Information on Investment Decisions*

	N	Mean	Standard Deviation
The decision to invest must be accompanied by the right sources of information.	86	4.39	.867
Efficient capital allocation is heavily dependent on the flow of information.	86	4.30	1.094
Investors require information regarding share prices and the general performance of the market before investing	86	4.68	.543
Investment firms require reliable sources of information to combat rivals.	86	3.93	1.319
Investment firms require accounting information from companies of interest to establish whether to invest in them or not.	86	4.45	.971
<b>Overall Mean</b>	<b>86</b>	<b>4.35</b>	<b>.9538</b>

*Source: Research Data (2019)*

Table 4.9 indicates that there was general agreement on all the five statements relating to financial market information. In particular, the breakdown shows that the responding managers agreed most strongly that investors require information regarding share prices and the general performance of the market before investing (with highest mean of 4.68 and lowest standard deviation of 0.543). This was closely followed by managers agreeing that investment firms require accounting information from companies of interest to establish whether to invest in them (with mean of 4.45 and standard deviation of 0.971). The next agreement by the responding managers was that the decision to invest must be accompanied by the right sources of information (with mean of 4.39 and second-lowest standard deviation of 0.867). This was followed by the agreement that efficient capital allocation is heavily

dependent on the flow of information (with mean of 4.30 and standard deviation 1.094). Finally, the least strong agreement was that investment firms require reliable sources of information to combat rivals (at the lowest mean of 3.93 and highest standard deviation of 1.319).

These findings agree with Van et al. (2011), who used data from 2005 – 2006 to examine the factors of financial knowledge on stock market participation. Their analysis contained information relating to different characteristics of individuals being study; their economic status in terms of wealth and the ability to save. The data set was characteristic of the Dutch population (comprising over 2,000 households). Their findings show that the basic economic concepts were lacking. Hence the knowledge of stocks, bonds, risk diversification, and the working of financial markets were inadequate. The proponents concluded that individuals who lack basic financial knowledge are less likely to make informed monetary decisions.

These findings also agree with Gnani et al. (2012), who indicated that factors which influence the decision to invest most include the following: personal finance, unbiased information, approval from finance expert, the information generated from financial transactions, and firm's perceived image from the outside environment. Even though all of those factors are crucially important for a firm to succeed, however, some are most significant than others. For instance, accounting information was valued most significant than the rest.

#### **4.6 Effects of Investment Risk on Investment Decisions**

The researcher gauged the level of agreement of the responding managers with the statements relating to investment risk. The results are analyzed and presented in table 4.10 below.

**Table 4.10*****Effects of Investment Risk on Investment Decisions***

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Investment managers reduce risk by diversifying investments among various financial instruments and industries	86	4.93	1.234
Risk assessment of investment opportunity has an effect on investment performance.	86	4.57	1.386
To avoid risks, investors require information regarding share prices and the general market performance before investing.	86	4.07	1.248
A firm will only invest in projects if the expected rate-of-return exceeds the related cost.	86	3.23	1.584
To avoid a steady decline in the value of the security, interest rate should be taken into account.	86	3.57	1.463
<b>Overall Mean</b>	<b>86</b>	<b>4.074</b>	<b>1.333</b>

***Source: Research Data (2019)***

The above table 4.10 implies that there was complete agreement on all the five statements relating to investment risk. Most specifically, the breakdown shows that the target respondents most strongly agreed that investment managers reduce risk by diversifying investments among various financial instruments and industries (with highest mean of 4.93 and lowest standard deviation of 1.234). This was closely followed by managers agreeing that risk assessment of investment opportunity affects investment performance (with mean of 4.57 and third-lowest standard deviation of 1.386). The next agreement by the responding managers was that to avoid risks, investors require information regarding share prices and the general market performance before investing (with mean of 4.07 and standard deviation of 1.248). This was followed by the agreement that investors avoid a steady decline in the value

of securities by ensuring that interest rate is taken into account (with mean of 3.57 and fourth-lowest standard deviation of 1.463). Finally, the least strong agreement was that firm should only invest in projects if the expected return exceeds the related cost (with lowest mean of 3.23 and highest standard deviation of 1.584).

These findings agree with Sachse et al. (2012) who argued that the current ways of mitigating possible investment risks must include providing enough information about the structure of the financial market and the ability to measure statistical risk. The process of identifying the sources of investment risks and resolving them in a timely fashion are crucially important for the success of an investment project as much as returns are concerned. The proponents further held that providing sufficient information about the risks of various investment proposals would require a thorough understanding of risk itself. Therefore, for an investment to yield a better result, the different kinds of risk must be understood for better risk treatment.

The study further agree with Gupta and Ahmed (2016), who found that when it comes to investment decision-making, individual investors are generally driven by emotional influences. To establish the impacts of emotional factors when deciding to invest through the acuity of risk, the researchers found that the most significant setback encountered by fund managers are making those decisions based on rationalities, emotions, and gut feelings. The proponents further discovered that an investor's decision-making process relies on how he perceives risk and the motivating factor in making these decisions. The study concluded that investor's decision making is subjective to the quality of information available, and the appetite for taking a risk.



#### 4.7 Effects of Investment Profitability on Investment Decisions

The researcher gauged the level of agreement of the responding managers with the statements relating to firms' profitability. The results are analyzed and presented in table 4.11, as specified below.

**Table 4.11**

***Investment Profitability on Investment Decisions***

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Investors seek higher return on assets as compensation or reward for taking a risk	86	3.0211	1.121
Return on equity is directly correlated to the level of risk an investor is willing to incur.	86	3.8033	.74877
Return on capital assets is a determinant factor that is directly linked to the final measure of investment.	86	4.9452	.60241
Profit is as well dependent on the nature of investment that is being considered.	86	4.6714	.9231
To maximize net profit margin, the estimated cost of an investment must be lower than the expected return.	86	4.6714	.6789
<b>Overall Mean</b>	<b>86</b>	<b>4.1728</b>	<b>.8419</b>

***Source: Research Data (2019)***

The above table 4.8 suggests that there was general agreement on all the five statements relating to investment profitability. In particular, the breakdown deduces that the responding managers most strongly agreed that return on capital assets is a determinant factor that is directly linked to the final measure of investment (with mean of 4.9452 and lowest standard deviation of .60241). This was followed by managers agreeing that to maximize net profit margin, the estimated cost of an investment must be lower than the expected return (with mean of 4.6714 and second-lowest standard deviation of .6789). The next agreement by the responding managers was that profit is dependent on the nature of investment that is being considered (with mean of 4.5492 and fourth-lowest standard deviation of .9231). This was

followed by the agreement that Return on equity is directly correlated to the level of risk an investor is willing to incur (with mean of 3.8033 and third-lowest standard deviation of .74877). Finally, the least strong agreement was that investors seek higher return on assets as compensation or reward for taking a risk (with lowest mean of 3.0211 and highest standard deviation of 1.121).

The findings agree with Makori and Jagongo (2013) who adopted different components of inferential statistics to examine the existing connection between the management of working capital and financial return or profitability in Kenya for the years 2003 – 2012. The findings indicated a positive link between what the firm earns in return, the period of inventory and payout. However, the researchers discovered a contrary link between financial return and the time it took for accounts receivable, and also the period for translating investment into inventory. The researchers concluded that the increase in sales, the scope and size of a company, and fiscal leverage significantly influence investment profitability.

#### **4.8 Effects of Investors' Financial Knowledge on Investment Decisions**

The researcher measured the level of agreement of the responding managers with the statements relating to investors' financial knowledge. The results are summarized and presented in table 4.12 below.

**Table 4.12*****Effects of Investor's Financial Knowledge on Investment Decisions***

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Financial planning helps investors in ensuring a reasonable balance between outflow and inflow of funds	86	3.60	1.129
Investors use budget to enable them to know what they can afford to buy and invest in.	86	3.78	1.081
Working capital represents firm's net investment in current assets necessary to support its everyday business	86	3.36	1.183
Investor has to be knowledgeable enough in making informed investment decisions	86	4.60	1.114
Deciding whether to invest short-term or long-term depends on an investor's financial knowledge and experience.	86	4.86	1.147
<b>Overall Mean</b>	<b>86</b>	<b>4.04</b>	<b>1.1308</b>

**Source: Research Data (2019)**

The breakdown in table 4.12 shows that there was general agreement on all the five statements relating to investor's financial knowledge. In particular, the study reveals that the respondents most strongly agreed that deciding whether to invest in short-term or long-term depends on an investor's financial knowledge and experience (with mean of 4.86 and fourth-lowest standard deviation of 1.147). This was closely followed by managers agreeing that investors use budget to enable them to know what they can afford to buy and invest in (with highest mean of 4.6 and second-lowest standard deviation of 1.114). The next agreement by the target participants was that investors use the budget to enable them to know what they can afford to buy and invest (with mean of 3.78 and lowest standard deviation of 1.081). This was followed by respondents agreeing that financial planning assists investors to ensure that there is a reasonable balance between the amount that is coming in and the amount that is going out

so that firmness is observed in the firm (with mean of 3.60 and third-lowest standard deviation of 1.129). Lastly, the least strong agreement was that working capital represents a firm's net investment in current assets necessary to support its everyday business (with lowest mean of 3.36 and highest standard deviation of 1.183).

These findings agree with Van et al. (2011), who used data from 2005 – 2006 to examine the influences of financial knowledge on stock market participation. Their analysis contained information relating to different characteristics of individuals being study; their economic status in terms of wealth, and the ability to save. The data set was characteristic of the Dutch population (comprising over 2,000 households). Their findings show that the basic economic concepts were lacking. Hence the knowledge of stocks, bonds, risk diversification, and the working of financial markets were inadequate. The proponents concluded that individuals who lack the basic financial knowledge are less likely to make informed monetary decisions.

#### **4.9 Inferential Statistics**

The study adopted inferential statistics as a basis of establishing the generalizability of the results to the entire population. While descriptive statistics are applied to draw trends and patterns of data using measures of central tendencies such as mean & standard deviations. Inferential statistics are utilized to establish the statistical relationship among variables. The inferential statistics applied in this section include the following: multiple linear regression analysis, reliability analysis, and correlation analysis.

##### **4.9.1 Correlation Analysis**

The Pearson correlation analysis was utilized in this study to show the relationship between both the independent and the dependent variables. For this study, the correlation analysis helped in determining the strengths and relationships in the model between the predictor and outcome variables.

**Table 4.13*****Relationship between Independent Variables***

		<b>Investment Decision</b>	<b>Investment risk</b>	<b>Invest ment Return</b>	<b>Investors financial Knowledge</b>	<b>Financial market Information</b>
Investment Decision	Pearson Correlatio n Sig. (2- tailed) N					
Investment risk	Pearson Correlatio n Sig. (2- tailed) N	.858**				
Investment Profitability	Pearson Correlatio n Sig. (2- tailed) N	.841**	.110**			
Investors financial Knowledge	Pearson Correlatio n Sig. (2- tailed) N	.805**	.107**	.137**		
Financial market Information	Pearson Correlatio n Sig. (2- tailed) N	.771**	.114**	.126**	.128**	
						86

**\*\*.** Correlation is significant at the 0.01 level (2-tailed).

The above table 4.13 shows that investment risk ( $r=0.858$ ,  $P<0.000$ ) is having a stronger and significant correlation with investment decisions in the firms listed on the NSE than all other study variables. The research also established that firms' profitability ( $r=0.841$ ,  $p<0.000$ ), investor's financial knowledge ( $r=0.805$ ,  $p<0.000$ ), and financial market information

( $r=0.771$ ,  $p<.000$ ) have strong positive relationships on investment decisions in the listed firms on the NSE. These results are significant at ( $p\text{-value}<0.05$ ).

#### 4.9.2 Regression Analysis

The researcher used multi-linear regression analysis to establish the significant importance of each research variable that affects investment decisions among listed firms on the NSE. The researcher adopted a computer-based application known as the Statistical Package for Social Sciences (SPSS version 23.0) for data analysis. The findings are summarized and presented in the following tables below.

**Table 4.14**

*Model Summary*

<b>Model Summary<sup>b</sup></b>				
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.876 <sup>a</sup>	.767	.746	.230

a. Predictors: (Constant), Financial market Information, Investment risk, Investment profitability and Investors financial Knowledge

b. Dependent Variable: Investment decisions

The coefficient of determination is the rate of change in the dependent variable (investment decisions) that is explained by all the four independent variables (financial market information, investment risk, investment Profitability and investor's financial Knowledge). In this research, the four independent variables that were investigated explain (76.7%) of the variation in the investment decisions as denoted by the  $R^2$ . This implies that other elements not considered in this study constitute (23.3%) of the variance in the dependent variable.

**Table 4.15*****Relationship between Independent Variables***

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.876	4	1.969	65.633	.000 <sup>b</sup>
	Residual	2.392	80	.03		
	<b>Total</b>	<b>10.268</b>	<b>84</b>			

a. Dependent Variable: Investment decisions

b. Predictors: (Constant), financial market information, investment risk, investment profitability, and investors' financial Knowledge

**Source: Researcher (2019)**

The probability value of  $p < 0.00$  suggests that the regression affiliation was highly significant in predicting how financial market information, investment risk, firms' profitability, and investors' financial knowledge influence investment decisions of listed firms on the NSE.

**Table 4.16*****Relationship between Dependent and Independent Variables***

		Coefficients <sup>a</sup>			T	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.931	.229		12.800	.000
	Investment risk	.388	.096	.705	4.042	.000
	Financial market Information	.222	.087	.576	2.567	.013
	Investment Profitability	.324	.088	.358	3.725	.000
	Investors financial Knowledge	.176	.085	.167	2.071	.024

**a. Dependent Variable: Investment decisions**

**Source: Research (2019)**

The findings in the above table 4.16 indicate that financial market information, investment risk, firms' profitability, and investors' financial knowledge constant factor organization performance was (2.931) due to variation from other factors other than Financial market

information, investment risk, investment return, and investor's financial knowledge. Furthermore, a unit of change in investment risk while setting the coefficient of other independent variables zero would lead to a change in investment decisions among listed firms in the NSE by a factor of (0.388). Additionally, a unit of change in financial market information while setting the coefficient of other independent variables zero would lead to a change in investment decisions among listed firms on the NSE by a factor of (0.222). Moreover, a unit of change in firms' profitability while setting the coefficient of other independent variables zero would lead to a change in investment decisions among listed firms on the NSE by a factor of (0.324). Also, a unit of change in the investor's financial knowledge while setting the coefficient of other independent variables zero would lead to a change in the investment decision among listed firms on the NSE by a factor of (0.176). These results show that financial market information, investment risk, investment return, and investor's financial knowledge had a significant effect on investment decisions among listed firms on the NSE since they all had a significant p-value (p-value < 0.001). The resultant regression model is as shown below;

$$Y = 2.931 + .388X_1 + .222X_2 + .324X_3 + .241X_4 + \epsilon$$

#### **4.10 Results of Hypothesis Testing**

Hypotheses below were tested and results obtained as follows:

**H<sub>01</sub> Financial-market information has no statistically significant effect on investment decisions among listed firms in the NSE.**

The regression results revealed that financial market information had statistically significant effect on investment decisions among listed firms on the NSE. Hence the null hypothesis was rejected.



**H<sub>02</sub> Investment risk has no statistically significant effect on investment decisions among listed firms in the NSE**

The regression results revealed that investment risk had statistically significant effect on investment decisions among listed firms on the NSE. Hence the null hypothesis was rejected.

**H<sub>03</sub> Investment profitability has no statistically significant effect on investment decisions among listed firms in the NSE.**

The regression results revealed that Investment profitability had statistically significant effect on investment decisions among listed firms on the NSE. Hence the null hypothesis was rejected.

**H<sub>04</sub> Investor's financial knowledge has no statistically significant effect on investment decisions among listed firms in the NSE.**

The regression results revealed that investor's financial knowledge had statistically significant effect on investment decisions among listed firms on the NSE. Hence the null hypothesis was rejected.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This fifth chapter sums up with summary of the findings, conclusions and recommendations of each variables in line with results and understandings of the study. The researcher also included the study limitations and gave suggestions for further research areas on the same subject. The chapter concluded with some suggestions for policy and practice inferred from the research findings.

#### **5.2 Summary of the Findings**

The general objective of this research was to investigate factors that are affecting investment decisions among listed firms on the NSE. Specific objectives were as follows: to assess to which extent financial-market information influences investment decisions among listed firms in the NSE; to analyze to which extent investment risk influences investment decisions among listed firms in the NSE; to establish to which extent investment profitability influences investment decisions among listed firms listed in the NSE; and to find out the extent investor's financial knowledge influences investment decisions among listed firms in the NSE.

The research sought to benefit investment firms, researchers, policymakers, shareholders, financial managers, and individual investors to enable them to develop strategies that would help them in making informed investment decisions. The study was guided by three theories within the field of finance, which are significant to the factors affecting investment decisions. These theories are the Efficient Markets Hypothesis, the Capital Asset Pricing Model, and the Modern Portfolio Theory.

The researcher employed a descriptive research design and targeted 178 finance managers of the 67 listed firms. The sample of 123 was extracted from the population using the Yamane's formula. Questionnaires were used to gather data from the responding managers. To ensure that the study instrument was valid, experts' opinions were pursued, and the analysis of data commenced just after collecting raw data and was analyzed and presented using tables.

This study achieved a response rate of 69.91%. About 67% of the respondents were male, while female respondents were 33%, hence suggesting that most respondents are male. The age bracket that was most represented was between 26 – 30 years. The majority (53%) of the responding managers have worked in their separate firms between 2–6 years. Moreover, 53% of the respondents had a Bachelor's degree as their highest degree, 17% had diplomas, and 26% had a Master's degree, while 4% of them had a doctoral degree. It was found that 43% of the respondents were in the lower level of management, 30% were in the senior level of management, while 27% were in the middle level of management. The above describes the general profile of the responding managers at the NSE.

The regression coefficient of R-squared is (0.767). This infers that financial market information, investment risk, firms' profitability, and investors' financial knowledge used in this study explain 76.7% of the variation in the investment decisions. This suggests that other features not considered in this study accounted for 23.3% of the variation in the investment decisions at the NSE. The ANOVA probability value of  $p < 0.00$  can be interpreted that the regression affiliation was highly strong and significant in establishing the independent variables.

The correlation analysis further implies that investment risk ( $r=0.858$ ,  $P < 0.000$ ) has the strongest correlation with investment decisions in the NSE; followed by firms' profitability

( $r=0.835$ ,  $p<0.000$ ), investor's financial knowledge ( $r=0.805$ ,  $p<0.000$ ), and financial market information ( $r=0.771$ ,  $p<0.000$ ). These results are significant at ( $p\text{-value}<0.05$ ).

The results of the four independent variables are further summarized below.

### **5.2.1 Financial-Market Information and Investment Decisions**

The study assessed financial market information on investment decisions among listed firms in the NSE. The findings revealed that there is a strong positive relationship between financial market information and investment decisions. Further analysis suggested that the correlation of coefficient is strong at (0.771).

Information concerning firms' financial performance, share prices, dividends policy, etc., are important parameters in making adequate investment decisions. The findings of the study suggest that a key factor considered in deciding what to invest relies on the availability of information. Hence there is a need for the Capital Market Authority (CMA) to link investors to platforms for having access to capital market information and training market participants on how to use this information to their advantage to make sound investment decisions.

These findings agree with Sultana and Pardhasadhi (2012), who examined key influences that characterize the Indian individual equity and stock investors' decision-making process. The researchers condensed the 40 traits to only ten features which include: individual uniqueness, risk minimization, capital growth, product awareness, government and media, economic expectation, social responsibility, accounting information, financial expectation, and advocate recommendation factors.

### **5.2.2 Investment Risk and Investment Decisions**

The study analyzed the effects of investment risk on investment decisions among listed firms in the NSE. These results showed a strong and positive relationship between investment risk

and investment decisions. More analysis indicated that the correlation of coefficient is strong at (0.858).

The findings further reveal that most investors inherently prefer lower risk to higher risk. However, some investors would prefer taking a higher risk for a possible higher return. Neuro-economic proof deduces that emotional factors affect the investment decision making of individuals. Risk is one of those factors that investors have to deal with in their day-to-day activities. Making the right decisions as an investor is crucial for the growth and the survival of firms.

The study agrees with Baker et al. (2012), who revealed that there is a strong relationship between risk and investment return. This could be the result of asset growth on investors' expectations of aggregate returns.

### **5.2.3 Investment Profitability and Investment Decisions**

The study established the effects of firms' profitability on investment decisions. The outcomes proposed a strong and positive relationship between firms' profitability and investment decisions. Further analysis showed that the strength of the correlation of coefficient is strong at (0.841).

These findings confirm the results of Kamwaro (2013), who learned that assets' choice of investment affects profits. The proponent further revealed that investing in bonds at the NSE facilitates capital growth.

### **5.2.4 Investor's Financial Knowledge and Investment Decisions**

The study investigated the effects of investor's financial knowledge on investment decisions. The findings showed a strong and positive relationship between investors' financial

knowledge and investment decisions. Further analysis revealed that the correlation of coefficient is strong at (0.805).

Investor's financial knowledge plays an important role in determining the decision to invest by firms listed in the NSE. Without the practical knowledge of key concepts in finance which include: investment return, risks, asset diversification, liquidity decisions, inflation, interest rate, etc., an investor is likely to make poor investment choices.

These findings agree with Kefela (2010), who indicated that individuals who do not have the financial education are more likely to face challenges with incremental debt, high cost of mortgages, lack of savings, and are therefore more likely to make poor investment decisions.

## **5.3 Conclusions**

### **5.3.1 Financial-Market Information and Investment Decisions**

Based on the findings of the first objective, the researcher concludes that financial market information greatly affects the investment decisions of firms listed on the NSE. Therefore, if firms are to make informed investment decisions, they must have sufficient and adequate information that would enable them to do so. With the improvement of the country's ICT platform in Kenya, investors can review financial market information in real-time and this facilitates sound investment decisions.

### **5.3.2 Investment Risk and Investment Decisions**

Based on the results of the second objective, the researcher concludes that investment risk had the greatest significant influence on investment decisions as per the results of the correlation analysis. Therefore, the adoption of a strong risk management strategy would lead to the greatest increase in firms' investment performance.

A common strategy employed by firms to manage risk includes diversifying investments through various financial instruments and industries to maximize expected returns. Also, investors mitigate investment risk by investing in projects or programs that have the potential to generate future income. Assessing risk is also at the forefront of investment decision-making since it is one of the critical components that investors have to deal with in their day-to-day operations.

### **5.3.3 Investment Profitability and Investment Decisions**

Based on the outcomes of the third objective, the researcher concludes that firms' profitability had the second greatest significant effects on investment decisions by firms listed on the NSE. Therefore, an appropriate strategy for investment decision-making would lead to a profound increase in firms' profitability.

Firms' profitability is a determinant factor that is directly tied to the final measure of an investment project. To maximize profit, the estimated cost of an investment should be less than the expected return. Investment return is also determined by the nature of investment considered. When wrong investment decisions are made, results are often catastrophic due to the magnitude of capital loss. Therefore, the expected return on investment should correlate well with the level of risk an investor is willing to incur before making investment decisions.

### **5.3.4 Investor's Financial Knowledge and Investment Decisions**

Based on the results of the fourth objective, the researcher concludes that investor's financial knowledge had the third greatest influence on investment decisions by firms listed on the NSE. Therefore, if firms are to succeed in their investment activities, investors must have the right skills and knowledge that will help them make sound investment decisions. With the right kind of education and experience, an investor is more likely to succeed.

In summary, the study can be concluded that the independent variables (financial market information, investment risk, investment profitability, and investor's financial knowledge) strongly affect investment decisions. Therefore, if these firms are to succeed in their investment activities, they must put in place the necessary actions that would address these factors.

#### **5.4 Recommendations**

Taking into account the study results, the researcher recommends the following:

The study indicates that financial market information is crucial in making investment decisions. Therefore, there is a need for investment companies to provide up-to-date market information to interested persons. This would facilitate investors' decision-making since investors often decide from a point of knowledge.

Moreover, the Nairobi Securities Exchange should continue to share market information on listed firms. This would positively influence investment decisions of individuals and firms. The information acquired would assist them to make more informed decisions.

Finally, the analytical tools such as the structural-equation modeling and the factor-analysis (instead of the regression analysis) should also be explored to research on those factors that affect investment decisions.

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

Although participation in this study was voluntary, most respondents were at first reluctant to fill in the questionnaires – fearing that it may invade their privacy. For this reason, a considerable amount of time was spent explaining to some participants that statistics provided in this study will be anonymous and confidential, and that the results of the study would only reflect the general views of the respondents.



However, the number of respondents declined was 37 even though the researcher assured them that there was no risk involved. Therefore, based on the sample size of 123, one hundred percent response rate was not achieved. The 86 questionnaires gathered accounted for 69.9% response rate, and this was considered sufficient to carry out the analysis and make a conclusion. Logistic and resource requirements were also a limitation for this study. The researcher had challenges in locating all of the listed firms in Nairobi County. Hence a lot of time was spent locating firms' head offices in order to hand in the questionnaires.

### **5.6 Suggestions for Further Studies**

The researcher concentrated on investment decisions. Other studies should be conducted to ascertain other functions of finance such as the financing decisions, the dividend decisions, and the liquidity decisions to determine their influence on firms' performance in Kenya. This is because an investment decision (which was the focus of this study) is just one of the four finance functions.

Moreover, similar studies on factors affecting investment decisions should be conducted to investigate the effect of other variables (apart from; financial market information, investment risk, firms profitability, and investor's financial knowledge) which formed the basis of this study.

The scope of this study was limited to primary data. Therefore, future research can be carried out to ascertain secondary data to examine the similarities and dissimilarities in the findings. Secondary data are widely available, so less time may be spent investigating factors that affect firms' investment decision-making. Finally, future research can be conducted to investigate other factors (23.3%) not explained by this study that affects firms' investment decisions.

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## APPENDICES

### Appendix 1: Letter of Introduction

Prince Worzie,  
Kenya Methodist University,  
P.O. Box 45240 - 00100, Nairobi, Kenya.

19<sup>th</sup> July 2019

Dear Respondent,

#### **RE: DATA COLLECTION**

I am a student at the Kenya Methodist University currently doing a research study to fulfill the requirements of the award of Master of Business Administration on “**Factors Affecting Investment Decisions among Firms Listed in the Nairobi Securities Exchange**”. Your firm was selected to participate in this study and I would highly appreciate if you would kindly respond to all questions in the attached questionnaire as completely, correctly and honestly as possible. Your response will be treated with the utmost confidentiality and will be used only for this study.

Thank you for your assistance and cooperation.

Warm Regards,

**Prince Worzie**

**Bus-3-0450-1/2018**

## Appendix II: Questionnaire

### Section A: Personal Information

1. Please indicate your gender

Male  Female

2. Please specify your age range

21-25  26-30  31-36  37-42  Above 42

3. Please stipulate your highest level of education

PhD  Masters  Bachelors  Diploma

4. How long have you worked in this firm?

Below 2 years  2-6 years  7-10 years  above 10 years

5. What level of management position do you occupy?

Lower level  Middle level  Senior level

6. How long have you worked in this current position?

Below 5 years  5-10 years  11-15 years  Over 15 years

7. Which industry does your firm belong to at the NSE?

Investment	<input type="checkbox"/>	Telecommunication	<input type="checkbox"/>
Agriculture	<input type="checkbox"/>	Commercial and services	<input type="checkbox"/>
Banking	<input type="checkbox"/>	Manufacturing and allied	<input type="checkbox"/>
Insurance	<input type="checkbox"/>	Energy and petroleum	<input type="checkbox"/>
Construction & allied	<input type="checkbox"/>	Automobiles and accessories	<input type="checkbox"/>
Exchange trade funds	<input type="checkbox"/>	Real estate and investment trust	<input type="checkbox"/>
Investment services	<input type="checkbox"/>		

### Section B: Financial Market Information

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly Agree

	1	2	3	4	5
The decision to invest must be accompanied by the right sources of information.					
Efficient capital allocation is heavily dependent on the flow of information.					
Investors require information regarding share prices and the general performance of the market before investing					
Investment firms require reliable sources of information to combat rivals.					
Investment firms require accounting information from companies of interest to establish whether to invest in them or not.					

### Section C: Investment Risk

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly agree

	1	2	3	4	5
Investment managers reduce risk by diversifying investments among various financial instruments and industries					
Risk assessment of investment opportunity has an effect on portfolio performance.					
To avoid risks, investors require information regarding share prices and the general market performance before investing.					
A firm will only invest in projects if the expected rate-of-return exceeds the related cost.					
To avoid a steady decline in the value of the security, interest rate should be taken into account.					



**Section D: Investment Profitability**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

		1	2	3	4	5
	Investors seek higher return on assets as compensation or reward for taking a risk					
	Return on equity is directly correlated to the level of risk an investor is willing to incur.					
	Return on capital assets is a determinant factor that is directly linked to the final measure of investment.					
	Profit is as well dependent on the nature of investment that is being considered.					
	To maximize net profit margin, the estimated cost of an investment must be lower than the expected return					

**Section E: Investor's Financial Knowledge**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

		1	2	3	4	5
	Financial planning helps investors in ensuring a reasonable balance between outflow and inflow of funds so that stability is maintained in the firm					
	Investors use budget to enable them to know what they can afford, take advantage of buying and investing opportunities					
	Working capital represents firm's net investment in current assets necessary to support its everyday business					
	Investor has to be knowledgeable enough in making informed investment decisions					
	Deciding whether to invest short-term or long-term depends on an investor's financial knowledge and experience					

**Section F: Investment Decisions (Dependent variable)**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

<b>Investment decisions</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Short and long term investment plans affects investment decision-making					
The amount of capital to be invested in a given project affects investment decisions					
Handiness of fund from banks and other borrowing agents influences investment decisions					
The development of technology enhances investment decisions making					
A positive net present value (NPV)influences investment decisions					
The selections of assets of investment affects investment decisions					

*Thank You for your time and cooperation*

### Appendix III: Listed Firms at the Nairobi Securities Exchange

AGRICULTURAL	INSURANCE
Eaagads Ltd Ord 1.25 AIM KakuziPlc Ord.5.00 Kapchorua Tea Co. Ltd OrdOrd 5.00 AIM The Limuru Tea Co. PlcOrd 20.00AIMS SasiniPlcOrd 1.00 Williamson Tea Kenya Ltd Ord 5.00 AIM	Britam Holdings PlcOrd 0.10 CIC Insurance Group Ltd ord.1.00 Jubilee Holdings Ltd Ord 5.00 Kenya Re Insurance Corporation Ltd Ord 2.50 Liberty Kenya Holdings Ltd Ord.1.00 Sanlam Kenya PlcOrd 5.00
AUTOMOBILES & ACCESSORIES	INVESTMENT
Car & General (K) Ltd Ord 5.00	Centum Investment Co PlcOrd 0.50 Home Afrika Ltd Ord 1.00 Kurwitu Ventures Ltd Ord 100.00 Olympia Capital Holdings ltd Ord 5.00 Trans-Century PlcOrd 0.50AIMS
BANKING	INVESTMENT SERVICES
Barclays Bank of Kenya Ltd Ord 0.50 BK Group PlcOrd 0.80 Diamond Trust Bank Kenya Ltd Ord 4.00 Equity Group Holdings PlcOrd 0.50 HF Group PlcOrd 5.00 I&M Holdings PlcOrd 1.00 KCB Group PlcOrd 1.00 National Bank of Kenya Ltd Ord 5.00 NIC Group PlcOrd 5.00 Stanbic Holdings Plc ord.5.00 Standard Chartered Bank Kenya Ltd Ord 5.00 The Co-operative Bank of Kenya Ltd Ord 1.00	Nairobi Securities Exchange PlcOrd 4.00
COMMERCIAL AND SERVICES	MANUFACTURING & ALLIED
Atlas African Industries Ltd GEMS Deacons (East Africa) PlcOrd 2.50AIMS Eveready East Africa Ltd Ord.1.00 Express Kenya Ltd Ord 5.00 AIMS Kenya Airways Ltd Ord 5.00 Longhorn Publishers PlcOrd 1.00AIMS Nairobi Business Ventures Ltd Ord. 1.00 GEMS Nation Media Group Ltd Ord. 2.50 Sameer Africa PlcOrd 5.00 Standard Group PlcOrd 5.00 TPS Eastern Africa Ltd Ord 1.00 Uchumi Supermarket PlcOrd 5.00 WPPScangroupPlcOrd 1.00	B.O.C Kenya PlcOrd 5.00 British American Tobacco Kenya PlcOrd 10.00 Carbacid Investments Ltd Ord 1.00 East African Breweries Ltd Ord 2.00 Flame Tree Group Holdings Ltd Ord 0.825 Kenya Orchards Ltd Ord 5.00 AIM Mumias Sugar Co. Ltd Ord 2.00 Unga Group Ltd Ord 5.00
CONSTRUCTION & ALLIED	TELECOMMUNICATION
ARM Cement PlcOrd 1.00 Bamburi Cement Ltd Ord 5.00 Crown Paints Kenya PlcOrd 5.00 E.A.Cables Ltd Ord 0.50 E.A.Portland Cement Co. Ltd Ord 5.00	SafaricomPlcOrd 0.05
ENERGY & PETROLEUM	REAL ESTATE INVESTMENT TRUST
KenGen Co. Plc Ord. 2.50 KenolKobil Ltd Ord 0.05 Kenya Power & Lighting Co Ltd Ord 2.50 Kenya Power & Lighting Co Ltd 4% Kenya Power & Lighting Co Ltd 7% Total Kenya Ltd Ord 5.00 Umeme Ltd Ord 0.50	STANLIBFAHARI I-REIT
	EXCHANGE TRADED FUNDS

Source: (www.nse.co.ke, April2019)

## Appendix IV: Research Authorization Letter (KeMU Permit)



### Kenya Methodist University

P. O Box 267 - 60200, Meru, Kenya, Tel: (+254-020) 2118423-7, 064-30301/31229 Fax: (+254-064) 30162 Email: info@kemu.ac.ke , Website: www.kemu.ac.ke

July 29, 2019

Executive Secretary  
National Council for Science and Technology  
P.O Box 30623 – 00100  
NAIROBI

Dear Sir/ Madam,

**RE: PRINCE WORZIE – BUS-3-0450-1/2018**

This is to confirm that the above named is a bona fide student of Kenya Methodist University pursuing a Master of Business Administration.

Prince is undertaking a research study on “Factors affecting investment decisions among listed firms in the Nairobi securities exchange”. To successfully complete his research work, he requires relevant data in his area of study.

In this regard, we kindly request your office to issue him a research permit to enable him collect the data for his academic research work.






We thank you in advance for your cooperation.

Yours faithfully,



Dr. Evangeline Gichunge  
Associate Dean, Research Development & Board of Postgraduate Studies

## Appendix V: NACOSTI Research Permit

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 392474	Date of Issue: 20/August/2019
<b>RESEARCH LICENSE</b>	
	
<p>This is to Certify that Mr., <b>WORZIE PRINCE</b> of Kenya Methodist University, has been licensed to conduct research in Nairobi on the topic: <b>FACTORS AFFECTING INVESTMENT DECISIONS AMONG LISTED FIRMS IN THE NAIROBI SECURITIES EXCHANGE</b> for the period ending : 20/August/2020.</p>	
License No: NACOSTI/P/19/587	
392474 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
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