THE RELATIONSHIP BETWEEN INVESTMENTS AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

2017

DECLARATION

This research project is my original work and has not been submitted for any award to any other college, institution or university

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

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ACKNOWLEDGEMENT

I thank the almighty Allah the Most Gracious the Most Powerful for enabling me to pursue my career in finance. Many thanks to my supervisor, Mr Abdulatif Essajee; His guidance and encouragement through the process made me to come out successful.

To all my family members, relatives, colleagues and friends, I say thanks so much and God bless you.

DEDICATION

I dedicate to my parents Ahmed Hussein and Ardo Mohamed, my wife Anisa Osman you have been the source of my encouragement and discipline and to my aunt Salatha Hussein for encouraging me to further my education.

Also my siblings, Farhan, Abdullahi, Deka, Fatma and Mohamud for being an inspiration to me.

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ATM - Automatic Teller Machines

CBK - Central Bank of Kenya

IT - Information Technology

NPL - Non-Performing Loans

R&D - Research and Development

ROA - Return of Assets

ABSTRACT

Investment decisions are one of the significant decisions in a company since they are hypothesized to influence its value by influencing profitability and risk. However, investment decisions are risky and very uncertain on whether the costs incurred to invest will be recouped and profits gained within the specified time period. This study sought to determine the relationship between investments and financial performance of commercial banks in Kenya. The neoclassical theory of investment, the q theory of investment and the accelerator model of investment were used as the main theoretical underpinning for the study. A descriptive research design was employed and secondary data collected from the targeted 42 commercial banks in Kenya. Correlation, regression and descriptive statistical techniques were adopted to analyze the collected data. The results found an insignificant negative relationship between investment in government securities, investment in properties and return on asset. The results also revealed a positive and insignificant relation between corporate bonds and return on assets of the commercial banks. The findings also found a significant relationship between investment in stocks, liquidity, bank size, capital adequacy and return on assets of the commercial banks. Finally, it was found that the relationship between credit risk and return on asset is negative and insignificant. The study concluded that investments in stock of ordinary shares and investment in other companies' shares significantly influence performance of commercial banks in financial terms. The study also concluded that liquidity, bank size and capital adequacy have a significant impact of on commercial banks financial performance. The study recommends that the management of commercial banks should focus on investment in stock and maintain adequate liquidity and capital adequacy ratio to enhance financial performance of their banks.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Investment decisions are one of the key decisions for management of any organization. They are significant decisions for a company since they are hypothesized to influence its value by influencing profitability and risk (Alslehat & Altahtamouni, 2014). Investment decisions largely include acquisition, modernization, extension and replacement of the long-term asset. The investment decisions that a firm makes is vital in firm's financial performance hence making it effective. For a firm to be competitive and efficient it has to make investment decisions key to the business administration (Virlics, 2013).

The theoretical perspective on how investment and financial performance relate has also advanced over years. The Q theory of investment asserts that a firm ought to invest when it expects the investment to bear profits and so forth an effective asset market's valuation of the firm incorporates such prospects (Erickson & Whited, 2000). Thus, the only thing that determines firm investment is the existence of investment opportunities that are profitable (Balfoussia & Gibson, 2016). The theory based on resources suggests that in order for firms to acquire competitive advantage they should implement unique investments which are rare, valuable, cannot be imitated and non-substitutable (Stores, 2015).As long as the anticipated revenue from an investment is higher than the opportunity cost of capital, investment will be useful and undertaken by the firm (Warström & Niemelä, 2015).

Commercial banks are the financial intermediaries that play an important role in the economy by providing different services. In strengthening the economic activities and growth the banking sector is an important entity. It is considered as the backbone of an economy (Mushtaq et al., 2014). Apart from functioning as an intermediate, the bank's financial performance has an implicit impact on the growth of economy of a country (Nuhiu, Hoti & Bektashi, 2017). Investment plays a very significant role in the financial performance of commercial banks. Commercial banks invest their resources in order to earn returns that will enable them enhance their financial performance (Njiiri, 2015). These investments are always considered safe investments since they impact positively on profits gained, as the returns from the securities are not usually market-competitive (Islam et al., 2017).

1.1.1 Investments

Investment is sacrificing of existing consumption for future consumption. Its main aim is to create future wealth. It can also refer to resource provision for long or medium term and the anticipated outcome is recovering cost of investments plus a great profit (Virlics, 2013). Investment can be related to a product or asset bought for the purpose of income generation or appreciating given some investment time. Therefore, investment is the expenditure accrued for income-producing assets (Stores, 2015).

Investment decisions are among the three most fundamental decisions that a firm does take on its usual day to day operations, the other two fundamental decisions are the financing decisions and the operational decisions (Karanja, 2012). Investments may be

classified into non-current assets which entails, plant property and equipment or financial instruments ordinary shares, fixed investment securities such as bond and others. Business enterprises can achieve growth and diversify risk if they invest in various forms of investments. Firm investment can also be viewed in terms replacement decisions where an asset is normally replaced or firm investment may be in the form of net investments where the company adds new forms of investments and acquires new assets (Virlics, 2013).

Commercial banks normally invest in government securities, which include government treasury bills and bonds. Other investments of a bank mainly include investment, which are listed in a securities exchange or shares in private companies and bonds issued privately by other firms. In addition, to debentures and ordinary shares, commercial banks also invests in subsidiaries, associates, joint ventures and other miscellaneous investment which are either directly purchased or acquired through takeovers, merging or consolidation(Islam et al., 2017). Additionally, commercial banks also invest in real estate properties like commercial buildings, residential real estate and other forms of real estate (Levišauskait, 2010).

1.1.2 Financial performance

Financial performance is a subjective measure of how well an organization employs its primary assets to generate revenue for the organization. The term can also be referred as a broad measure of an organizations overall financial health over a predetermined period of time (Murerwa, 2015). Financial performance also refers to the processes of using

various financial instruments to measure the performance or profitability of the organization. Financial performance indicates the financial health of a firm in a given period of time. Financial performance may be used to relate or differentiate firms with similar characteristics similar firms or to evaluate sectors or industries in total to enable an entity to decide on how well to enhance the existing circumstances or carry on a wanted arrangement (Haque, 2014).

To appraise a firm's performance, business entities normally apply financial ratios since they provide a simplified description of the entities current financial state in contrast to previous accounting period and they provides clues on how a firms management can improve performance (Jha & Hui, 2012). Managers of various firms use financial ratios to carry out quantitative and in-depth analysis of the firm's financial statements. Analysis of financial ratios by managers helps to determine whether organizational goals and objectives are being achieved, hence financial ratios also serve as a control to and help the management to formulate future strategies. Ratio analysis entails the relative measures of an organization performance in financial terms and provides clues on the financial state of the company (Wei, 2012).

Financial performance in the banking industry can be evaluated using proxies like profitability, return on equity, liquidity and the interest coverage ratio (Njiiri, 2015). The return on investment indicates the amount of profit a bank is generating from its investments which are financed by shareholders and other investors while the interest coverage ratio depicts the ease with which a bank can pay interest on outstanding debt

(Haque, 2014). The Return on assets (ROA) is the mostly used comprehensive measurement of overall performance by banking institutions on the accounting viewpoint (Jha & Hui, 2012). Therefore, ROA will employed to measure financial performance.

1.1.3 Investments and Financial Performance

The decision to make investments in resources is a significant driver of the business system of finance. Sound investments that implement well-planned strategies are important in creating shareholders' value (Tewolde, 2008). Investments are established by the combination of the investment projects, through long-term projects and short-term ones. Any investment that is put into account before directors will be one that relies on precise procedure in investment project's valuation, which considers the major aim of the facility as to bring in the owners wealth (Alslehat & Altahtamouni, 2014). Decisions on investments try to find a structure that is optimal alongside with the quantity and quality terms of the firm (Jha & Hui, 2012).

Firm investment decisions are shown to be directly related to financial performance. The q theory of investments explicitly connects investment to the objectives of the firm and supports that the investment behaviour of a firm affects the value of the firm (Twine, Kiiza, & Bashaasha, 2015). The neoclassical model highlights that future net worth of investments influences the value of firms since assets are used to generate revenue (Warström & Niemelä, 2015). The accelerator model of investment contends that to maximize profits firms hold a stock of investments which is proportional to the firms level of output (Scholleova, Fotr & Svecova, 2010).

A study by Beld (2014) assessed the research effects and growth investment on firms performance and found that financial firm performance was positively affected by research and development investments. The study found significant results between research and development investment and financial performance. In their study, Bustamante and Frésard (2017) investigated whether the influence of peers investment is stronger in concentrated industries, featuring more heterogeneous firms and found that the positive influence of peers' investment amplifies variation in aggregate investment and which affects productivity and output. Another study by Farinha & Prego (2013) analyzed the bond between firms' investment decisions and firms' financial standing and discovered that a firm's investment rate positively affects the profitability of firms.

1.1.4 Commercial Banks in Kenya

Kenya's banking sector plays a very important role within the economy by facilitating the flow of cash from depositors to borrowers. It is considered as the tie that holds the economy of the country together. Manufacturing and agricultural sectors practically rely on the banking sector so as to grow and survive (Irungu & Gatuhi, 2013). Banks control the financial industry in the country with the financial intermediation process in Kenya heavily relying on commercial banks. There are 40 commercial banks; dropping from 42 as Giro Commercial Bank was acquired by I&M Holdings in 2016 and Diamond Trust Bank is currently under the process of purchasing Habib Bank, while Chase Bank and Imperial Bank are under receivership (Cytonn Investments, 2017).

In Kenya, commercial banks are categorized into three distinct groups by use of a weighted composite index, which entails customer deposits, net-assets, reserves and capital, number of deposit accounts and loan accounts (CBK, 2016).

Commercial banks in Kenya continue to develop in terms of efficiency, stability and inclusiveness on the framework of legal regulations, supervisory, regulatory and financial reforms and initiatives. In 2015, the sector recorded increased performance in financial terms, whereby there was an increase of 9.2% on the part of total net assets which was attributed by growth in loans, advances and investments, which had an increase of 23.2%and 15.12 %respectively (CBK, 2016). Due to interest rates capping in 2016 most commercial banks in Kenya reduced lending especially to the most risk sectors and has focused more on investments in government securities, corporate bonds and other types. As such, due to the increase investments government securities, the average income of the commercial banks increased to 19.9 billion on the third quarter of 2016 (CBK, 2016).

1.2 Research Problem

The commercial banking trend is around the word has witnessed raid changes. Competition is tough thus forcing banks to heighten their effectiveness and competitiveness by raising their performance (Jha & Hui, 2012). With growing competition globally, banks are directing their energies on investments to create value of shareholders so as to survive extreme competition (Irungu & Gatuhi, 2013). However, the decision to invest is subjective and a wrong investment decision can lead companies even to bankruptcy. Investment choices can also be made in compliance with the conditions in the markets, the portfolio level divergence, the results of fundamental and technical

analysis, along with what the investors and managers expect and prefer (Rakocevic, Milosevic & Rakocevic, 2014). Thus, investment decisions are risky and very uncertain on whether the costs incurred to invest will be recouped and profits gained within the specified time period (Virlics, 2013).

In the Kenyan economy, commercial banks have enlarged and opened many branches over the previous few years. This has resulted in extremely tremendous increase in deposit liabilities and in turn, a rise in volumes of investment portfolios (Rop, Kibet & Bokongo, 2016). Kenyan banks' investments have amplified from Ksh. 15.8 billion in 2014 to Kenya shillings 19.5 billion in 2015. The high increase was credited to 87.1 percent increase in bank investments in various securities such as bills and bonds issued by foreign firms (CBK, 2016). However, in spite of the improved investments, the sector recorded decline in profit in the year 2015 (Cytonn Investments, 2017). It detailed a 5.03%drop in pre-tax profits. Most of the country's commercial bank sectors display performance variances, with some of them reporting a lot of profits while others had losses even before tax on their reports made every year (Mwangi, Muathe & Mugambi, 2016).

A series of studies have also explored the concept of firm investment and its relationship with firms' performance. For example, a paper by Lööf and Heshmati (2008) explored the causal relationship of performance and investment indicators at the firm level. The study found a two-way underlying relationship between the two but the scope of the study was not commercial banks. Huang et al (2006) also examined the association

between performance of the firm and information technology investment. The study found that companies with huge investments in infrastructure, information technology and skilled personnel in information technology resources have a greater relationship with benefits associated with information technology and not the performance of a firm. The authors however, focused on investment in information technology by firms.

In the Kenyan context, a paper by Njiiri (2015) looked at the affiliation between financial performance and investment of insurance companies. It was found that investments in real estate, certificates of deposit, Government securities, corporate bonds and stocks have a major impact on insurance companies' financial performance. The study focus was insurance firms and not commercial banks. Karanja (2012) assessed the bond between financial performance of medium and small-scale enterprises and investment choices and he established that medium and small scale enterprises were affected by investment decisions but the study context was medium and small enterprises. Therefore, despite the importance of investment decisions very few papers have tried to explore the existing relationship between investments and commercial banks financial performance. This creates the question of what is the relationship between the financial performance and investments in commercial banks in Kenya?

1.3 Research Objective

To determine the relationship between investments and financial performance of commercial banks in Kenya

1.4 Value of the Study

The findings of this study can be of significance to management of commercial banks who may use the discoveries to make the appropriate investment decision and to decide on the type of securities to invest in. The conclusions and recommendation of the study can also be used by policy making and regulatory institutions like the capital market authority of Kenya and the Central Bank of Kenya to develop policies towards investment made by commercial banks. Finally, the study will be of significance to the academic community. The study adds on to the existing theoretical and empirical literature on investments and commercial banks financial performance

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section previews the determinants of commercial banks financial performance, the empirical literature review and the theoretical literature review. The chapter also presents the conceptual model and the summary of literature reviewed.

2.2 Theoretical Review

The neoclassical theory of investment, the q theory of investment and the accelerator model of investment will be used as the main theoretical underpinning for the study.

2.2.1 Neoclassical Theory of Investment

This theory originates from Jorgenson (1963). The theory draws its fundamentals from the maximization of utility and wealth of a firm over time (Warström & Niemelä, 2015). In the neoclassical theory, investment is seen as a distributed lag function of variations in the required capital. The required or desired capital here acts as a function to the output level, user capital cost and output price (Twine, Kiiza, & Bashaasha, 2015). The theory presupposes that investment is a function of cost of capital and the firms output. Additionally, the theory contends that the capital and labour ratios adapt to the relative changes in prices (Virlics, 2013).

The neoclassical theory of investment is premised on preposition that agents can make numerical probabilities and probability distribution of the expected returns. In the investment models, the firm is seen to be neutral to risks, and capital cost causes the risk

(Virlics, 2013).The neoclassical argument assumes that firm managers act in the best interest of firm stakeholders. It also assumes managers and external suppliers of funds have the same information regarding the quantity and quality of investment opportunities available to the firm. These assumptions serve as a point of departure for models that demonstrate the potential importance of internal funds in the investment decision (Ismail et al., 2010). For this study, the neoclassical theory will be employed to explore whether investments maximize the wealth and utility of the owners of the firm.

2.2.2 The Q Theory of Investment

This theory originated from Tobin and Brainard (1968) and Tobin (1969). The Q-theory is an extension of the neoclassical theory since it incorporates the adjustment costs as an explanation for output losses. According to the theory, firms choose investment levels, which maximize the estimated current firm value (Twine, Kiiza, & Bashaasha, 2015). The theory presupposes that the market estimation of equities is the major element of investment by firms. Thus, investment decisions are stirred when financing sources are highly priced in the market place than it would cost to create it (Erickson & Whited, 2000).

This theory relates to investment rate as a Q function where Q refers to market value ratio of new added investment resources to their replacement cost. This investment theory suggests the metric q, which is the ratio between a unit of physical capital's market value and its value of replacement, done to recap the existence/absence of opportunities for investments for a precise firm (Eklund, 2013). Tobin reasons that, when the capital adds

marginal units to a firm value more than it costs to obtain it, that is, q is greater than 1, installing new capital will be profitable to the precise firm. Hence 1<q indicates that the firm should accrue more capital (i.e. embark on extra investment) and vice versa (Balfoussia & Gibson, 2016).

According to the theory, investment decisions depend on the marginal Q level, defined as the imminent investment marginal returns over the existing marginal investment cost. The Q theory also argues that if the firm's value of market is more than the cost of replacement of capital firms will choose to invest until the value of capital equals the replacement cost, thus optimizing capital stock (Warström & Niemelä, 2015). In this study, the Q theory of investment will be explored to explain whether the investment levels chosen by a firm maximizes its current value.

2.2.3 The Accelerator Model of Investment

The model originated from Clark (1917) but its applications in business cycles was advanced by Samuelsson (1939). The model shows investment to be a function of growth of output only assuming that the wanted capital stock is achieved in every period of time. The model assumes that capital demand depends on the acceleration of that demand and not with the demand volume for the finished product (Twine, Kiiza, & Bashaasha, 2015). The accelerator is the arithmetical value between the increases in investment relation as a result of income increase. If national income increases and investment made falls to zero due to the national income or output remaining constant, the net investment that is induced will be positive (Lööf & Heshmati, 2008).

The accelerator is an advanced model of the neoclassical investment theory in which the price changes have been cut to constant coefficients (Eklund, 2013).The accelerator model shows the relationship between capital and output as determined by a production function, and the cost of effect of capital, that captures the substitutability among capital and other production factors. The accelerator model focuses on growth of output as the main element of investment choices (Twine, Kiiza, & Bashaasha, 2015). This model shows that, firms plan to add to the capital stock per period, that is, invest so as to make only partial alterations account for the gap between the wanted stock of capital and the current stock of capital (Eklund, 2013). For this study, the accelerator model will be applied to explain whether investments accelerate the value of the firm.

2.3 Determinants of Financial Performance of Commercial Banks

Credit risk, bank liquidity, bank size and capital adequacy will be explored as the key determinants of commercial banks financial performance.

2.3.1 Credit Risk

Credit risk arises from the possibility that the borrower will default. In no way, would a bank extend credit to a potential defaulter (Mukarushema, Kule & Mbabazize, 2016).Credit risk refers to the loan-loss provisions to loans ratio. Therefore, banks can improve their performance by reducing the credit exposure (Murerwa, 2015). Credit risk is among the variables affecting the status of a specific bank whereas analysis of the quality of assets entails assessing the probability of debtors paying their loans back. The amount of the credit risk rests on the quality of assets a specific bank holds (Jha & Hui,

2012). Credit risk is a predetermined determinant of bank performance that is depended on risk attitude and philosophy of management as well as on other decisions taken by the management (Murerwa, 2015).

2.3.2 Bank Liquidity

Liquidity is the bank's ability to fulfill its obligations, mostly of depositors. Liquidity of the commercial bank is also considered as an influence to the financial performance of a bank (Murerwa, 2015). The management of liquidity is utterly one of the most significant tasks of a bank. If funds accrued are not used in a proper manner, a bank may suffer losses (Jha & Hui, 2012). One of the major reasons of bank failures is insufficient liquidity. An adequate liquidity position occurs when a banking institution can get enough finances, either through disposing its assets as fast at sensible cost or by adding more liabilities (Bansal & Mohanty, 2013).

2.3.4 Bank Size

The size of the commercial bank or any other business entity in terms of the assets is a very significant determinant of profitability due to various issues. Commercial banks that have a large asset size are able to expand their operations geographically to regions where competition is not very high or to regions where the market is largely untapped (Murerwa, 2015). Large banks are likely to have an advantage of engaging in higher investment diversification than small banks. The investment diversification reduces risks and economies of scale lead to increase operational efficiency through minimizing costs.

A positive relation is anticipated between profitability and the size of the banks (Tesfaye, 2013).

2.3.4 Capital Adequacy

Capital is among the bank precise variables that influence the amount of profit a banking entity accrues. Capital provides for the business, hence acts as a big boost for the business in case of adverse situations. Besides that, it indicates that the organization will carry on honoring its responsibilities (Bansal & Mohanty, 2013). A strong capital adequacy ratio displays the inner power of the bank to survive harsh conditions/moments and it increases safety for depositors during unstable macroeconomic conditions (Tesfaye, 2013). Adequacy of capital and suitability identifies ability scale of financial organizations or institutions to endure shocks in their balance sheets(Govori, 2013)

2.4 Empirical Review

This section will preview past studies, which are related with the study topic. The section will preview both international and local studies.

2.4.1 Global Studies

A study by Chen, Cheng and Hwang (2005) examined the relationship between creation of value efficiency and the firms' valuation of market and financial performance. The study sampled all the listed firms in Japan for a period of 10 years from 199-2004. The authors developed a regression model to study the correlation between market-to-book value ratios of the firm and efficiency on corporate value creation, and to assess the

relation between firms' current as well as future financial performance and the intellectual capital. The results found that intellectual capital of the firm had an influence on financial performance and value of market. It was also found that R&D expenditure captures extra information on structural capital and positively affects profitability and firm value. The study however focused reaserch and development expenditure.

Beccalli (2007) investigated whether the IT investment influences banks' performance. 737 banks in Europe were sampled over the period 1993-2000. Using the regression method the author found that in spite of banks majorly investing in information technology there was some association between total information technology investment and profitability of banks improved thus indicating that there was availability of a profitability paradox. The study however focused on investment in information technology.

Ge, Aivazian, and Qiu (2005) studied the impact of financial leverage on the firms' investment choices by analyzing information on all the Canadian companies which traded publicly. The study considered a period of 5 years from 2000 to 2004. The study assessed the strength of the findings by using pooled regression methods and used the instrumental variable method. The study found a strong correlation between investment and leverage. The study however focused leverage and investment decisions.

In Rwanda, Mukarushema, Kule and Mbabazize (2016) examined the effect of financial statements analysis in investment decision making by commercial banks. They employed

detailed survey design and sampled 110 respondents using stratified random sampling. Data for the research was collected using a questionnaire. Through the regression model, findings of the research indicated that financial statement analysis is the single most important statement in investment decision making. The research concluded that, a combined 82% of the investment decision making by commercial banks are based on financial statements analysis. The study focused on impact of financial statement analysis on investment by banks.

Zehir et al (2010) studied the relationship between IT level of investment, information technology perception, and information technology use, information technology at course of decision-making, performance of the firm, orientation of technology and future orientation. The study collected data using questionnaires from 158 National and Multinational Companies in Turkey. Through the ordinary least squares method, the study finding indicated that information technology investments are vital component of firm performance. The study concluded that if companies manage information technology investments fruitfully, they would improve firm performance. The study however focused on investment in information technology.

2.4.2 Local Studies

Rop, Kibet and Bokongo (2016) researched on the effect of portfolio diversification on the financial performance of Kenyan commercial banks. The study used an exploratory design and the population consisted of 40 commercial banks. Through descriptive statistical analysis, the study found that average capital structure for banks in the banking

sector was 64.040 with a standard deviation of 3.87239. The study arrived to a conclusion that many banks over the years have in practice employed the use of insurance investment on the financial performance of commercial banks. The study was however based on portfolio diversification and not investments.

Monyoncho (2015) looked at the relation between E-Banking technologies and financial performance. The research carried out a census of the 44 banks Kenyan-licensed and used secondary data for a five-year period. Through regression, the study showed ATM invention has transformed its role from a cash dispenser to a relationship management tool for customers thus increasing their loyalty. The focus of the study was investment in e banking technologies.

Machuki (2014) studied the effect of investment decision on the performance of listed firms in the Securities Exchange Nairobi. The study employed a descriptive research design and obtained secondary data from the 61 companies at the Nairobi Securities Exchange, under the main segment. The study utilized panel data methodology, which consisted of cross-sections and time series. The findings of the study revealed a significant and positive correlation between ROA and investment decision, financial leverage and liquidity. The context of the study was all firm listed at NSE and not commercial banks.

Mayoli (2013) studied the effect of financial assets allocation on the performance of Kenyan commercial banks. The study embraced a cross-sectional and time series were

combined between the financial years 2000 to 2012. To establish the existing relation the study adopted the liner regression model. The study found that investments in securities offered the highest returns with other factors held constant in the period under review, these securities are perceived to be high risk-high returns assets class. The study also found that investments in securities among commercial banks were very low representing less than 1% of asset allocation. The focus of the study was asset allocation decisions.

Karimi (2013) conducted a study on the connection between investment portfolio choice and profit gained of investment companies shown in the Nairobi Securities exchange. The research employed a design descriptive design of research and sampled four companies listed as under the investment sector at the Nairobi Securities Exchange. They used structured questionnaires to collect data. Through descriptive statistical analysis, study found that projects of investments that promise both high returns and constitute high risks are not found to be eye-catching for many institutional investors. The study also found that investor looks forward to getting good return for their investment as a compensation or reward for taking a risk in an investment. The focus of the study was profitability gains and investment portfolio choice.

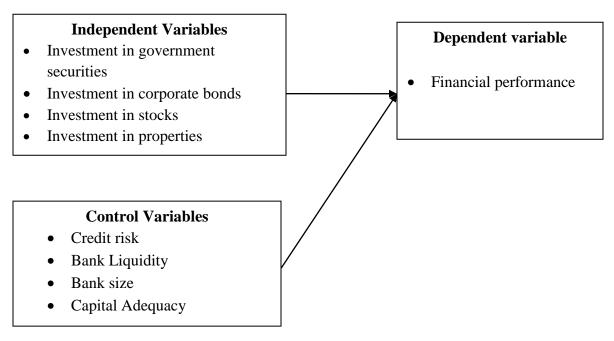Irungu (2014) examined the capital budgeting techniques used in investment appraisal among companies in the Nairobi Securities Exchange. They used a correlation cross-sectional survey research design and the population consisted of all companies shown at the Nairobi Securities Exchange. Using questionnaires to collect data, the research found out that all of the four capital budgeting techniques used by firms included net present

value, period of payback, internal return rate and accounting return rate. However, using correlation analysis, the findings established that there was no correlation between the banks' financial performance and the capital budgeting techniques employed. The study made the conclusion that there was no major relationship between the capital budgeting techniques employed and the financial performance. The focus of the study however was capital budgeting techniques and decisions.

2.5 Conceptual Framework

The conceptual model depicts the independent and the dependent variables. According to the neoclassical theory, investment is seen as a distributed lag function of variations in the required capital. Therefore, the required or desired capital here acts as a function to the output level, user capital cost and output price. Additionally, Q theory of investments contends that the market estimation of equities is the major element of investment by firms. Thus, the independent variables will include investment in government securities, investments in stocks, investment in properties and corporate bonds investments. The independent variable will be financial performance. Additionally, credit risk, bank liquidity, bank size and capital adequacy will be used as control variables. The conceptual framework is depicted as follows:

Figure 2.1 Conceptual Model

Independent Variables	Dependent variable
• Investment in government securities • Investment in corporate bonds • Investment in stocks • Investment in properties	• Financial performance

Control Variables
• Credit risk • Bank Liquidity • Bank size • Capital Adequacy

Source: Researcher

2.6 Summary of Literature Review

The chapter explored the neoclassical investment theory, the Q and the Accelerator investment model theory. The neoclassical theory embraces that in investment undertakings, firms meet capital cost so as to get the wanted capital stock. Q theory presupposes if there is an existing enterprise that is affordably purchasable, no need of reinforcing a new enterprise. The accelerator model of investment assumes that firms hold a stock of inventories, which is proportional to the firms level of output and focused on the major determinant of investment decisions which is output growth. The chapter also reviewed several studies by various authors and most of the reviewed studies have not extensively scrutinized the affiliation between investments and commercial banks financial performance with majority of the available studies concentrating on IT investment and firm performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology previews design of the research, the population of the study, analysis of data procedure and the collection of data technique.

3.2 Research Design

A research design involves a systematic method of data gathering, procedures and method of analyzing necessary data. To answer the research question of this study, a descriptive research design was employed. A descriptive design helps to establish how things are currently in the field of study and to report them as they are without manipulating them or change their status.

3.3 Population of the Study

A population is a distinct group of individuals, services, events, elements and group of things that are being examined. According to the Central bank of Kenya (2016), there were 42 commercial banks in Kenya as at 31st December 2016. The study therefore carried out a census of the 42 commercial banks.

3.4 Data Collection

To determine the relation between investments and financial performance of commercial banks in Kenya, secondary data was preferred, and was retrieved from the annual financial reports of the commercial banks in Kenya for the period between 2012 to 2016. Secondary data on investment was obtained from the commercial banks statement of

financial position while data on financial performance was retrieved from the statement of financial position and income statement.

3.5 Diagnostic Tests

Various diagnostics test including the tests of normality, serial correlation and multicollinearity were undertaken. The measures of skewness and kurtosis were used to assess normality while serial correlation was determined via the Durbin Watson test. Finally, to assess multicollinearity the variance inflation factors and correlation analysis were used respectively.

3.6 Data Analysis

The collected data was coded and entered into the statistical package for social sciences and then summarized using statistical methods that are descriptive like the mean, standard deviation, skewness and kurtosis. Additionally, correlation was used to establish the degree of relationship among the variables and regression analysis was used to establish the association between the dependent and independent variables.

3.6.1 Analytical Model

The multiple linear model of regression was adopted as the analytical study model. The regression model is illustrated as below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$$

Where,

Y = Financial performance determined using return on assets (ROA)

X_1 = Investment in government securities measured using the proportion of total investment in government securities over the total assets

X_2 = Investment in stock measured using the proportion of total investment in stock over the total assets

X_3 = Investment in properties measured using the proportion of total investment in properties over the total assets

X_4 = Investment in corporate bonds measured using the proportion of total investment in corporate bonds over the total assets.

X_5 = Credit risk measured using the non-performing loans ratio (Control variable)

X_6 = Bank liquidity measure using the liquidity ratio (Control variable)

X_7 = Bank size measured using the natural log of assets (Control variable)

X_8 = Capital adequacy measured using the capital adequacy risk (Control variable)

β_0 = Constant

β_1 - β_7 = Coefficients of the regression equation

ε = Error term

3.6.2 Test of Significance

This study utilized the ANOVA and the F statistics at 0.05 level of significance to test whether specific the regression model was significant. The t statistics was used to assess the significance of the coefficients of the regression model.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This section presents the findings of the analyzed data, the discussion and interpretations of the results. The chapter outlines the response rate, the descriptive statistics, correlation and the results of regression analysis.

4.2 Response Rate

This research targeted 42 commercial banks in Kenya as at 31 December 2016 but the study obtained completed data from 35 commercial banks in the country. The 35 banks made up a response rate of 83%, which was considered sufficient.

4.3 Descriptive Statistics

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev	Skewness	Kurtosis
ROA	175	-.098	.073	.01652	.022838	-1.504	.132
Government securities	175	.000	.590	.20611	.126817	.829	.735
Stocks	175	.000	.490	.02257	.056849	.952	1.420
Properties	175	.000	.050	.00063	.004174	.015	1.348
Corporate bonds	175	.000	1.900	.02337	.144880	1.644	1.416
Credit risk	175	.000	.620	.09949	.098484	.154	.702
Liquidity	175	.017	1.130	.40851	.155782	1.742	.594
Size	175	11.040	20.010	17.194	1.6590	-.844	1.520
Capital adequacy	175	.070	.840	.23211	.105234	.358	.764

Source: Research Findings

Table 4.1 summarizes the study data using descriptive statistical technique. The tables shows that the average ROA of the commercial banks was 0.0165 with maximum and minimum values of 0.073 and -0.098 respectively. The tables also indicate that the average investment in government securities, stocks, properties and corporate bonds were 0.20611, 0.02257, 0.00063 and .02337. This indicates that commercial banks mostly invest in government securities, which include treasury bills and bonds, followed by corporate bonds, stocks and the least in properties. The study shows that the mean value of credit risk was 0.9949, which indicates that 9.94% of the loans in the banking sector are nonperforming.

The average liquidity was 0.40851, which indicate commercial banks are liquid, and most of them had liquidity ratio above the recommended ratio of 20% however, three banks had liquidity ratios below the 20% ratio with one having a liquidity ratio of 1.7% in 2016. The study also shows that the average size of the commercial banks in terms of the natural log was 17.194 while the average capital requirement measured using the capital adequacy ratio was 0.105234. The tables also show that the data was normally distributed since all the kurtosis and skewness value ranged between -2 and +2 hence the assumption of normality was upheld.

4.4 Correlation Analysis

Table 4.2 shows the correlations among the variables. According to the findings on the table, ROA had a positive correlation with investment in government securities, stocks and properties but a negative correlation with investment in corporate bonds. The table

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further shows that the correlation between liquidity, bank size, capital adequacy and ROA is positive while the correlation between credit risk and ROA is negative. The correlations are all less than 0.7 hence an indication that there is no multicollinearity among the variables.

Table 4.2 Correlations

	1	2	3	4	5	6	7	8	9
1	1								
2	.086	1							
3	.145	-.061	1						
4	-.038	-.095	-.059	1					
5	.033	-.037	.165*	.009	1				
6	-.228**	-.009	-.175*	.092	-.066	1			
7	.304**	.133	.094	-.078	-.035	-.336**	1		
8	.149*	.066	-.179*	-.012	-.199**	-.224**	.024	1	
9	.246**	.084	-.071	.058	-.027	-.144	.372**	-.174*	1

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

*. Correlation is significant at the 0.05 level (2 tailed).

Key: 1- ROA, 2- Government securities. 3- Stocks, 4 – Properties, 5 – Corporate bonds,

6- Credit risk, 7- Liquidity, 8-size, 9 – Capital adequacy

Source: Research findings

4.5 Regression Analysis

4.5.1 Model Summary

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.426[a]	.182	.142	.894061	1.528

a. Predictors: (Constant), Capital adequacy, Corporate bonds, Properties, Government securities, Credit risk, Stocks, Size, Liquidity

b. Dependent Variable: ROA

Source: Research Findings

The model summary indicates that 18.2% of the variation in financial performance of commercial banks in Kenya is explained by the independent variables, which include investment in government securities, stocks, properties, corporate bonds, credit risk, and liquidity, size and capital adequacy. The 18.2% is shown by the coefficient of determination value (R-square) which is 0.182. The overall correlation coefficient value of 0.426 indicates that there is a week correlation between the independent and dependent variables. The Durbin Watson value is 1.428 and lies between 1 and 4 thus an indication that there is no serial correlation.

4.5.2 Analysis of Variance

Table 4.4 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	29.448	8	3.681	4.605	.000[b]
1	Residual	132.691	166	.799		
	Total	162.139	174			

a. Dependent Variable: ROA

b. Predictors: (Constant), Capital adequacy, Corporate bonds, Properties, Government securities, Credit risk, Stocks, Size, Liquidity

Source: Research Findings

Table 4.4 shows that the regression model is significant since the p value of 0.000 is less than the significance value of 0.05. This indicates that the regression model is a good predictor of the relationship between the considered study variables.

4.5.3 Regression Coefficients

Table 4.5 shows the regression coefficient results which indicates that there is an insignificant negative relationship between investment in government securities, investment in properties and ROA. The results also indicate that there is a positive and insignificant relation between corporate bonds and return on assets of the commercial banks. The results also show that there is a significant relationship between investment in stocks, liquidity, bank size, capital adequacy and return on assets of the commercial banks. The tables further indicate that the relationship between credit risk and ROA is negative and insignificant. The VIF values are all less that 10 and greater than 1, which

indicates there was no multicollinearity among the independent variables and the dependent variable.

Table 4.5 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-5.011	.774		-6.478	.000		
	Government securities	-5.011	.185	.040	.560	.576	.961	1.040
	Stocks	2.761	1.267	.163	2.179	.031	.878	1.139
	Properties	-3.758	16.412	-.016	-.229	.819	.969	1.032
	Corporate bonds	.383	.485	.058	.790	.431	.927	1.078
	Credit risk	-.043	.062	-.056	-.701	.484	.780	1.282
	Liquidity	.430	.193	.179	2.225	.027	.758	1.320
	Size	.121	.045	.208	2.662	.009	.807	1.239
	Capital adequacy	1.263	.458	.218	2.756	.007	.788	1.269

a. Dependent Variable: ROA

Source: Research Findings

The results on table 4.3 leads to the following regression equation

$$Y = -5.011 - 5.011X_1 + 2.761X_2 - 3.758X_3 + 0.383X_4 - 0.043X_5 + 0.430X_6 + 0.121X_7 + 1.263X_8 + \varepsilon$$

4.6 Interpretation of the Findings

The findings established an insignificant negative relationship between investment in government securities, investment in properties and ROA of the commercial banks. This

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means that investment in government securities and properties does not significantly affect the financial performance of Kenyan banks. The results also indicate that there is a positive and insignificant relation between corporate bonds and return on assets of the commercial banks. This indicates that investment in corporate bonds does not have a significant effect on Kenya banks financial performance. A study by Mayoli (2013) found that investments in securities among commercial banks were very low representing less than 1% of asset allocation. Irungu (2014) also concluded that there was no major relationship between the capital budgeting techniques employed and the financial performance.

The findings revealed a significant positive relationship between investment in stocks, liquidity, bank size, capital adequacy and return on assets of the commercial banks. This means that an investments in stocks, bank liquidity, size and capital adequacy directly and significantly influences the financial performance of commercial banks in Kenya. A study by Machuki (2014) revealed a significant and positive correlation between ROA and investment decision, financial leverage and liquidity. Mayoli (2013) found that investments in securities offered the highest returns with other factors held constant in the period under review, these securities are perceived to be high risk-high returns assets class. Finally, the study found that the relationship between credit risk and ROA is negative and insignificant hence an indication that credit risk has no significant impact on performance of commercial banks in Kenya.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the research, outlines the study conclusions and recommendations. In additions, the section highlights the research limitations and suggests areas which may need additional investigation.

5.2 Summary

The study sought to answer the question of what is the relationship between investments and financial performance of commercial banks in Kenya. To provide answers to this question a descriptive design was undertaken and secondary data was collected from the targeted 42 commercial banks in Kenya from 2012 to 2016. This research targeted 42 commercial banks in Kenya as at 31 December 2016 but the study obtained completed data from 35 commercial banks in the country hence making up a response rate of 83% which was deemed adequate. Descriptive statistical techniques, regression and correlation were employed to analyze the data.

The results of descriptive analysis of the data obtained that the average ROA of the commercial banks was 0.0165 while the average investment in government securities, stocks, properties and corporate bonds were 0.20611, 0.02257, 0.00063 and .02337 in that order. The mean value of credit risk was 0.9949 whereas the average liquidity was 0.40851 respectively. The result revealed the average size of the commercial banks in

terms of the natural log was 17.194 while the average capital requirement measured using the capital adequacy ratio was 0.105234 respectively.

The findings of correlation analysis found that ROA had a positive correlation with investment in government securities, stocks and properties but a negative correlation with investment in corporate bonds. The results indicated that the correlation between liquidity, bank size, capital adequacy and ROA was positive while the correlation between credit risk and ROA was negative. The model summary finding revealed that 18.2% of the variation in financial performance of commercial banks in Kenya is explained by the independent variables, which include investment in government securities, stocks, properties, corporate bonds, credit risk, and liquidity, size and capital adequacy.

The findings of ANOVA established that the regression model was significant since the p value of 0.000 was less than the significance value of 0.05. The coefficient results established an insignificant negative relationship between investment in government securities, investment in properties and ROA. The results also revealed a positive and insignificant relation between corporate bonds and return on assets of the commercial banks. The findings also found a significant relationship between investment in stocks, liquidity, bank size, capital adequacy and return on assets of the commercial banks. Finally, it was found that the relationship between credit risk and ROA is negative and insignificant.

5.3 Conclusions

The results of the study found an insignificant negative relationship between investment in government securities, investment in properties and ROA of the commercial banks. The study based on this finding concludes that investment in government securities and properties does not significantly affect the financial performance of Kenyan banks. The findings also found that there is a positive and insignificant relation between corporate bonds and return on assets of the commercial banks. Based on this finding the study concludes that investment in corporate bonds does not have a significant effect on Kenya banks financial performance.

The findings of the research also established that there a significant positive relationship between investment in stocks, liquidity, bank size, capital adequacy and return on assets of the commercial banks. Based on this finding the study concludes that investments in stocks, bank liquidity, size and capital adequacy directly and significantly influences the financial performance of commercial banks in Kenya. The research findings further revealed that the relationship between credit risk and ROA is negative and insignificant. The based on this finding concludes that credit risk has no significant impact on performance of commercial banks in Kenya.

5.4 Recommendations

The study concluded that financial performance of commercial bank in Kenya is significantly and positively influenced investment is stocks. The researcher therefore

recommends that the management of commercial banks should emphasize on investing in stocks to ensure that they enhance their banks performance in financial terms.

The researcher also conclude that commercial banks financial performance was significantly influence by liquidity, bank size and capital adequacy. The study therefore recommends that the management of commercial banks should maintain adequate liquidity and capital adequacy ratios to ensure that they enhance their banks performance and increase it size in the long-run.

The study concluded that investment in government securities, investment in properties, investment in corporate bonds do not significantly affect commercial banks financial performance. Nevertheless, the study recommends that commercial banks can invest in government securities and corporate bond since they can be converted into cash, which enhances liquidity of banks.

The study further concluded that credit risk does not significantly affect commercial banks performance. Nevertheless, the study recommends that banks managements should instate effective credit risk mitigation strategies since credit affects the interest income, which a bank receives after advancing credit.

5.5 Limitations of the Study

The objective of this study was to explore the relationship between bank performance and its investment decisions. The study therefore focused on commercial banks despite the fact that there are other financial institutions like mortgage firms, micro finances and saving and credit cooperative societies, which operate in a similar manner as commercial

banks. The findings therefore will be limited to commercial banks and not the various forms of financial institutions in the country.

The study measured financial performance using the returns on assets ratio but there other financial performance measures which may yield different results. Additionally, the independent ratios were measured using specific ratios identified but there are other alternative measures of investments, credit risk, liquidity and size, which may yield similar or diverse results. The findings thus are based on the operationalized variables.

5.6 Suggestion for Further Research

The context of this study was commercial banks in Kenya however there are several other financial institutions in Kenya like Microfinance institutions, mutual funds, unit trust and investment firms which invest in a similar manner as commercial banks. Thus, the study recommends an additional research on the effect of investments on other types of financial institutions in Kenya. The study also recommends an additional study using other measures of financial performance like return on equity, net interest margin and other measures.

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APPENDICES

Appendix I: List of commercial banks in Kenya

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India.
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Charterhouse Bank Ltd
8. Chase Bank (K) Ltd.
9. Citibank N.A Kenya.
10. Commercial Bank of Africa
11. Consolidated Bank of Kenya
12. Co-operative Bank of Kenya
13. Credit Bank Ltd.
14. Development Bank of Kenya
15. Diamond Trust Bank Kenya
16. Ecobank Kenya Ltd.
17. Equatorial Commercial Bank
18. Equity Bank Ltd.
19. Family Bank Limited.
20. Fidelity Commercial Bank
21. Fina Bank Ltd.
22. First community Bank.
23. Giro Commercial Bank Ltd.
24. Guardian Bank Ltd.
25. Gulf African Bank Limited.
26. Habib Bank A.G Zurich.
27. Habib Bank Ltd.
28. Imperial Bank Ltd.
29. I & M Bank Ltd.
30. Jamii Bora Bank Limited.
31. Kenya Commercial Bank.
32. K-Rep Bank Ltd.
33. Middle East Bank (K) Ltd.
34. National Bank of Kenya Ltd.
35. NIC Bank Ltd.
36. Oriental Commercial Bank
37. Paramount Universal Bank
38. Prime Bank Ltd.
39. Standard Chartered Bank Kenya Ltd.
40. Trans-National Bank Ltd.
41. UBA Kenya Bank Limited.
42. Victoria Commercial Bank

Source: Central bank of Kenya (2017)

Appendix II: Data Collection Sheet

Year	2016	2015	2014	2013	2012
Net income					
Total assets					
Investment in government securities					
Investment in stock					
Investment in properties					
Investment in corporate bonds					
Net non performing loan					
Total loans and advances					
Liquidity ratio					
Capital adequacy ratio					