

**THE EFFECT OF MACRO-ECONOMIC VARIABLES ON
PERFORMANCE OF INVESTMENT BANKS IN KENYA**

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DECLARATION

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

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

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DEDICATION

This work is dedicated to my parents, Edward and Lydiah, and my siblings, Andrew, Ann and Eva for their encouragement and support throughout the working period.

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ABBREVIATIONS

ANOVA	Analysis of Variance
APT	Arbitrage Pricing Theory
CAPM	Capital Asset Pricing Model
CBA	Commercial Bank of Africa
CMA	Capital Markets Authority
CPI	Consumer Price Index
EMH	Efficient Market Hypothesis
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
KCB	Kenya Commercial Bank
KRA	Kenya Revenue Authority
MFI	Micro Finance Institutions
MPT	Market Pricing Theory
ROA	Return on Assets
US	United States

ABSTRACT

Over the past ten years, the investment banks in Kenya have witnessed tremendous growth that has been attributed to more improved openness and reduced regulation in the sector which has aroused interest in the investing public. The investment banking industry like any other industries in the market is affected by various macroeconomic variables such as interest rate, inflation, unemployment, Gross Domestic Product (GDP), exchange rate fluctuations and money supply. Firms and individuals need to be well informed about the macro economic factors they are exposed to for mitigating risks and losses that might occur as a result. This study sought to determine the effect of macroeconomic variables on financial performance of investment banks in Kenya. The independent variable were interest rates as measured by quarterly CBK lending rate, inflation rates as measured by quarterly CPI, exchange rates as measured by quarterly exchange rate between KSH/USD and economic growth as measured by quarterly GDP growth rate. Financial performance of investment banks in Kenya was the dependent variable which the study sought to explain and it was measured by return on assets of investment banks in the country on a quarterly basis. Secondary data was collected for a period of 10 years (January 2008 to December 2017) on a quarterly basis. The study employed a descriptive research design and a multiple linear regression model was used to analyze the relationship between the variables. Statistical package for social sciences version 22 was used for data analysis purposes. The results of the study produced R-square value of 0.344 which means that about 34.4 percent of the variation in financial performance of investment banks in Kenya can be explained by the four selected independent variables while 65.6 percent in the variation was associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with financial performance of investment banks ($R=0.586$). ANOVA results show that the F statistic was significant at 5% level with an F statistic of 4.585. Therefore the model was fit to explain financial performance of investment banks in Kenya. The results further revealed that individually, interest rate, inflation rates and exchange rates are significant determiners of financial performance of investment banks in Kenya while economic growth is not a significant determiner. This study recommends that there is need for policy makers to regulate the prevailing levels of interest rates, exchange rates and inflation rates as they have a significant effect on financial performance of investment banks in the country.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

The relationship between macroeconomic factors and performance of firms has been a subject of interest among scholars and practitioners. It is often argued that a firm's performance is determined by some fundamental macroeconomic variables such as interest rate, gross domestic product, inflation and exchange rate. Evidence from financial press indicates that investors generally believe that monetary policy and macroeconomic events have a large influence on the volatility of earnings. This means that macroeconomic variables can influence investors' investment decision and motivates many researchers to investigate the relationship between investment returns and macroeconomic variables (Gan et al., 2006).

The activities in the financial markets and their relationship with the real sector have assumed significant importance since the inception of the financial sector reforms in the beginning of 1990's. The whole institutional reforms, introduction of new instruments, change in procedures, widening of network of participants call for a reexamination of the relationship between the financial sector and real sector. Interest has grown during the past two decades or so as more and more individuals own stocks (shares) than ever before. Research findings from developed markets show that firms' performance are closely interrelated to influence and also be influenced by other sectors of the economy. This relationship between firm performance and the general economy of a country is of interest to many more people in the community than just investors (Oloo, 2009). The

explanation for this is because companies play an important role in the economy in terms of allocation of resources, financial intermediation and supply of capital (Ngugi et al., 2006).

Investment banks are an essential part of the financial sectors of modern economies. Providing alternative savings tools to savers and non-bank sources of financing for enterprises, the markets promote economic growth through improved efficiency in savings mobilization (Mwega, 2009). Investment banks provide a means through which small savers can pool funds to invest in a variety of financial instruments. The resulting economies of scale offer investors the benefits of professional portfolio management, reduced transaction costs, and the reduced risk exposure within large, diversified portfolios (Gardener & Cooperman, 2000). The role of the investment banks in Kenya is to enhance and accelerate the growth and development of the economy (Fischer, 1993). Because of the crucial role investment banks play in the development of the economy, understanding the macro economic factors that affects their operation is important.

1.1.1 Macroeconomic Variables

Macroeconomic variables are those variables that are independent of the income levels. They are factors that greatly influence the economic growth. They deal with the performance, structure, behaviour, and decision-making of an economy as a whole, rather than individual markets. These variables affect national income, output, consumption, unemployment, inflation, savings, investment, international trade and international finance (Sharma & Singh, 2011). Macroeconomic variables are indicators or main signposts signaling the

current trends in the economy. Some of the macroeconomic variables include GDP, unemployment and inflation (Khalid et al., 2012).

In contrast, microeconomics is primarily focused on the actions of individual agents, such as firms and consumers, and how their behaviour determines prices and quantities in specific markets. That is, microeconomics studies individual components, whereas macroeconomics studies the economy as a whole. Gross domestic product (GDP) is the sum of all productivity within a country for a given year. GDP includes all domestically manufactured products, all produce and livestock, all asset valuation increases, and intangible investment growth. Inflation is the rate at which prices increase over a period of time (Sharma & Singh, 2011).

Smaller components, such as the consumer price index, fiscal policies, commercial banking, and access to credit all play a role in influencing inflation up or down. Unemployment measures the number of residents who are not presently employed but are actively seeking employment. Individual macroeconomic variables, such as banking, the consumer price index, and changes in government regulations, each influence multiple areas of economic growth (Mishkin, 2004).

1.1.2 Firm Performance

Performance is a measure of how efficient a company utilizes its assets to generate revenues in its primary mode of doing business. The term performance refers to the overall measure of a firm's general financial standing over a period, and it is commonly used to compare the performance of firms in the same industry or comparison of industries in aggregates. Line items such as total revenue from a firm's operating activities, cash flow from operations, operating income among others can be used.

Furthermore, an interested party such as a financial analyst may wish to look deeper into financial statements and analyze margin growth rates or any declining debt (Titman & Wessel, 2008).

Ultimately the universal measure of business performance is profits, and the ultimate forms of this measurement are the final accounts of the company. Profits have the advantage that it can be used to measure the effectiveness and efficiency not only of different business functions (marketing, engineering, production) but also compare different companies or firms. According to Kwon and Shin (1999), organizational performance encompasses three specific areas of firm outcomes that include financial performance (profits, return on assets, return on investment), product market performance (sales, market share) and shareholder's return (total shareholder return, economic value added).

1.1.3 Effect of Macro Economic Variables on Firm Performance

The relationship between macroeconomic factors and performance has gotten generous thought in the available literature. The arbitrage-pricing model predicts that the biggest part of the returns of firms is from unexpected events, which are linked to the general economic environment (Sadiye, 2014). The modern portfolio theory Modern portfolio theory assumes that a company's business performance is influenced by the interaction various macroeconomic variables which are a source of systematic risk (Çekrezi, 2015). The macroeconomic variables, both real and financial have a considerable influence, positive as well as negative, on the performance of the corporate sector of the economy (Kumar, 2014).

Cheechee and Herbeman (2002) explain that economic environments have a profound effect on the growth of companies. Mwega (2009), states that macro-economic variables are such factors that are pertinent to a broad economy at the regional or national level and affect a large population rather than few selected individuals. It is often argued that firm performance is determined by some fundamental macro-economic variables such as the interest rate, Gross Domestic Product (GDP), exchange rate, inflation unemployment, money supply, stock market and FDI which are closely monitored by the government, businesses and consumers (Mwangi, 2013).

Evidence from the financial press indicates that investors generally believe that monetary policy and macroeconomic events have a large influence on the volatility of firm performance (Muchiri, 2012). The major macroeconomic factors are the income level (per capita and disposable income), inflation and price level, comparative return on investments and demographic factors and form the linkage between the economy and investment banks.

Maghyereh (2002) investigated if the interest rate has an explanatory power on stock return, and revealed that the interest rate can be used as an explanatory power for stock market return. Kwon and Shin (1999) did a study on the effects of interest rate and exchange rate on Turkish stock return and revealed that both macroeconomic variables have a significant impact on share prices. Evans (1998), argue that, the inflation risk and interest rate are integrated assets with higher risk accordingly investor should be compensated by receiving higher return which mean that there is a positive correlation between interest rate and inflation.

1.1.4 Investment Banks in Kenya

Kenya has one of the most advanced and diversified financial sectors in the region. Investment banking is not well established in the country. The investment banking segment in Kenya relies on the expertise and sales reach of subsidiaries of major Kenyan banks such as NIC Capital, Genghis Capital, KCB Capital, Equity Investment Bank, CBA Capital standalone licensed investment banks such as Dyer & Blair Investment Bank, Standard Investment Bank, Faida Investment Bank, Kestrel Capital and local franchises of international players such as Barclays Financial Services, African Alliance, SBG Securities, EBI Investment Corporation and Renaissance Capital. Investment banks in Kenya are involved in offering advisory services on public offering of securities, corporate restructuring, takeover, mergers and acquisitions (M&A), privatization, corporate finance options, engaging in the business of a stockbroker, engaging in the business of a dealer, promoting or arranging underwriting or issuance of securities, promoting and acting as a fund manager of collective investment schemes, providing investment advisory services and contractual portfolio management (CMA, 2016).

Overall, the advisory arena is likely to remain accessible only to large corporates capable of drawing together complex teams of advisors in various fields and pay for the work. One would hope to see a broadening of the product range and deeper value chains develop as the market for the services is driven by demand and rarely by supply. There has been increased competition in the industry from the stock brokers and other major commercial banks. The local investment banks have also faced stiff competition from

foreign banks which are well established and have an upper hand in the competition (CMA, 2016).

In terms of total income for the year ended December 31, 2016; the Kenyan investment banking industry was dominated by Dyer & Blair Investment Bank, SBG Securities, Kestrel Capital, Renaissance Capital, Standard Investment Bank, Genghis Capital, African Alliance Investment Bank, Equity Investment Bank and Faida Investment Bank. Their cumulative total income for the period was more than 70% of the Kenyan investment banking industry. Other investment banks include CBA Capital, KCB Capital, NIC Capital, Sterling Capital and EBI Investment Corporation. The small investment banks have faced stiff competition from big investment banks that have made their products and services cheaper and accessible (CMA, 2016). The local investment banks need to come up with strategies that would enable them to compete in the industry.

1.2 Research Problem

A number of macroeconomic factors such as changes in interest rate, inflation rates, and economic growth are believed to affect how stocks perform. The macroeconomic approach attempts to examine the sensitivity of stock prices to changes in macroeconomic variables. Under this approach, stock prices are influenced by changes in money supply, interest rate, inflation and other macroeconomic indicators. It employs a general equilibrium approach, stressing the interrelations between sectors as central to the understanding of the persistence and co-movement of macroeconomic time series, based on the economic logic, which suggests that everything does depend on everything else (Emenuga, 1994).

Over the past ten years, the investment banks in Kenya have witnessed tremendous growth that has been attributed to more improved openness and reduced regulation in the sector which has aroused interest in the investing public. The number of registered investment banks has increased from three in the year 2000 to the current twenty one (21) (Kenya Gazette, 2017). The investment banking industry like any other industries in the market is affected by various macroeconomic variables such as interest rate, inflation, unemployment, Gross Domestic Product (GDP), exchange rate fluctuations and money supply. Firms and individuals need to be well informed about the macro economic factors they are exposed to for mitigating risks and losses that might occur as a result.

Desaro (2012) undertook a study on the relationship between macroeconomic factors and the financial performance of commercial banks in Kenya. She established that the ROA was positively correlated with the GDP, money supply, lending rate and inflation, and negatively correlated with exchange rate. Njuguna (2013) did a study on the effects of macroeconomic factors on the financial performance of deposit taking microfinance institutions in Kenya and concluded that increase in GDP led to an increased performance while increase in lending rates led to a reduction in performance as measured by ROA. Mwangi (2013) concluded that macroeconomic variables influence the financial performance of companies in the aviation industry in Kenya at 20.8% level of significance (5%). The study also found that the ROA had a weak positive insignificant correlation with GDP growth rate and annual change in money supply (M3). The study further concludes that there is a weak negative insignificant correlation between ROA and real exchange rate, annual average lending rate and annual average inflation.

Njuguna (2013) found out that MFI financial performance could be determined to a very large extent by three macroeconomic variables; economic growth (measured by GDP), interest rate and inflation. He argued that if microfinance industry has to have a boost in Kenya they should check the three macro-economic factors. Kung'u (2013) concludes that GDP, inflation and banks' lending interest rates in that respective order were established to be the macroeconomic factors that had the greatest positive effect on PE firms' financial performance while exchange rate of the dollar against the Kenya Shilling showed a negative relationship though to a small extent. Muchiri (2012) concludes that exchange rate has a significant negative impact on stock market performance; higher money supply and lower interest rates may lead to better stock market performance. He recommends the Government to initiate measures that will control exchange rate, money supply and initiate policies that will lower interest rates.

Most of the studies on the effects of macroeconomic indicators have covered Aviation industry (Mwangi, 2013) the stock market (Muchiri, 2012) the commercial banks in Kenya (Desaro, 2012). Muchiri (2012) suggested in his research the need to replicate the study of macroeconomic variables in other sectors of the economy like manufacturing, insurance, investment banks in order to find out whether these variables influence performance of the firm. There is therefore a gap in literature as far as the study on the relationship between macroeconomic variables and performance of investment banks in Kenya. Thus this study sought to fill this research gap by answering the following

question: What is the effect of macroeconomic variables on performance of investment banks in Kenya?

1.3 Research Objective

The objective of this study was to determine the effect of macro-economic variables on performance of investment banks in Kenya

1.4 Value of the Study

The findings of this study will be important to investment banks stakeholders, finance students', researchers', academicians and scholars, finance professionals, government agencies and policy makers. The study will be useful to the investment banks shareholders as they will know whether treasury managers tasked with value addition of their investments are making viable decisions based on macroeconomic variables. The study will be of importance to management since they can tell the relationship between risk-adjusted returns and macroeconomic factors.

To academicians, scholars and researchers, this study will open up to a new area that has not been studied hence arouse curiosity in trying to dig deeper in this field especially for those who may be interested in conducting further research on this area will undoubtedly find this study to be significant point of reference for literature and research gaps. Government agencies such as CMA, KRA and policy makers will find this as a useful basis that can guide them in decision making process especially when formulating policies such as fixing the interest rates and legislations that govern investment banks operations in Kenya.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter is divided into five sections, the first section will cover the theories in the study, the second section will cover the determinants of financial performance, the third section will cover empirical studies, the fourth section covers the conceptual framework and the last section will cover the summary of the theoretical and empirical reviews.

2.2 Theoretical Review

The main purpose of this literature review is identifying and examining what has been done by other scholars and researchers in relation to the effect of macro-economic variables on the financial performance of investment banks. The theoretical review will provide detailed knowledge of what has been done and form a framework within which the research findings are to be interpreted and also to overcome the limitations of previous studies. The following section will describe and discuss different theories such as Keynesian Economic Theory, Modern Portfolio Theory and Behavioral Finance Theory.

2.2.1 Keynesian Economic Theory

Keynes (1936) is in the view that in the short run, especially during recessions, economic output is strongly influenced by aggregate demand (total spending in the economy). In the Keynesian view, aggregate demand does not necessarily equal the productive capacity of the economy; instead, it is influenced by a host of factors and sometimes behaves erratically, affecting production, employment, and inflation. Keynesian economists often

argue that private sector decisions sometimes lead to inefficient macroeconomic outcomes which require active policy responses by the public sector, in particular, monetary policy actions by the central bank and fiscal policy actions by the government, in order to stabilize output over the business cycle.

Policies focus on the short-term needs and how economic policies can make instant corrections to a nation's economy. Also, the government is seen as the only force to end financial and economic downturns through monetary or fiscal policies, and providing aggregate demand to increase the level of economic output, facilitated through a stable financial system that can spur continued economic stability. Keynes (1936) later supported an alternative structure that includes direct government control of investment and advanced that financial deepening can occur due to an expansion in government expenditure. Since higher interest rates lower private investment, an increase in government expenditure promotes investments and reduces private investments concurrently.

2.2.2 Modern Portfolio Theory

Modern Portfolio Theory (MPT) is a theory of finance that attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets. There are four basic steps involved in portfolio construction: Security valuation, Asset allocation, Portfolio optimization and Performance measurement. More technically, MPT models an asset return as a normally distributed function (or more generally as an elliptically distributed random variable), define risk as the standard deviation of return,

and models a portfolio as a weighted combination of assets, so that the return of a portfolio is the weighted combination of the assets' returns. By combining different assets whose returns are not perfectly positively correlated, MPT seeks to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and markets are efficient (Daniel, Hirshleifer & Subramanyam, 1997).

MPT or portfolio theory was introduced by Markowitz (1952) with his paper "Portfolio Selection," which appeared in the 1952 Journal of Finance. Thirty-eight years later, he shared a Nobel Prize in Economics in 1990 with Merton Miller and William Sharpe for what has become a broad theory for portfolio selection and their contribution to the field of financial economics. Prior to Markowitz's work, investors focused on assessing the risks and rewards of individual securities in constructing their portfolios. Standard investment advice was to identify those securities that offered the best opportunities for gain with the least risk and then construct a portfolio from these. Following this advice, an investor might conclude that railroad stocks all offered good risk-reward characteristics and compile a portfolio entirely from these. Intuitively, this would be foolish. Markowitz formalized this intuition. Detailing mathematics of diversification, he proposed that investors focus on selecting portfolios based on those portfolios' overall risk-reward characteristics instead of merely compiling portfolios from securities that each individually has attractive risk-reward characteristics. In a nutshell, investors should select portfolios not individual securities (Markowitz, 1952).

If we treat single-period returns for various securities as random variables, we can assign

them expected values, standard deviations and correlations. Based on these, we can calculate the expected return and volatility of any portfolio constructed with those securities. We may treat volatility and expected return as proxy's for risk and reward. Out of the entire universe of possible portfolios, certain ones will optimally balance risk and reward. These comprise what Markowitz called an efficient frontier of portfolios. An investor should select a portfolio that lies on the efficient frontier. James Tobin (1958) expanded on Markowitz's work by adding a risk-free asset to the analysis. This made it possible to leverage or deleverage portfolios on the efficient frontier. This led to the notions of a super-efficient portfolio and the capital market line. Through leverage, portfolios on the capital market line are able to outperform portfolio on the efficient frontier (Tobin, 1958).

Sharpe (1964) formalized the capital asset pricing model (CAPM). This makes strong assumptions that lead to interesting conclusions. Not only does the market portfolio sit on the efficient frontier, but it is actually Tobin's super-efficient portfolio. According to CAPM, all investors should hold the market portfolio, leveraged or deleveraged with positions in the risk-free asset. CAPM also introduced beta and relates an asset's expected return to its beta. Portfolio theory provides a context for understanding the interactions of systematic risk and reward. It has shaped how institutional portfolios are managed and motivated the use of passive investment techniques. The mathematics of portfolio theory is used in financial risk management and was a theoretical precursor for today's value-at-risk measures.

2.2.3 Arbitrage Pricing Theory

Arbitrage pricing theory (APT) as proposed by Ross (1976) is a general theory that entails analysis of macroeconomic variables and asset pricing that holds that the expected return of a financial asset can be modelled as a linear function of various macro-economic factors or theoretical market indices, where sensitivity to changes in each factor is represented by a factor-specific beta coefficient. The model-derived rate of return will then be used to price the asset correctly - the asset price should equal the expected end of period price discounted at the rate implied by the model. If the price diverges, arbitrage should bring it back into line. The APT was a revolutionary model because it allows the user to adapt the model to the security being analyzed. And as with other pricing models, it helps the user decide whether a security is undervalued or overvalued and so he or she can profit from this information. APT is also very useful for building portfolios because it allows managers to test whether their portfolios are exposed to certain macroeconomic variables.

A firm's manager has to continuously evaluate investment options in light of limited resources and the paramount need to maximize shareholders returns. This can be termed as the process of arbitraging between the opportunities available. Arbitrage is the practice of taking positive expected return from overvalued or undervalued securities in the inefficient market without any incremental risk and zero additional investments. The arbitrage pricing theory (APT) is an asset pricing theory that states that the expected return of an investment or a financial asset can be modeled as a linear relationship of various macro-economic variables or where degree of correlation to changes in each

variable is represented by a beta coefficient. The model-derived rate of return will then be used to obtain the price or value of the asset correctly. The asset value should equal the expected end of period asset value or future cash flows discounted at the rate implied by the model. If the asset value changes, arbitrage should bring it back to the line (Mayasami and Sims, 2002).

2.3 Determinants of Financial Performance

The determinants of investment bank performance are grouped into internal and external factors. They are stochastic variables which determine the output. Internal factors are characteristics of each investment bank individually which affect its performance. These factors are basically influenced by internal decisions made by management and the board. External factors includes: The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Exchange Rates (Athanasoglou et al., 2005).

2.3.1 Economic Growth

Bad economic conditions can worsen the quality of the investment portfolio generating losses, thus reducing investment banks' profitability. In contrast, an improvement in economic conditions, in addition to improving the solvency of borrowers, increases demand for credit by households and firms, with positive effects on the profitability of banks (Athanasoglou et al., 2005). In the same view, Kadongo (2011) concluded that the pro-cyclical nature of bank profits derives from the effects that the economic cycle exerts on net interest income (via lending activity) and loan loss provisions (via credit portfolio quality). Therefore, in general, there is a positive relationship between investment banks profitability and economic growth.

2.3.2 Interest Rates

It is generally believed that a rising interest rate should lead to higher investment bank profitability by increasing the spread between the saving and the borrowing rates. Studies in the USA have shown that this relationship is particularly apparent for smaller investment banks. They notice that the falling interest rates during recession lead to slower growth in investments. Consequently, investment banks, particularly the small ones may have difficulty in maintaining profit as market rates drops (Demirguc-Kunt & Huizingha, 2000). In the essence of lend-long and borrow-short argument, investment banks, in general may increase their investment rates sooner by more percentage points than their deposit rates. In addition, the rise in the real interest rates will increase the real debt burden on the borrower. This in turn, may lower asset quality, thereby inducing investment banks to charge a higher interest margin in order to compensate for the inherent risk.

2.3.3 Exchange Rates

Exchange rates have a significant effect on financial performance. First, currency fluctuations enter directly into the import price, producer price and Consumer Price Index (CPI). Exchange rate movements are transmitted to domestic prices through three channels. First is through prices of imported consumption goods, exchange rate movement affects domestic prices directly. Second is through prices of imported intermediate goods, exchange rate movement affects production cost of domestically produced goods. Third is through prices of domestic goods priced in foreign currency.

The extent to which those changes are reflected in the consumer price index (CPI) depends on the share of imports in the consumption basket (Nwankwo, 2006).

If depreciation results in higher prices for imported goods, demand for domestic goods that compete with imports will increase. As demand rises, there will be upward pressure on domestic prices and nominal wages. Rising wages will exert further upward pressure on domestic prices. Depreciation of the exchange rate can only offer protection to domestic industry when the domestic cost of production increases much less than the rate of depreciation, while prices of imported equivalent increases by the full amount of the depreciation. A depreciation of the currency can in this case lead to improved performance of local industry. Further, rise in exchange rate but in a well-controlled macroeconomic policy environment can lead to foreign currency gains by investment banks which are incorporated in their income statements to improve on their performance (Nwankwo, 2006).

2.3.4 Inflation Rates

A widely used proxy for the effect of the macroeconomic environment on investment bank performance is inflation. The effect of inflation depends on whether investment banks' wages and other operating expenses increase at a faster rate than inflation. The question is how mature an economy is so that future inflation can be accurately forecast and thus banks can accordingly manage their operating costs. As such, the relationship between the inflation rate and performance is ambiguous and depends on whether or not inflation is anticipated. An inflation rate fully anticipated by the investment bank's

management implies that banks can appropriately adjust interest rates in order to increase their revenues faster than their costs and thus acquire higher performance. On the contrary, unanticipated inflation could lead to improper adjustment of interest rates and hence to the possibility that costs could increase faster than revenues. Demircuc-Kunt and Huizinga (2000) attempted to identify possible cyclical movements in investment bank profitability, the extent to which profits are correlated with the business cycle.

2.4 Empirical Review

Athanasoglou et al., (2006) examined the profitability behaviour of bank-specific, industry related and macroeconomic determinants, using an unbalanced panel dataset of South Eastern European (SEE) credit institutions over the period 1998-2002. The estimation results indicated that the picture regarding the macroeconomic determinants was mixed. Inflation positively and significantly affects profitability. Maghyreh (2002) investigated the long-run relationship between the Jordanian stock prices and selected macroeconomic variables, by using Johansen and Juselius (1999) cointegration analysis and monthly time series data for the period from January 1987 to December 2000. The study showed that macroeconomic variables were reflected in stock prices in the Jordanian capital market.

Bourke (1989) revealed a positive relationship between inflation and bank profitability. Higher inflation rate lead to higher loan rates, and hence higher revenues will be generated by the bank. Inflation has a negative effect on bank profitability if wages and other costs (overhead) are growing faster than the rate of inflation. Athanasoglou et al., (2005) found that changes that precede most economic series have detrimental effect on

output and real stock returns in the U.S., Canada, Japan, and the United Kingdom during the postwar period. They add that, the postwar oil shocks appear to have generated volatility in the Japanese and U.K. stock markets that is “excess” of what can be explained by existing rational models.

Flamini et al., (2009) in their study on the determinants of commercial bank profitability in Sub-Saharan Africa established that Macroeconomic variables significantly affect bank profitability in Africa. In particular, inflation had a positive effect on bank profits; output growth had a significant positive impact on bank profitability. Chen et al., (1986) investigated the impact bank’s specific factors and macroeconomic factors on bank’s profitability, which is measured by return on average assets (ROAA) in the UK banking industry over the period 1999-2006. The results indicated that macroeconomic variables (real GDP and inflation) had insignificant effect which indicated that macroeconomic factors have little impact on profitability of banks.

Demirguc-Kunt et al., (1998) performed the exhaustive analysis of variables which are not under the control of bank management and may have significant effect on bank performance (i.e., external variables): inflation rate, GDP per capita, GDP per capita growth, taxation level, overall financial structure, various legal and institutional factors. Using country data for 80 countries over period 1988-1995, they found positive relationship between inflation and profitability, which may signify (1) about higher level of profits which bank could gain from float under the condition of inflationary environment; (2) that bank expenses caused by inflationary processes are lower than bank

profits obtained due to the same reason. There was not observed any correlation between GDP per capita growth and bank profitability, while some evidence of positive relationship between GDP per capita index and profitability was noticed. The influence of structural and institutional factors on bank profitability was found to be more significant in developing countries than in developed.

Gastanaga et al., (1998) examined the influence of macroeconomic variables on stock market equity values in Sri Lanka, using the Colombo All Share price index to represent the stock market and the money supply, the treasury bill rate (as a measure of interest rates), the consumer price index (as a measure of inflation) and the exchange rate as macroeconomic variables and with monthly data for the 17-year period from January 1985 to December 2001 and employing the usual battery of tests, which included unit roots, co integration they examined both long-run and short run relationships between the stock market index and the economic variables. The Vector Error Correction Model analysis provided support for the argument that the lagged values of macroeconomic variables such as the consumer price index, the money supply and the Treasury bill rate have a significant influence on the stock market.

Patra and Poshakwale (2006) examined the short-run dynamic adjustments and the long run equilibrium relationships between selected macroeconomic variables, trading volume and financial performance in the Greek stock market during the period of 1990 to 1999. They reach results showing that short run and long run equilibrium relationship exists between inflation, money supply and trading volume and the stock prices in the Athens

stock exchange. No short run or long run equilibrium relationship is found between the exchange rates and firm performance.

Demirguc-Kunt and Huizinga (2000) and Olsson (2008) attempted to identify possible cyclical movements in bank profitability - the extent to which bank profits are correlated with the business cycle. Their findings suggest that such correlation exists, although the variables used were not direct measures of the business cycle. Demirguc Kunt and Huizinga (2000) used the annual growth rate of GDP and GNP per capita to identify such a relationship, while Olsson (2008) used a number of macroeconomic variables (such as GDP, unemployment rate and interest rate differential).

Mamatzakis and Remoundos (2003) examined the determinants of the performance of Greek commercial banks from 1989 to 2000. They measured the profitability of the commercial banks using the ratios of return on assets (ROA) and return on equity (ROE). They considered internal factors, like management policy decisions and external factors, like economic environment to explain the profitability of the banks. The results suggested that the variables related to management decisions assert a major impact on the profitability of Greek commercial banks.

Naceur (2003) investigates the impact of banks characteristics, final structure and macroeconomic indicators on banks net interest margin and profitability in Tunisian Banking Industry for the 1983-2000 period. High net interest margin and profitability tend to be associated with banks that hold relatively high amount of capital, and with

large overheads. Naceur finds that inflation and growth rates have negative and stock market development has positive impact on profitability and net interest margin.

Pasiouras and Kosmidou (2007) examine the performance of domestic and foreign commercial banks in 15 EU countries during the period 1995-2001. They find that profitability of both domestic and foreign banks is affected not only by bank specific characteristics, but also by financial market structure and macroeconomic conditions. The results suggest that all variables have significant relationship with bank profitability, although their impacts and relation is not always uniform for domestic and foreign banks.

Maghyereh (2002) while conducting a study on the effect of macroeconomic variables on stock market returns for four emerging economies of Brazil, Russia, India and China affirmed that there was no significant relationship between present and past market returns with macroeconomic variables, suggesting that the markets of Brazil, Russia, India and China exhibit weak form of market efficiency. Also, no significant relationship was found between respective exchange rate and oil price on the stock market index prices of the four countries studied.

There are various studies that have been undertaken Kenya on the relationship of macroeconomic variables and financial performance and their findings variables are diverse; Kipngetich (2011) did a study on the relationship between interest rates and financial performance of commercial banks in Kenya and found that there is a positive relationship between interest rates and financial performances of commercial banks. Thus

companies should therefore prudently manage their interest rates to improve their financial performance. Interest rate was found to have negative relationship with the profitability of companies in aviation industry.

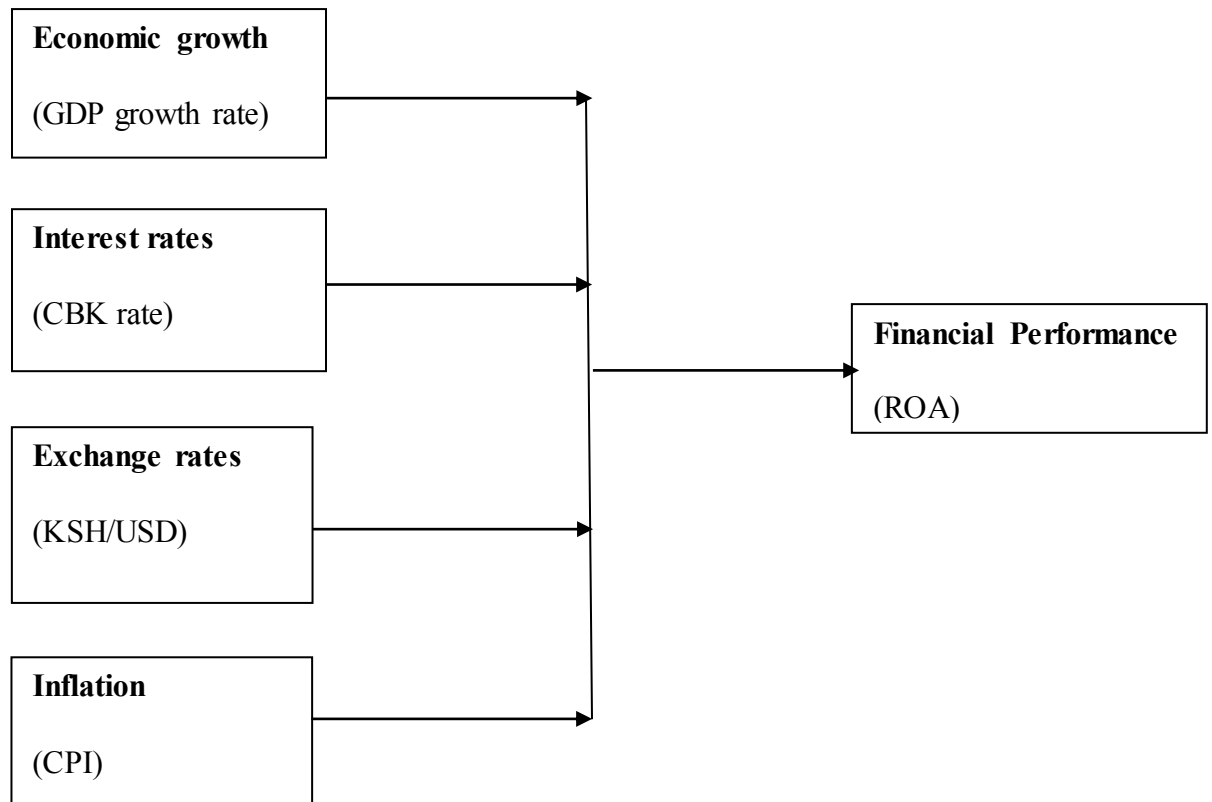
Desaro (2012) did a study in the study on the effect of macroeconomic variables on financial performance of commercial banks in Kenya and found out that the ROA was negatively correlated with the exchange rate and positively correlated with the GDP growth and inflation. Nyamwange (2009) did a study on the relationship between financial performance for multinational corporations in Kenya and exchange rates volatility and found that Sterling Pound, United States Dollar, Euro exchange rate and Japanese Yen exchange rate influence the financial performance of Multinational Corporation.

Mwangi (2013) undertook a research in non-financial sector where the study was on the relationship that exists between macroeconomic variables and financial performance of aviation industry in Kenya. The study concluded that the macroeconomic variables influenced the financial performance of companies in the aviation industry in Kenya at 20%, level of significance (5%) The study also concluded that ROA has a weak positive insignificant correlation with GDP .It further conclude that there is a weak negative insignificant correlation between ROA and real exchange rate, annual average lending rate and annual inflation rate.

According to Njuguna (2013) who undertook a study on the relationship between macroeconomic factors and MFIs financial performance measured by ROA ,the study concluded that ROA is highly a function of macroeconomic factors and more specifically

GDP, Interest rates and Inflation and the three variables can be credibly used to predict MFIs expected ROA. This revelation offers regulators and those responsible over macroeconomic variables, vital information that if MFIs are to operate profitably and encourage growth in the sector, then; they have to offer favourable economic variables. That is, they should ensure high economic growth (GDP) and have low inflation and interest rates in the economy which will instead boost MFIs performance and therefore creating room for higher economic growth.

2.5 Conceptual Framework



Independent variables

Dependent variable

Figure 2.1: The Conceptual Model

Macro-economic variable is the independent variable and it comprises of four measures.

The four measures are: Economic growth, interest rates, exchange rates and inflation. Financial performance as dependent variable will be measured in terms of the return on assets (ROA) which is the ratio of annual net income to average total assets.

2.6 Summary of Literature Review

After reviewing the literature on the effect of macroeconomic variables on financial performance, it is clear that different researchers have studied different macroeconomic variables with respect to the financial performance of different sectors. These macroeconomic variables include GDP, interest rates, exchange rates, money supply, and inflation among others. The results for these researches have been different. The empirical results indicated that the relationship between macroeconomic variables and financial performance can either be positive, negative or none at all. For example the findings of the studies done by Desaro (2012) among others showed that there exists a relationship between the macroeconomic variables and financial performance while study done by Patra and Poshakwale (2006) showed that there is no relationship found between the selected macroeconomic variable and financial performance. Since most of the studies conducted have arrived at conflicting results, this study intends to contribute to the debate. In addition, no local study has been done on the effect of macro-economic variables on financial performance of investment banks.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides information on the research design, the population and sample that was selected for the study. In this section, the researcher also discusses the data collection methods, data analysis and presentation techniques that were used in this study.

3.2 Research Design

According to Kothari (2004), a research design is a frame of methods and procedures for acquisition of information that is needed. It is the overall plan of conducting the study and it helps to answer the research questions and achieve the objective of the study. The study employed a descriptive research design. A descriptive study involves a description of all the elements of the population. It allows estimates of a part of a population that has these attributes. Identifying relationships among various variables is possible, to establish whether the variables are independent or dependent.

3.3 Population and Sampling

A population is an entire group of individuals, events or objects having common observable characteristics (Kothari, 2004). The population target for this study was all the 21 investment banks that were operational in Kenya for the period between 1st of January 2008 and 31 December 2017.

Since the study population is few, sampling was not employed in this study. The target population provided data that was used to answer the research questions raised by the researcher on how macro-economic variables affect financial performance of investment

banks in Kenya.

3.4 Data Collection

The study used secondary data on the macroeconomic variables: Economic growth as measured by GDP, interest rate as measured by Central bank lending rate, exchange rate (Kenya Shilling and US Dollar) and CPI for inflation. The data on inflation and GDP was obtained from KNBS while data on exchange rate (USD and Kenya Shilling) and interest rates was obtained from the CBK. The data on ROA of the individual investment banks was obtained from the individual investment banks.

3.5 Diagnostic Tests

Linearity show that two variables X and Y are related by a mathematical equation $Y=bX+c$ where c is a constant number. The linearity test was obtained through the scatterplot testing or F-statistic in ANOVA. Stationarity test is a process where the statistical properties such as mean, variance and autocorrelation structure do not change with time. Stationarity was obtained from the run sequence plot. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This was determined by Kernel density test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It will be tested using Durbin-Watson statistic (Khan, 2008).

Multicollinearity is said to occur when there is a nearly exact or exact linear relation among two or more of the independent variables. This will be tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent

variable is an indication that the determinant is one while it is zero if there is a complete linear dependence between them and as it approaches to zero then the Multicollinearity becomes more intense. Variance Inflation Factors (VIF) and tolerance levels will also be carried out to show the degree of Multicollinearity (Burns & Burns, 2008).

3.6 Data Analysis

Data Analysis is the task of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. Data analysis is developed to deal with manipulation of the information that has been gathered so as to present the evidence (Singleton et al., 2003).

The study made use of Statistical Package for Social Sciences version 22 to analyze the data. Given that the study model was multivariate, the study used multiple regression technique in analyzing the relationship between the selected macro-economic factors and the financial performance of investment banks in Kenya. The analyses entailed the computation of the various coefficients of correlation in the model to determine the relationship between macro-economic factors and the financial performance of investment banks in Kenya.

3.6.1 Analytical Model

The researcher applied a multiple regression analysis to establish the effect of macro-economic variables on financial performance of investment banks in Kenya. The dependent variable was financial performance of investment banks while the independent variable will be macro-economic variables. The analytical model to be used in analyzing the effect of the independent variables on the dependent variable is:

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

Where;

Y= Financial performance of investment banks as measured by the average return on assets on a quarterly basis

α = Intercept of the regression equation.

β_i = Beta Coefficient of variable i (the slope of the regression)

X_1 = Economic growth as measured by GDP growth rate on a quarterly basis

X_2 = Interest rates as measured by the Central bank lending rate on a quarterly basis

X_3 = Exchange rate as measured by the natural logarithm of exchange rate between USD and KES on a quarterly basis

X_4 = Inflation rate as measured by natural logarithm of CPI on a quarterly basis

ε = Error term

3.6.2 Test of Significance

To test the statistical significance the f- test and the t – test were used at 95% confidence level. The f statistic was utilized to establish a statistical significance of regression equation while the t statistic was used to test statistical significance of individual parameters.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

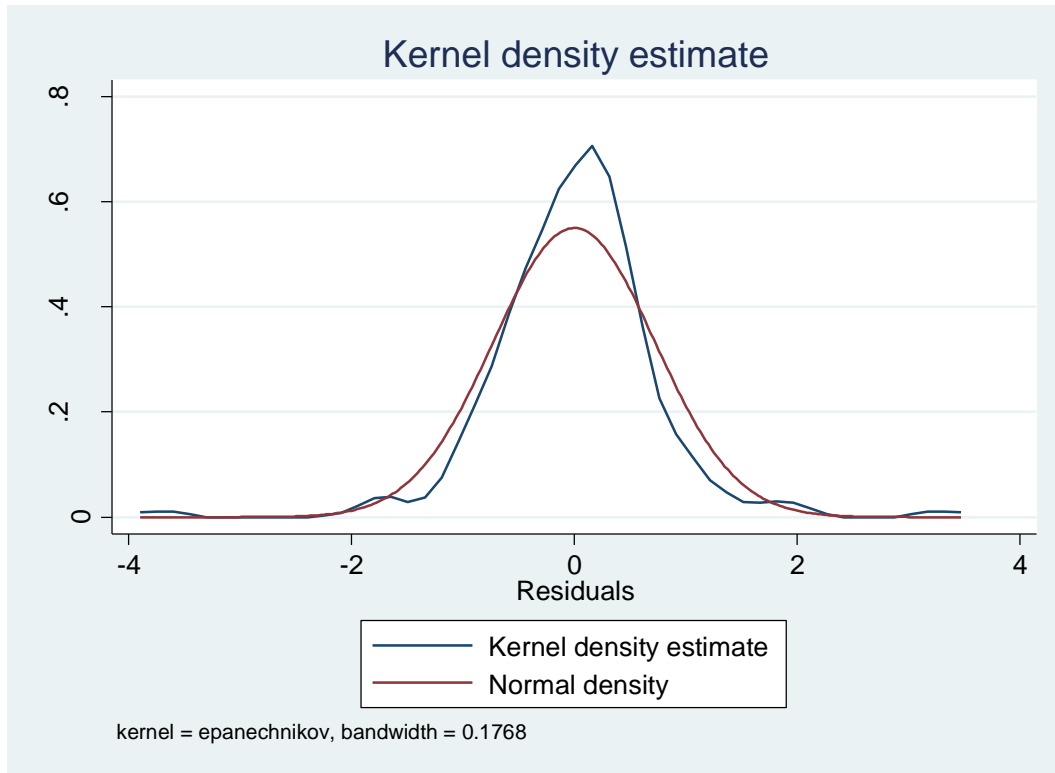
4.1 Introduction

This chapter presents the analysis, findings and interpretation of the secondary data collected from Kenya National Bureau of Statistics, Central Bank of Kenya and annual reports of individual investment banks. The study sought to determine the effect of macro-economic variables on financial performance of investment banks in Kenya. The independent variables selected for the study were interest rates, inflation rate, exchange rates and economic growth. Regression analysis was used to test the correlation between the variables under study in relation to the objectives of the study. Analysis of variance (ANOVA) was used to test the goodness of fit of the analytical model. The findings were presented in tables.

4.2 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. The null hypothesis for the test was that the secondary data was not normal. Kernel density was used to test for normality. Figure 4.1 shows that the data is normally distributed.

Figure 1:Normality Test



Source: Research Findings (2017)

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 which implies that the research data was normally distributed and therefore the null hypothesis was rejected. The data was therefore appropriate for use to conduct parametric tests such as Pearson’s correlation, regression analysis and analysis of variance.

4.4 Descriptive Analysis

This section presents the descriptive results of this study. The descriptive statistics provided here gives a presentation of the maximum and minimum values of variables applied together with their means and standard deviations in this study. Table 4.1 below shows the descriptive statistics for the variables applied in the study. An analysis of all

the variables was obtained using SPSS software for the period of ten years (2008 to 2017) on a quarterly basis. Financial performance of investment banks had a mean of 2.567 with a standard deviation of 1.2875. Interest rates recorded a mean of 15.813 with a standard deviation of 1.9453. Inflation had a mean of 2.120 and standard deviation of 0.1043. Exchange rate resulted to a mean of 1.930 with a standard deviation of 0.0608 while economic growth resulted to a mean of 6.215 with a standard deviation of 3.4879.

Table 4. 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	40	-.9	4.7	2.567	1.2875
Interest rate	40	13.7	20.2	15.813	1.9453
Exchange rate	40	1.8	2.0	1.930	.0608
Inflation rate	40	1.9	2.3	2.120	.1043
GDP growth rate	40	.3	12.5	6.215	3.4879
Valid N (listwise)	40				

Source: Research Findings (2018)

4.4 Correlation Analysis

The researcher carried out Pearson product-moment correlation analysis to test whether the study variables were correlated. A p-value of 0.05 or less was used to indicate significant correlations. The results of the study are as shown in Table 4.2.

From correlation analysis, the study showed the existence of a strong negative correlation between interest rates and financial performance of investment banks in Kenya ($p = -.476$, $p > .002$). This goes to show that the prevailing interest rates in a country have an

association with financial performance of investment banks and that association is significant. The relationship between inflation and financial performance of investment banks was found to be weak positive and insignificant ($p=.123$, $p>0.448$). This implies that movement in the inflation rate is positively correlated to financial performance of investment banks but not in a significant manner. The study also showed that there exists a weak negative correlation between exchange rates and financial performance of investment banks ($p=-.072$, $p>.657$). This shows that exchange rates have a weak negative association with financial performance of investment banks and the association is not significant. The relationship between economic growth and financial performance of investment banks was found to be weak and positive ($p=.000$, $p>0.998$). This implies that movement in economic growth is positively correlated to financial performance of investment banks but not in a significant manner. Although the independent variables had an association to each other, the association was not strong to cause Multicollinearity as all the r values were less than 0.70. This implies that there was no Multicollinearity among the independent variables and therefore they can be used as determinants of financial performance of investment banks into the country in regression analysis.

Table 4. 2: Correlation Analysis

		ROA	Interest rate	Exchange rate	Inflation rate	GDP growth rate
ROA	Pearson Correlation	1	-.476**	-.072	.123	.000
	Sig. (2-tailed)		.002	.657	.448	.998
	N	40	40	40	40	40
Interest rate	Pearson Correlation	-.476**	1	.055	.130	-.010
	Sig. (2-tailed)	.002		.735	.423	.952
	N	40	40	40	40	40
Exchange rate	Pearson Correlation	-.072	.055	1	.653**	.097
	Sig. (2-tailed)	.657	.735		.000	.551
	N	40	40	40	40	40
Inflation rate	Pearson Correlation	.123	.130	.653**	1	-.005
	Sig. (2-tailed)	.448	.423	.000		.975
	N	40	40	40	40	40
GDP growth rate	Pearson Correlation	.000	-.010	.097	-.005	1
	Sig. (2-tailed)	.998	.952	.551	.975	
	N	40	40	40	40	40

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

Source: Research Findings (2018)

4.5 Regression Analysis and Hypothesis Testing

The financial performance of investment banks in Kenya on a quarterly basis was regressed against four predictor variables; interest rates, inflation rates, exchange rates and economic growth. The regression analysis was undertaken at 5% significance level. The study obtained the model summary statistics as shown in table 4.3 below.

Table 4. 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.586 ^a	.344	.269	1.1009	1.735

a. Predictors: (Constant), GDP growth rate, Inflation rate, Interest rate, Exchange rate

b. Dependent Variable: ROA

Source: Research Findings (2018)

R squared, being the coefficient of determination indicates the deviations in the response variable that is as a result of changes in the predictor variables. From the outcome in table 4.3 above, the value of R square was 0.344, a discovery that 34.4 percent of the deviations in financial performance of investment banks in Kenya was caused by changes in interest rates, exchange rates, economic growth and inflation. Other variables not included in the model justify for 65.6 percent of the variations in financial performance of investment banks in Kenya. Also, the results revealed that there exists a strong relationship among the selected independent variables and the financial performance of investment banks as shown by the correlation coefficient (R) equal to 0.586. A durbin-watson statistic of 1.735 indicated that the variable residuals were not serially correlated

since the value was more than 1.5.

Table 4. 4: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.229	4	5.557	4.585	.004 ^b
	Residual	42.418	35	1.212		
	Total	64.648	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), GDP growth rate, Inflation rate, Interest rate, Exchange rate

Source: Research Findings (2018)

The significance value is 0.004 which is less than $p=0.05$. This implies that the model was statistically significant in predicting how interest rates, inflation rate, exchange rates and economic growth affect financial performance of investment banks in Kenya. Given 5% level of significance, table 4.4 above shows computed F value as 4.585 which is more than the critical value from the table. This confirms that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables affects financial performance of investment banks in Kenya.

Coefficients of determination were used as indicators of the direction of the relationship between interest rates, inflation rates, exchange rates and economic growth with financial performance of investment banks in Kenya. The p-value under sig. column was used as

an indicator of the significance of the relationship between the dependent and the independent variables. At 95% confidence level, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates a statistically insignificant relationship between the dependent and the independent variables. The results are as shown in table 4.5

Table 4.5: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	12.270	5.833		2.104	.043
Interest rate	-.344	.092	-.519	-3.753	.001
Exchange rate	-9.364	4.469	-.442	-2.095	.043
Inflation rate	6.469	2.610	.524	2.478	.018
GDP growth rate	.015	.051	.040	.289	.774

a. Dependent Variable: ROA

Source: Research Findings (2018)

From the above results, it is evident that interest rate is a significant determinant of Financial performance of investment banks in Kenya as indicated by a p value that is less than 0.05. Exchange rate and inflation rate were also found to be significant determiners of financial performance of investment banks in Kenya as shown by high t values and p values that are less than 0.05 while economic growth was found to be an insignificant

determinant of Financial performance of investment banks in Kenya as indicated by p values more than 0.05.

The following regression equation was estimated:

$$Y = 12.270 - 0.344X_1 - 9.364X_2 + 6.469X_3 + 0.015X_4$$

Where,

Y = Financial performance of investment banks in Kenya

X₁ = Interest rates

X₂ = Exchange rates

X₃ = Inflation rates

X₄ = Economic growth

On the estimated regression model above, the constant = 12.270 shows that if selected dependent variables (Interest rates, exchange rates, economic growth and inflation) were rated zero, financial performance of investment banks in Kenya would be 12.270. A unit increase in interest rates would lead to a decrease in financial performance of investment banks by 0.344. A unit increase in exchange rates would lead to a decrease in financial performance of investment banks by 9.364 while a unit increase in inflation would lead to an increase in financial performance of investment banks in Kenya by 6.469.

4.7 Discussion of Research Findings

The study sought to determine the effect of interest rates on financial performance of investment banks in Kenya. The independent variable was interest rate as measured by CBK quarterly lending rate. The control variables were inflation rates as measured by quarterly CPI, exchange rates as measured by quarterly exchange rate between ksh and usd and economic growth as measured by quarterly GDP growth rate. Financial

performance of investment banks were the dependent variable which the study sought to explain and it was measured by quarterly return on assets of investment banks in Kenya. The effect of each of the independent variables on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed existence of a strong negative correlation between interest rates and financial performance of investment banks in Kenya ($r = -.476$, $p > .002$). The study also showed that there exist a weak negative correlation between exchange rates and financial performance of investment banks ($r = -.072$, $p > .657$). This shows that exchange rates have a weak negative association with financial performance of investment banks but the association is not significant. The relationship between economic growth and financial performance of investment banks was found to be weak and positive ($r = .000$, $p > .998$). This implies that movement in economic growth is positively correlated to financial performance of investment banks but not in a significant manner. The relationship between inflation and financial performance of investment banks was found to be weak and positive ($r = .123$, $p > .448$). This implies that movement in the inflation rate is negatively correlated to financial performance of investment banks but not in a significant manner.

The model summary revealed that the independent variables: interest rates, exchange rates, economic growth and inflation explains 34.4% of changes in the dependent variable as indicated by the value of R^2 which implies that there are other factors not included in this model that account for 65.6% of changes in financial performance of investment banks in Kenya. The model was found to be fit at 95% level of confidence since the F-value of 4.585 is higher than the critical value. This implies that overall the multiple

regression model is statistically significant, in that it is a suitable prediction model for explaining financial performance of investment banks in Kenya.

The findings of this study concur with Njuguna (2013) who undertook a study on the relationship between macroeconomic factors and MFIs financial performance measured by ROA, the study concluded that ROA is highly a function of macroeconomic factors and more specifically GDP, Interest rates and Inflation and the three variables can be credibly used to predict MFIs expected ROA. This revelation offers regulators and those responsible over macroeconomic variables, vital information that if MFIs are to operate profitably and encourage growth in the sector, then; they have to offer favourable economic variables. That is, they should ensure high economic growth (GDP) and have low inflation and interest rates in the economy which will instead boost MFIs performance and therefore creating room for higher economic growth.

This study is also in agreement with Desaro (2012) who did a study on the effect of macroeconomic variables on financial performance of commercial banks in Kenya and found out that the ROA was negatively correlated with the exchange rate and positively correlated with the GDP growth and inflation. Nyamwange (2009) also did a study on the relationship between financial performance for multinational corporations in Kenya and exchange rates volatility and found that Sterling Pound, United States Dollar, Euro exchange rate and Japanese Yen exchange rate influence the financial performance of Multinational Corporation.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the previous chapter, conclusion, limitations encountered during the study. This chapter also elucidates the policy recommendations that policy makers can implement to achieve the expected financial performance of investment banks in Kenya. Lastly the chapter presents suggestions for further research which can be useful to future researchers.

5.2 Summary of Findings

The study sought to investigate the effect of interest rates on financial performance of investment banks in Kenya. The independent variables for the study were interest rates, inflation rates, exchange rates and economic growth. The study adopted a descriptive research design. Secondary data was obtained from CBK, KNBS and financial reports of individual investment banks and was analyzed using SPSS software version 22. The study used quarterly data covering a period of ten years from January 2008 to December 2017.

From the results of correlation analysis, a strong negative correlation was found to exist between interest rates and financial performance of investment banks in Kenya. The relationship between economic growth and inflation and financial performance of investment banks in Kenya was found to be weak and positive while exchange rates had a weak negative relationship with financial performance of investment banks in Kenya.

Interest rate was found to have a significant relationship with financial performance of investment banks in Kenya as indicated by p values that are less than 0.05 while the other variables exhibited an insignificant correlation indicated by a p value of more than 0.05.

The co-efficient of determination R-square value was 0.344 which means that about 34.4 percent of the variation in financial performance of investment banks in Kenya can be explained by the four selected independent variables while 65.6 percent in the variation of financial performance of investment banks in Kenya is associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with financial performance of investment banks in Kenya ($R=0.586$). ANOVA results show that the F statistic was significant at 5% level with a $p=4.585$. Therefore the model was fit to explain the relationship between the selected variables.

The regression results show that when all the selected dependent variables (interest rates, exchange rates, economic growth and inflation) are rated zero, financial performance of investment banks in Kenya would be 12.270. A unit increase in interest rates would lead to a decrease in financial performance of investment banks by 0.344. A unit increase in exchange rates would lead to a decrease in financial performance of investment banks by 9.364 while a unit increase in inflation would lead to an increase in financial performance of investment banks in Kenya by 6.469.

5.3 Conclusion

From the study findings, the study concludes that financial performance of investment banks in Kenya has a negative association with interest rates. The study therefore concludes that higher interest rates lead to reduced financial performance of investment

banks in the country to a significant extent. Exchange rates were also found to be negatively related to financial performance of investment banks and therefore an increase in exchange rates leads to a decrease in financial performance of investment banks in the country. The study found that inflation rate had a positive correlation with financial performance of investment banks in Kenya and we can therefore conclude that higher inflation rates tend to improve financial performance of investment banks in Kenya.

This study concludes that independent variables selected for the study interest rates, inflation rates, exchange rates and economic growth influence financial performance of investment banks in the country to a large extent as they account for 34.4 percent of the changes in financial performance of investment banks in the country. The fact that the four independent variables explain 34.4% of changes in financial performance of investment banks in the country imply that the variables not included in the model explain 65.6% of changes in financial performance of investment banks in the country. The overall model was found to be significant as explained by the F statistic. It is therefore sufficient to conclude that these variables significantly influence financial performance of investment banks in Kenya as shown by the p value in anova summary.

This finding concurs with This study is also in agreement with Desaro (2012) who did a study in the study on the effect of macroeconomic variables on financial performance of commercial banks in Kenya and found out that the ROA was negatively correlated with the exchange rate and positively correlated with the GDP growth and inflation. Nyamwange (2009) also did a study on the relationship between financial performance for multinational corporations in Kenya and exchange rates volatility and found that Sterling Pound, United States Dollar, Euro exchange rate and Japanese Yen exchange rate

influence the financial performance of Multinational Corporation.

5.4 Recommendations

The study established that there is a negative influence of interest rates on financial performance of investment banks in the country which is statistically significant. This study recommends that there is need for central bank to regulate the interest rate levels prevailing in the country bearing in mind that they influence financial performance of investment banks in the country.

The study found that exchange rates have a negative influence on financial performance of investment banks in Kenya. This study recommends that policy makers should regulate prevailing exchange rates as depreciation in exchange rates may lead to decreased financial performance of investment banks into the country.

Inflation rate was also found to have a significant effect on financial performance of investment banks in the country. The inflation rate was actually found to have positive relationship which might imply that a single digit inflation rate is not necessary bad for the economy as was found in this study. The government through the regulators should set policies that maintain inflation at a level that will help improve financial performance of investment banks in Kenya.

5.5 Limitations of the Study

The scope of this research was for ten years 2008-2017. It has not been determined if the results would hold for a longer study period. Furthermore it is uncertain whether similar findings would result beyond 2017. A longer study period is more reliable as it will take into account major economic conditions such as booms and recessions.

One of the limitations of the study is the quality of the data. It is difficult to conclude from this research whether the findings present the true facts about the situation. The data that has been used is only assumed to be accurate. The measures used may keep on varying from one year to another subject to prevailing condition. The study utilized secondary data, which had already been obtained and was in the public domain, unlike the primary data which is first-hand information. The study also considered selected determinants and not all factors affecting financial performance of investment banks in Kenya mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

The study was not exhaustive of the independent variables affecting financial performance of investment banks in Kenya and this study recommends that further studies be conducted to incorporate other variables like money supply, public debt, balance of trade, political stability and other macro-economic variables. Establishing the effect of each variable on financial performance of investment banks in the country will enable policy makers know what tool to use when controlling financial performance of investment banks.

The study concentrated on the last ten years since it was the most recent data available.

Future studies may use a range of many years e.g. from 1970 to date and this can be helpful to confirm or disapprove the findings of this study. Finally, due to the shortcomings of regression models, other models such as the Vector Error Correction Model (VECM) can be used to explain the various relationships between the variables.

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APPENDICES

Appendix I: List of Investment Banks in Kenya

1. ABC Capital
2. African Alliance Kenya Investment Bank
3. Afrika Investment Bank
4. Apex Africa Capital
5. CBA Capital
6. Discount Securities (Under Statutory management)
7. Dyer & Blair Investment Bank
8. Equity Investment Bank
9. Faida Investment Bank
10. Francis Drummond & Company
11. Genghis Capital
12. Kestrel Capital
13. Kingdom Securities
14. Ngenye Kariuki & Co (Under Statutory management)
15. NIC Securities
16. Old Mutual Securities
17. Renaissance Capital (Kenya)
18. SBG Securities
19. Standard Investment Bank
20. Sterling Capital
21. Suntra Investment Bank

