

**RELATIONSHIP BETWEEN MACROECONOMIC FACTORS
AND FINANCIAL PERFORMANCE OF AGRIBUSINESS
COMPANIES LISTED AT THE NAIROBI SECURITIES
EXCHANGE IN KENYA**

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILMENT OF THE REQUIREMENT FOR AWARD OF
DEGREE OF MASTER OF BUSINESS ADMINISTRATION**

UNIVERSITY OF NAIROBI

NOVEMBER, 2016

DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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

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ACKNOWLEDGEMENTS

I wish to thank The Almighty God for life and enabling me to complete this project. I wish to also express my sincere gratitude to my supervisor, Mr. Karanja James for his professional guidance and motivation throughout this period.

To the University of Nairobi for offering me the opportunity to do this study and all my lecturers who contributed in one way or another.

I also extend gratitude to my classmates whose presence offered me the psychological motivation, support and need to learn.

Finally, I thank my family for supporting me throughout my studies. I can't express my gratitude in words for my family, whose unconditional love has been my greatest strength.

To you all, God bless.

DEDICATION

I dedicate this project to my wife Monica, children Daphne, Joy and Mercy, friends and colleagues, the school of business and the administration at the University of Nairobi for being a strong pillar throughout my MBA program. Without their love and support this project would not have been made possible. I have been deeply humbled by the knowledge acquired and support accorded to me during my studies at the university.

TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGEMENTS	iii
DEDICATION	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	viii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS/ACRONYMS	x
ABSTRACT	xi
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Macro-Economic Factors	3
1.1.2 Financial Performance.....	4
1.1.3 Macro-economic Factors and Financial Performance.....	5
1.1.4 Listed Agribusiness Companies at the Nairobi Securities Exchange	6
1.2 Research Problem	7
1.3 Objective of the study	9
1.3.1 General objective	9
1.3.2 Specific objective	9
1.4 Value of the Study	9
CHAPTER TWO: LITERATURE REVIEW	11
2.1 Introduction	11
2.2 Theoretical Review	11
2.2.1 Purchasing Power Parity Theory (PPP)	11
2.2.2 Arbitrage Pricing Theory.....	12

2.2.3 Market Segmentation Theory	13
2.3. Determinants of Financial Performance	14
2.3.1 Exchange rate.....	15
2.3.2 Interest rate	15
2.3.3 Inflation	16
2.3.4 Gross Domestic Product (GDP).....	17
2.4 Conceptual Framework.....	18
2.5 Empirical Review	18
2.6 Summary of the Literature Review and Research gap	21
CHAPTER THREE: RESEARCH METHODOLOGY	23
3.1 Introduction	23
3.2 Research Design	23
3.3 Population of Study.....	23
3.4 Data Collection Technique.....	24
3.5 Data Analysis.....	24
3.5.1 Model Specifications.....	24
3.5.2 Test of Significance.....	25
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	26
4.1 Introduction	26
4.2 Descriptive Results	26
4.2.1 Measures of Central Tendency	26
4.2.2 Annual Trends.....	28
4.3 Correlation.....	30
4.4 Regression	31
4.4.1 Regression of macroeconomic factors on financial performance.....	31

CHAPTER FIVE: SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	35
5.1 Introduction	35
5.2 Summary	35
5.3 Conclusion.....	38
5.4 Recommendations.....	39
5.5 Limitations of the study	40
5.5 Suggestions for Further Research.....	40
REFERENCES	42
APPENDICES	46
Appendix I: Exchange Rate from 2009 to 2013.....	46
Appendix II: Interest Rate from 2009 to 2013	48
Appendix III: Inflation Rate from 2009 to 2013	50
Appendix IV: Gross Domestic Product	52
Appendix V: Financial Performance	54

LIST OF FIGURES

Figure 4.1: Trend Analysis	29
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LIST OF TABLES

Table 4.1: Measures of Central Tendency	26
Table 4.2: Correlations	30
Table 4.3: Model Summary	32
Table 4.4: ANOVA ^a	32
Table 4.5: Coefficients.....	33

LIST OF ABBREVIATIONS/ACRONYMS

APT	Arbitrage Pricing Theory
CAPM	Capital Asset Price Model
CMA	Capital Markets Authority
EBIT	Earnings Before Interest and Tax
GDP	Gross Domestic Product
GNP	Gross National Product
NSE	Nairobi Securities Exchange
PPP	Purchasing Power Parity
ROA	Return on Assets
ROCE	Return on Capital Employed
SPSS	Statistical Package for the Social Sciences
OLS	Ordinary Least Squares
VAR	Vector Auto Regression
VECM	Vector Error Correction Model
BRICS	Brazi, Russia, India, China & South Africa

ABSTRACT

Performance of any organization relates to its ability to seek resources needed for its operations and to manage them so as to give it an edge over the competitors. Financial performance measurement relies heavily on the variables that relate directly to financial statements. Some of the most commonly used measures of firm performance are return on assets and return on equity. Macro-economic factors are those that relate to the economy either at the regional or national level. Their effects cover a wider population as opposed to few selected individuals. The factors that have been identified and which have major influence are; inflation, gross domestic product (GDP), exchange rates, interest rates, the legal and regulatory environment and country risk. This study sought to test the relationship existing between macro-economic factors and financial performance of listed agri-business companies in Kenya. Descriptive correlation research design has been applied. The study targeted all the listed six agri-business companies at the Nairobi Securities Exchange (NSE) and covers the period between 2009 and 2013. The agri-business companies include; Eaagads Ltd, Kapchorua Tea Co. Ltd, Kakuzi Limited, Limuru Tea Co. Ltd, Sasini Ltd and Williamson Tea Kenya Ltd. The study has used secondary data obtained from the financial statements. The data was collected from the annual financial statements of the target agri-business firms listed at the Nairobi Securities Exchange for the period 2009 to 2013. The data collected was analyzed with the aid of the software Statistical Package for the Social Sciences (SPSS). The results have been shown in terms of frequency distribution and percentages. The data was arranged and classified according to their common characteristics. The financial ratios like current ratio, operating cash flow ratio and Return on Capital Employed (ROCE) and capital structure were calculated for the period from 2009 to 2013.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financial performance of companies due to its importance in decision is a subject that has been widely studied by financial analysts, researchers in the academia, the management of corporate entities and even the general public (Maleya and Muturi 2013). However, determining the most successful firms has not always been an easy task to carry out. A company may post very high levels of profitability, but at the same time have liquidity problems. A company may be doing well as a business and very bad as an investment. The financial performance of any firm can be determined from their profitability, growth of dividend over time, market share, size, return on equity, turnover in sales, asset base growth among many others. Be that as it may, there is still no consensus among a few fields of study with regards to how the performance of corporations ought to be measured and the variables that influence the financial performance of entities across the board (Liargovas & Skandalis, 2008). A solitary variable can't indicate each facet of an entity's performance and across industries and consequently demands utilization of various variables for a superior assessment of the financial profile of corporations.

Iswatia & Anshoria (2007) opines that performance of any organization relates to its ability to seek resources needed for its operations and to manage them so as to give it an edge over the competitors. Financial performance measurement relies heavily on the variables that relate directly to financial statements. Some of the most commonly used assessments of corporate performance are return on assets and return on equity. Hansen & Wernerfelt (1989) used return on assets as a parameter to determine the performance of a firm. They also provided an overview of material in relation to

pointers of prosperous corporates while analyzing diverse determinants of accomplishment for an extensive specimen of firms. The pointers include a few steady assessment of financial performance, such as, money with respect to resources, return on capital, and profit for resources, feasible development and measuring held profit with respect to shareholders equity. Also outlined in their report are other potential signs of prosperous corporate; these incorporate measures of expenses of creating awareness and publicizing , research and development costs, cash conversion cycle, and income instability.

Agribusiness has been defined as “comprising the economic undertakings of the ranches and firms that gather procedure and change crude agricultural items into final items for distribution to customers. Agribusiness incorporates all economic actions that boosts cultivation and transformation of raw farm goods to consumable merchandise – for instance hardware repair, manure creation, cultivating itself, food dispensation and manufacturing , transportation, bulk and retail, and dissemination of food. The income and jobs created within agricultural businesses is the revenue received and jobs given by these firms” (Davis and Goldberg 1957).

Kenya’s development as projected in Vision 2030 recognizes agriculture as a key component through which double digit annual economic growth can be achieved. Agribusiness is identified as a major driver in making the sector realize its potential. This involves changing from smallholder farm activities evidenced by low productivity and low value addition, to a modern agricultural sector driven by innovation, commercially focused and competitive both nationally and internationally. The government, thus, tries to targets its macro-economic policies to help businesses whose activities include but not limited to farming of various crops, supplying of

agricultural seeds, manufacture and sell of farm chemicals, selling and servicing of farm machinery, selling in supplying of farm products. These policies aim at enhancing the sector by increasing its production, efficiency and competitiveness both in the local arena and internationally. It will help the agricultural sector refocus from a subsistence view to meeting the dynamic market and commercial demands.

The agricultural sector contributes approximately 26% of the Gross Domestic Product (GDP) and provides income directly and indirectly to about seventy five percent of the Kenyan population. Food production plays an important part in providing the country's food security in the first instance, while the commercially industrial and horticultural crops subsectors aid the country in earning foreign exchange and help the balance of payments. Despite deliberate efforts that have been undertaken, the agricultural potential has not been optimized and its growth targets are far from being met. Opportunities to add any meaningful value to the agricultural produce are largely unexploited. This, together with high production costs, low adoption of technology , climate variability and poor infrastructure, makes Kenyan agricultural exports less competitive in global markets.

1.1.1 Macro-Economic Factors

Macro-economic factors are those that relate to the economy locally or nationally. Their effects cover a wider populace instead of a number of few selected persons. The factors that have been identified and which have significant impact are; inflation, gross domestic product (GDP), exchange rates, interest rates, the legal and regulatory environment and country risk. Macro-economists look at combined signs such as gross domestic product, inflation, interest rates, unemployment rates, and price

indices with a view to understanding how the country's economy operates. Inflation is a supported increment in the general value level of merchandise and ventures experienced in an economy over a timeframe i.e. as the value level raises, every unit of cash purchases less merchandise and enterprises. GDP is a measure of the market worth of every final products and services in monetary terms manufactured in a particular timeframe within a country. Interest rate is the value paid by the debtor to the creditor for use of an asset usually cash. An exchange rate is a price or rate at which the currency of one country can be exchanged for another country's currency.

According to Muchiri (2012), interest rates, economic output, employment and unemployment, population and inflation, highly affect performance of agricultural firms. Aguiar and Broner (2006) believe that emerging market predicaments may be associated with huge movements in macro-economic fundamentals and asset prices, and so there is all the more reason for making a distinction between directly-observed macro-economic variables and a computed series of innovations to the macro-economic fundamentals.

A business entity could fail because of a solitary component or a mix of variables. A firm faces three types of risks, firm risk, which is largely dependent on its management and its capital base; secondly is the industry risk i.e. affects specific industry such as its exposure to new regulations and thirdly macro-economic risk i.e. risk emanating from the macro-economic environment.

1.1.2 Financial Performance

Financial performance is a process seeking to determine whether financial goals or objectives of a firm such as, increase in shareholder value, profitability and cash flows

for example have been met over a period of time. Financial performance is very important to the various stakeholders as it shows the profitability, solvency and returns due to investors of any entity. Corporate managers and investors both existing and potential are concerned about financial performance because it has a direct and major impact on the valuation of the firm. Evaluating the financial health of a business allows the stakeholders to make informed decisions in terms of its strategies and activities. Financial performance is a term used to refer to how well a firm utilizes its resources to give returns to its investor's. There are various indicators that can be utilized to measure performance but the frequently used indicators are return on assets (ROA) or the return on capital employed (ROCE) (Smith & Anderson, 1996).

Return on Assets (ROA) is a proportion of the net revenues to its total assets (Khrawish, 2011). It assesses the efficiency of the entity management to administration to create revenues by maximizing the resources availed to them by the company. This means that, given the resources available, what are the results? Return on capital employed is the bottom line for the shareholders i.e. what they expect be paid for putting their resources into the business. An entity with a higher ROA is expected to produce more money for use within the company without borrowing. Therefore higher the ROA means the firm is better with respect to profit generation (Olweny and Shipho, 2011).

1.1.3 Macro-economic Factors and Financial Performance

Gerlach, Peng and Shu (2011) observe that, a country's state of the economy determines the performance of its organizations. In essence, the most influential macro-economic variables are Gross Domestic Product, exchange rates, interest rates,

inflation and market risk. As stated earlier, macro-economic variables are those that relate to the economy either at the regional or national level. Their effects cover a wider population instead of few selected individuals. It is often argued that financial performance of companies is determined by the afore mentioned fundamental macro-economic variables. These key variables are closely monitored by the government, businesses, consumers and other stakeholders.

Muchiri (2012) concluded in his study that the economic factors that influence changes in investment opportunities, pricing policies also affect financial performance in aviation industry.

1.1.4 Listed Agri-business Companies

The Nairobi Securities Exchange (NSE) was incorporated around 1954. The Nairobi Securities Exchange is the principal bourse in Kenya, mandated to offer an automated platform for the listing and trading of multiple securities. Some of the securities include equities, debt, and derivatives. The NSE is a licensee of the Capital Markets Authority (CMA). The NSE since 2011, classifies listed companies in twelve categories from the initial four categories. This is to ease comparison of performance in similar industries. The sectors include: construction & allied, agricultural, investment services, energy & petroleum, banking, commercial & services, energy & petroleum, insurance, investment, telecommunication & technology ,real estate investment trust and automobile & accessories manufacturing & allied,

Agricultural sector of the NSE, as one of the categories, has companies mostly trading in tea and coffee which are the main agricultural exports. These companies are: Eaagads Limited dealing in coffee, Kakuza Limited dealing with coffee, tea and

various fruits, livestock and forestry, Rea Vipingo dealing in sisal, Limuru Tea Company Limited engaged in tea growing, Sasini Tea and Coffee dealing in coffee, tea, dairy division and horticulture and Williamson Tea Kenya Limited engaged in tea growing, processing and distribution.

The agricultural sector has been the mainstay of the Kenyan economy for a very long time, contributing approximately 26% to the national GDP. The industry involves four key sub-sectors which include; horticulture, industrial crops, livestock and fisheries and food crops.

Despite the huge contribution to the economy, agriculture and the businesses operating in the sector continue to face numerous challenges. The small scale businesses dealing majorly in farming have scaled down or stopped their operations due to huge losses incurred. This is partly due to management issues of these businesses and factors beyond their control. Some of the large horticultural firms have gone bankrupt. The large agricultural companies are characterized by thin and illiquid trading in the market as their prospects remain bleak. This can be attributed to the unpredictable climatic conditions and also the macro-economic factors as most of their products are exported and they in turn import some of the inputs. Consequently, it is imperative to identify the macro-economic variables that affect these companies financial performance

1.2 Research Problem

Although several studies have been done in Kenya on the relationship between financial performance and macro-economic variables, no study has focused specifically on the agricultural companies. Many studies have focused on the stock

market performance in general, some in the banking and insurance sectors. This study intended to concentrate on agribusiness firms that are listed since it is an area that has been largely ignored by the researchers. This research intended to seal a research gap by examining the effect of four major macro-economic variables on the performance of agribusiness companies listed.

Among the studies undertaken, Olweny and Omondi (2011) pursued to determine how macro-economic factors affected the stock market with respect to performance. It was concluded that foreign exchange rate had positive influence on stock return volatility, so as inflation and interest rates. The researcher in this study assumed that macro-economic causes would influence all the listed companies in the similar manner. But one ought to know that, while macro-economic factors influence all sectors, the degree and direction of such influence vary from sector to sector. In another study, Ongore and Kusa (2013) sought to find out the particular factors that influence the performance of commercial banks in Kenya. The influence of exchange rate, interest rate, inflation and GDP fluctuation was however uncertain and subsequently needs extensive examination

An excerpt from the Kenya Economic Survey, the difficulties confronting the agricultural sector and the similar businesses in in Kenya incorporate high cost of manufacture and unfavorable international terms of trade. The influence of changing macro-economic elements on the execution of this area is not adequately archived. This consequently uncovered there is an exact crevice on the nature and degree of the effect of the large scale monetary components on the financial performance of firms in this segment.

The study's intention therefore was to identify various macro-economic factors and check their influence by answering the following question; is there a relationship between macro-economic factors and financial performance of listed agribusiness companies?

1.3 Objective of the research

1.3.1 General objective

This study sought to establish the relationship between macro-economic factors and financial performance of listed agri-business companies.

1.3.2 Specific objectives

- i. Find out the relationship between inflation rate and performance of listed agribusiness firms.
- ii. Find out the relationship between exchange rate and performance of listed agribusiness firms.
- iii. Find out the relationship between GDP fluctuations and performance of listed agribusiness firms.
- iv. Find out the relationship between interest rate and performance of listed agribusiness firms.

1.4 Value of the Study

The findings of this study is important to agribusiness companies, researchers' academicians and scholars, investors, government agencies and policy makers.

The study is useful to agribusiness companies and their management as this will identify the link between macro-economic factors and financial performance of their business.

For academicians, scholars and researchers, this study may add onto the existing knowledge and provide an avenue for further research by pointing out the areas with gaps.

For investors, this study may aid in decision making as to the most viable sectors to invest in.

For Government agencies and policy makers this may offer a useful basis that can guide them in decision making process especially when formulating policies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter reviewed previous reports carried out by other researchers on relationship between macro - economic factors and financial performance of companies in various industries. It also reviewed theories that are related to the study.

2.2 Theoretical Review

In determining the relationship between macro - economic factors and performance of listed agri-business companies, this study combined the following theories: Purchasing Power Parity theory, Arbitrage Pricing theory and Market Segmentation theory.

2.2.1 Purchasing Power Parity Theory (PPP)

Purchasing power parity theory (PPP) is a theory that examines what determines the exchange rate between different currencies. It states that it is the changes in price levels in countries over a given period of time that ultimately determines the exchange rate between their currencies. As the theory pegs changes in level of prices as the main element of movements in exchange rate. This came to be stated as the inflationary theory of exchange rate. Purchasing power parity theory is classified either absolute PPP or relative PPP. If the money of a home is translated to international money in absolute terms then it ought to have same purchasing power (Coakley et, al., 2005). They further reasoned that the money of local country should be able to procure similar shopping basket of goods or service in international land. Relative PPP on the hand, states that variation in national prices really reflects changes in ostensible value levels between nations. The hypothesis was adopted in

this research since all firms listed in the agricultural sector exports most of its products or are affected by exchange rate changes.

2.2.2 Arbitrage Pricing Theory

The theory concerned with asset pricing, in general, explains how assets and securities are priced with the understanding of the risks associated with them. The Arbitrage Price Theory (APT) suggested by Ross (1976) has been one of the key theories of asset pricing. APT in general takes the form of capital asset price model (CAPM) as stated by Sharpe (1964). While the CAPM purports to suggest that asset prices or expected financial performance of companies are determined by a single common factor, APT on the hand, says that they are actually determined various macro - economic factors.

The essence of this theory in simple terms, states that the expected performance of an asset or a firm in general depends on many factors and it's level of sensitivity to these factors. However, APT does not state the type nor the number of macro-economic factors involved in pricing. For instance, although Ross(1986) examined the effect of four factors that included rising prices of goods and services, GNP, investor certainty and the movements in the yield curve, he was of the opinion that APT should not be reduced to these four factors only. In view of this therefore, there has been a large body of empirical studies that have included many different macro-economic factors, depending on object of study. In this study, four macro-economic factors were included to examine their impact on the performance of listed agribusiness firms. Also, researchers meet challenges in identifying factors that are major determinants in explaining fluctuations of specific companies. Even with these challenges, researchers

can pick some economic factors; their selection must be based upon a tested and generally agreed theory (Chen. and Choudhary, 1986).

2.2.3 Market Segmentation Theory

This is a current theory that tries to explain interest rates phenomenon. It states that there exists no correlation whatsoever amid the interests rates which are short and long in nature. Indeed, markets which are short and long in time can be categorized into two diverse groups. In line with this therefore, the yield curve will take its shape according to the supply and demand of securities within each group, whether long or short. This theory is also referred to as the "Segmented Markets Theory". This school of thought presupposes that majority of investors already have an inclination with respect to length of developments that they intend to invest in. This principle asserts that the participants in each of the distinctive development lengths can't be effortlessly substituted for each other as they have different preferences. An offshoot emanating from this theory advocates were an investor decides to put their capital outside their preferred term, say from short to long, they must earn higher return for taking on the additional risk. This has been called the Preferred Habitat Theory. The worth of a security is always a function of the present value of the future cash flows related to it. Discounting the cash flows expected to be generated in the future; using a discounting rate from the market gives you the present value of those cash flows expected to be generated in the future. Demand and supply of money in the economy possess a direct connection with the rate in which it discounts its securities and in essence, with the current worth of cash flows. According to Sellin (2001), demand and supply of money will ultimately influences the prices of stock if the alteration in the demand and supply of money adjusts the anticipations of investors about forthcoming policies

especially the ones relating to money. He argues further that an encouraging supply of money will prompt investors to anticipate tighter fiscal measures in the future. As a result, the interest rate goes up and so will the discount rates. The present value of future earnings decline bringing down the stock prices, as often noted, the level of economic activities decline as interest rates rise, further depressing securities prices.

Another school of thought contends that a positive cash supply shock will push up the stock costs. They contend that an adjustment in the cash supply gives signal on cash request, which thus is brought about by future yield anticipation, supply of Money increases as a response to increased demand, signaling an increase in commercial activity. With commercial actions, cash flows increase and therefore pushes up the stock prices (Sellin, 2001).

The value of stock prices is affected by money supply as it has a direct impact on the interest rate. This school of thought believes that real interest rate rises as money supply is tightened. When interest rate it trigger a rise in the discount rate as well and in turn leads to decline the value of the stock (Bernanke and Kuttner, 2005). They trust that that a policy fixing the demand and supply of money aims at declining the rate of commercial activity and therefore minimizing the chances of firms to perform better.

2.3. Factors Affecting Financial Performance of Listed Agri-Business Firms

Determinants of financial performance of any entity can be classified into entity specific i.e. internal and macro-economic i.e. external factors (Aburime, 2005). Internal factors are those that relate to the individual entity and the management has power over them. The external factors cover the entire industry or even nationally and cannot be controlled by the entity but still affect its performance. These external factors include;

2.3.1 Exchange rate

Prior to 1972 many trading nations operated a fixed regime in terms of exchange rates and each country had affixed currency exchange rate to the US dollar. After 1972 the exchange rate regime was liberalised i.e. no more fixed rate relative to the US dollar. This change however, became a key sympathy toward the financial specialists, expert, supervisors and shareholders as the exchange rates became fluid. This therefore meant that the cost of monetary forms is controlled by free market activity of the cash in the open forex markets. As the supply and demand of various currencies is a function of various outside and inward variables, this new framework is dependable for wide currency fluctuations according to Abor (2005). Firms therefore face foreign exchange risk as a result of these fluctuations. Moreover, the world is becoming a global village and more economies are opened up causing more exposure to foreign exchange rate fluctuations. In essence, firms face three types of foreign exchange risks and these include; economic exposure, translation exposure and transaction exposure (Eiteman et al., 2006).

2.3.2 Interest rate

Liquidity theory takes the view that the interest rate is a coupon rewarded for the inconvenience for having to part with an asset which is very liquid, in this instance cash. Interest rate is sometimes seen as an element of pay. Its essential part is to aid in mobilizing financial resources into a pool and create an environment of efficient utilization so as to promote economic growth and development (Ngugi, 2001). Interest can also be seen as the rent paid for money. It assesses the rate of return that is anticipated by the money lenders for having given out their assets. The interest rate

should therefore incorporate all the data in regards to any future changes in the purchasing power and the risk component.

As per Cowley (2007), the interest rate is the cost at which the borrower pays for the utilization of cash money borrowed from the intermediaries. In a way it is the charge paid for the utilization of obtained resources. Fluctuations in interest rate expose firm's financial position to this very real risk. Wild fluctuations in interest rate pose very critical dangers to an association's profit and capital base changes. It also increases by a huge percentage its functional expenses. Higher interest rates may also negatively influence the basic estimation of benefits, liabilities and present estimation of future money streams that re discounted.

2.3.3 Inflation

Inflation refers to the change whether up or down in the overall level of prices of goods and services in the country for a given period of time. The changes in prices of goods and services directly and significantly effect in the purchasing power of money and the cost of production in the manufacture of the same goods and services. The effects of inflation can be seen from two angles; the effect on the aggregate demand and effect on the cost of production. When the inflation rate is high, consumers who have fixed incomes have a lower purchasing power as the value of money is reduced. This will ultimately lead reduced demand for goods and services. On the other hand, inflation pushes up the cost of production hence affecting the bottom line of firms.

The nominal interest rate ruling in the economy is made up of real interest rate and the inflation rate. The nominal interest rate will therefore change in line with changes in the inflation rate. This is referred to as the theory of the Fisher effect. Pandey (2009)

on the other hand, suggests that if capital markets operating within countries were perfect, then those investments with equal risk should ideally offer equal return in different markets. This is as per the arbitrage principle, proposing development of assets starting with one market then onto the next consistently until harmony is accomplished. In the event that the genuine rates of return are the same in two nations, then, according to the fisher impact, the ostensible rates of intrigue would alter precisely for the adjustment in the expansion rates. Vong and Chan (2009) contend that accessible exact confirmation on the relationship amongst expansion and productivity is uncertain and subsequently requires encourage look into.

2.3.4 Gross Domestic Product (GDP)

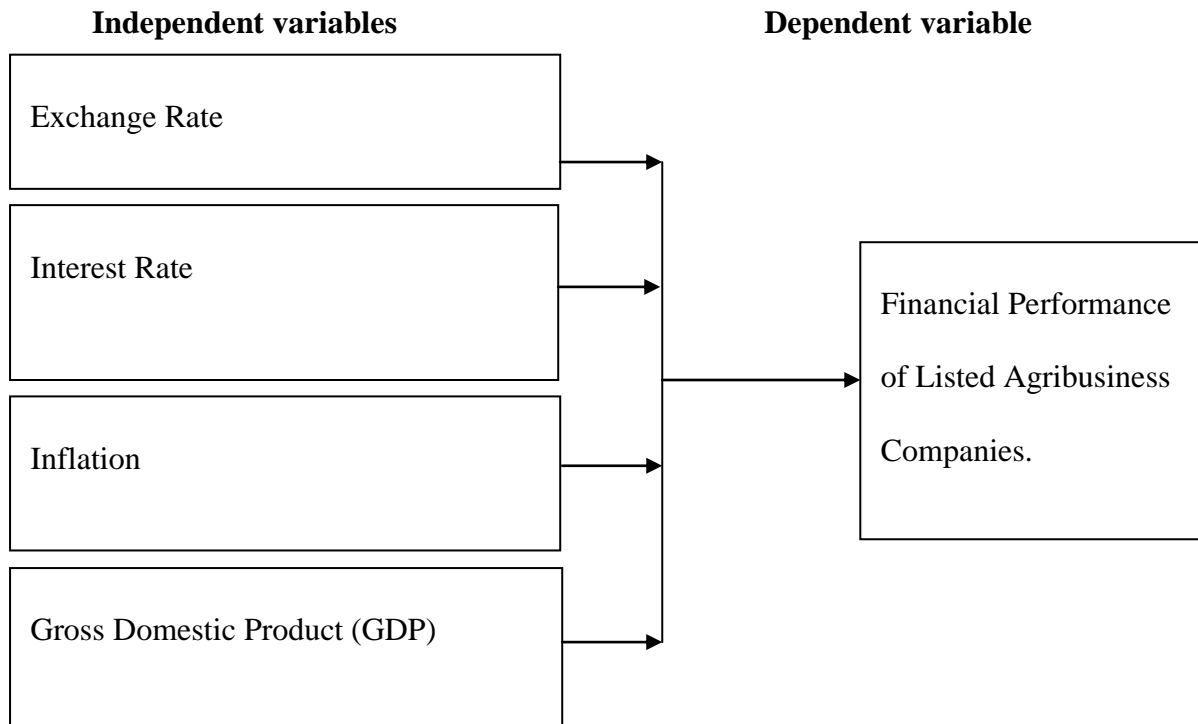
Every economy in the world today experience some cyclic fluctuations in their performance as shown by periods of boom and recession. As per Athanosoglou et al (2005), during periods of a boom the economy is thriving and demand for credit is high and the opposite is true during recession. Ongore and Kusa(2013) in their banking sector report, argue that when the GDP growth is declining, demand for credit falls significantly and this negatively affects the profitability of banks. On the other hand, when the economy is witnessing positive and increasing GDP, demand for credit increases substantially thereby leading to growth in profitability.

2.4 Conceptual Framework

According to Menike (2006), studies done show that various macro-economic factors can and does affect financial performance of firms. Since all the macro-economic factors can be looked at, it is imperative that they be narrowed down to those that are relevant to the agribusiness sector. Noting the above and balancing the theoretical

propositions with prior evidence, four variables which are exchange rate, interest rate, inflation rate and GDP fluctuation variables were picked.

Fig: 2.1: Conceptual Framework



2.5 Empirical Review

A large number of studies that have been done, seem to show significant relationships between the four main macro-economic variables of exchange rate, interest rate, inflation rate and GDP and the financial performance of firms in terms of profitability and security returns.

As indicated by Zulfiqar and Din (2015) who inspected the relationship between macro-economic pointers and firm performance among material ventures in Pakistan, findings recommend positive unimportant relationship between inflation rate and firm performance. The examination approach of regression analysis might not have been

proper since the information utilized was time arrangement as a part of nature. The most suitable examination would have been VECM to research the long period relationship between macroeconomic pointers and firm performance.

Limpanithiwat and Rungsombudpornkul (2010), on the hand, took a gander at the relationship between expansion rate and stock return among organizations recorded in Thailand. Time arrangement information for the period 2000 to 2010 was gathered for the study. Utilizing the unit root to test for stationarity and vector auto relapse to test the relationship between factors, the yield indicated next to no relationship between inflation rate and stock returns. The decision of vector auto relapse looked proper since the information was time arrangement in nature, and relapse examination would not have been fitting to research the relationship between factors.

A standout amongst the most suitable looks into to this study was that of Oleka, Sabina and Ebue (2015). They researched the relationship amongst expansion and firm performance in Nigeria. They gathered Secondary information from yearly financial related reports for the period 2000 to 2014. Playing out the conventional slightest squares relapse examination, the result achieved demonstrated a positive yet not critical relationship between both return on equity and income per share. These two were utilized as intermediary measures of financial performance of the firm. In my view, conventional minimum squares relapse examination as information investigation method was not proper since the information again was time series in nature. The most proper investigation should have been vector auto relapse keeping in mind the end goal to show relationship between the study factors over the long period of time.

Kumar (2013) looked into the link between inflation and stock returns; an evidence from Brazil, Russia, India, China and South Africa (BRICS) market. Quarterly secondary data was collected for the period 2000 to 2013 from Brazil, India, Russia, China and South Africa for the study. Utilizing time series to examine the information, stationarity tests demonstrated that the information was stationary in among the BRICS individuals. The confirmation likewise indicated noteworthy long haul relationship amongst returns and inflation rate. Connection investigation attempted demonstrated that there was a positive noteworthy relationship amongst return and inflation rate.

Kairuthi (2014) in local study , examined the impact of inflation and loan fees on securities exchange returns of firms listed at the NSE. The study utilized distinct time series relationship . Month to month auxiliary data was gathered on stock returns, inflation rates, trade rates and liquidity. Applying enlightening time series connection plan, the yield appeared to propose negative reverse relationship between inflation rates and stock returns. But, there was a positive noteworthy relationship between loan fee and stock returns.

In Namibia, Eita (2011) carried out a study on the influence of several macro-economic variables on stock performance and between the variables themselves. In particular, the study tried to research the relationship between loan fee, inflation rate, cash supply and trade rates. Utilizing the Vector Error Correction (VECM) model to break down the data, prove appear to point a positive critical relationship between growth in securities exchange costs and cash supply and monetary movement. Likewise noted was the converse relationship between stock prices and inflation rate while loan cost demonstrated positive huge association with stock performance.

Barasa (2014) likewise examined the key financial performance pointers and stock returns among firms operating at the NSE. This study embraced the exploratory research framework, regression analysis utilized to inspect the direction of the relationship and connection examination to gauge the quality of the relationship between stock returns and key financial performance pointers. It was found that there is a positive noteworthy relationship between inflation, financial development, loan fee and stock returns. Conversely, there was a reverse relationship between swapping of currency rates and stock returns.

Lai & Roy (2005) studied the effects of macro-economic news declarations on large stock returns. Month to month auxiliary news was gathered on eight indicators which included; GDP, genuine movement, utilization, venture, government consumption, net foreign sales, cash supply and forward looking pointers. The yield got from the study demonstrated that there was a negative critical relationship between GDP news declaration and mean stock returns.

Finally, Njoroge (2013) examined the association between loan cost and firm performance among licenced organizations at the NSE. Utilizing judgmental sampling system to choose firms effectively exchanging somewhere around 2008 and 2013, the findings demonstrated a positive however not critical relationship between loan fee and return on equity.

2.5 Summary of the Literature Review and Research gap

Form the above literature review; it is clear that there are quite a number of studies carried out on macro-economic variables influence on either stock market performance or individual firms. However, the evidence seems so inconclusive or

outright conflicting from one researcher to another. There is therefore need to carry additional research to try and resolve the above inconsistencies.

Lastly nature and extent of effects of macro-economic variables will be different depending on the industry. To some, they might be positively affected and others negatively. It is imperative therefore to study each industry individually and see the effects and relationships thereon. In view of this therefore, this study looked at the listed agribusiness firms performance in light of macro-economic variables.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Having identified the variables to be examined and the framework developed, this chapter dealt with designing the research. The design detailed how to conduct the study, the population list of the study and sample size used. It also entails the method used to collect the data, data analysis and model specification used. All these are to aid in arriving at a definitive conclusion regarding the link between macro-economic variables and financial performance of agribusiness firms.

3.2 Research Design

The research design adopted was descriptive correlation. Descriptive because data used was secondary data and for a given period of time. As per Dusan Rijbarova (2005) correlation is a statistical measures of a relationship between two or more variables that gives an indication of how one variable may predict or affect the another. Correlation and regression method applied to determine the relationship between the independent and dependent variables as indicated in the framework.

3.3 Population of Study

The population is the entire group of events or things that are of interest to the researcher. The study targeted all the six listed agribusiness firms and covers the period 2009 to 2013. The agribusiness companies included; Rea Vipingo Plantations, Eaagads Ltd, Kakuzi Ltd, Limuru Tea Co. Ltd, Sasini Ltd, and Williamson Tea Kenya Ltd.

3.4 Data Collection Technique

This research used data which was secondary in nature gathered from the financial accounts of the targeted agribusiness firms covering the period 2009 to 2013. The key pieces of information the researcher collected from the financial reports included earnings before interest and tax (EBIT), current liabilities, debt, the level of current assets, equity and operating cash flows. The secondary data was obtained from the Nairobi Securities Exchange.

3.5 Data Analysis

Data analysis is a procedure of breaking down all the data and assessing the pertinent data with a specific end goal to test the theory, notes Silvia and Skilling (2006). The information gathered was altered for precision, consistency and culmination, then organized and coded utilizing Ms –excel. The financial proportions like current ratio, operating cash flow ratio and Return on Capital Employed (ROCE) and capital structure were ascertained for the period from 2010 to 2015 After the above activity, the information was broke down utilizing the Statistical Package for the Social Sciences (SPSS) programming. The outcomes are displayed in terms of frequency distribution and percentages.

3.5.1 Model Specifications

In order to undertake the empirical analysis on the relationship between the selected independent and dependent variables, the model below was used:

$$C = \beta_0 + \beta_1D_1 + \beta_2D_2 + \beta_3D_3 + \beta_4D_4 + \mu_t$$

Where:

C was the dependent variable (financial performance of the companies)

D_1 was the independent variable exchange rate,

D_2 was the independent variable interest rate,

D_3 was the independent variable inflation rate and

D_4 was the independent variable gross domestic product

B_j represents the various coefficients

μ_t was the error term

3.5.2 Test of Significance

The study t-test was subjected to the 95% significance level. The null hypothesis that there was no significant difference against the alternative hypothesis of significant difference was tested. If the value under "Sig." is less than .05, then it denotes the test is significant, meaning the two variances were significantly different. If it is not significant (Sig. is greater than .05), the two variances are not significantly different; that is, the two variances are approximately equal.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents results of the data collected. Model results are presented together with descriptive statistics. The chapter also includes the interpretation of the results together with summary of the findings thereon.

4.2 Descriptive Results

This section presents the findings where the measures of central tendency and trend analysis are shown.

4.2.1 Measures of Central Tendency

The descriptive statistics for the three variables have been obtained for empirical investigation and are presented in the Table 4.1.

Table 4.1: Measures of Central Tendency

	Year	N	Minimum	Maximum	Mean	Standard Deviation
Financial Performance (ROE)	2009	12	1.37	5.60	4.0858	1.82376
	2010	12	1.96	6.40	4.5900	1.80412
	2011	12	2.23	7.36	4.9375	1.97352
	2012	12	3.53	7.36	5.5583	1.50851
	2013	12	4.10	7.25	5.4700	0.98893
Gross Domestic Product	2009	12	0.90	7.60	3.0083	2.42504

	2010	12	1.10	9.10	5.7500	2.81280
	2011	12	1.10	8.80	5.7500	2.77145
	2012	12	1.10	8.60	5.7500	2.75829
	2013	12	.80	8.70	5.7500	2.78192
Exchange Rate	2009	12	74.74	80.26	77.352	1.92560
	2010	12	75.79	81.43	79.233	2.03426
	2011	12	81.03	101.27	88.8108	6.24302
	2012	12	82.90	86.34	84.5283	1.11731
	2013	12	84.15	87.49	86.1228	1.17851
Inflation Rate	2009	12	7.14	14.62	10.6225	2.45511
	2010	12	3.18	7.52	4.1025	1.22189
	2011	12	5.42	19.72	13.9758	4.85383
	2012	12	3.20	18.31	9.6408	5.44898
	2013	12	3.67	8.29	5.7150	1.67446
Interest Rate	2009	12	6.82	8.46	7.3767	0.38225
	2010	12	1.60	6.56	3.5992	1.90432
	2011	12	2.46	18.30	8.7308	5.62319
	2012	12	7.77	20.56	12.7558	4.53711
	2013	12	5.92	10.38	8.9250	1.48917

Table 4.1 presents the descriptive statistics for all the variables. As shown above, there were 12 observations made for all the variables. Also tabulated are the average values, minimum and maximum values and the standard deviation. The dependent variable, financial performance of the companies has the mean (average) value of 4.08 (2009), 4.59 (2010), 4.93 (2011), 5.55 (2012) and 5.47 (2013); it has a minimum

value of 1.37, 1.96, 2.23, 3.53 and 4.10 and a maximum value of 5.60, 6.40, 7.36, 7.36 and 7.25 for the respective years.

The independent variable gross domestic product has the mean (average) value of 3.80 (2009), 5.75 (2010, 2012, 2013 and 2014 each); it has a minimum value of 0.90, 1.10, 1.10, 1.10 and 0.80 and a maximum value of 7.60, 9.10, 8.80, 8.60 and 8.70 for the years 2009,2010, 2011, 2012 and 2013 respectively.

Exchange rate has the mean (average) value of 77.35 (2009), 79.23 (2010), 88.81 (2011), 84.53 (2012) and 86.12 (2013); it has a minimum value of 74.74, 75.79, 81.03, 82.90 and 84.15 and a maximum value of 80.26, 81.43, 101.27, 86.34 and 87.49 for the respective years.

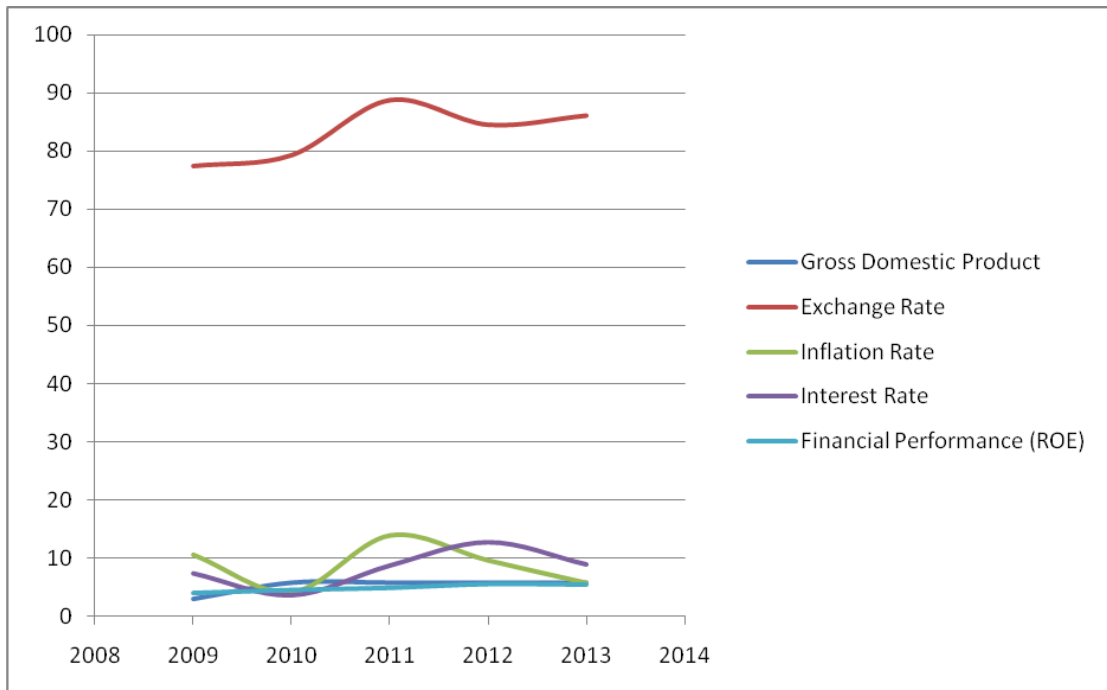
Inflation rate has the mean (average) value of 10.62 (2009), 4.10 (2010), 13.98 (2011), 9.64 (2012) and 5.72 (2013); it has a minimum value of 7.14, 3.18, 5.42, 3.20 and 3.67 and a maximum value of 14.62, 7.52, 19.72, 18.31 and 8.29 for the respective years.

Interest rate has the mean (average) value of 7.37 (2009), 3.59 (2010), 8.73 (2011), 12.75 (2012) and 8.93 (2013); it has a minimum value of 6.82, 1.60, 2.46, 7.77 and 5.92 and a maximum value of 8.46, 6.56, 18.30, 20.56 and 10.38 for the respective years.

4.2.2 Annual Trends

The trend in financial performance as depicted by return on equity, GDP, exchange rates, interest rates, inflation rates, over the years is presented in figure 4.1 below.

Figure 4.1: Trend Analysis



The results indicate that exchange rate as a macro-economic factor has been volatile, it increased gradually from year 2009 to 2011, then slightly decreased in 2012 and then went up in the year 2013. The increase may be attributed to balance of payment account, confidence in the local currency, interest rates, and state of the economy.

Results also indicate that trend in inflation rate and interest rate as a macroeconomic factor was inconsistent. For the period 2009 to 2010 there was a gradual decrease with an increase in 2010 to 2011 and then a slight decline in 2012 and 2013. This could have been caused by excess demand in the economy or cost push factors.

The GDP trend revealed a gradual decrease from year 2009 to 2010 after which it remains relatively consistent. This can be explained by interest of few venture capital firms to finance real estates.

Results in Figure 4.1 also shows that there was a gradual increase in financial performance in year 2009 to 2012, followed by a slight drop in the following year of 2013.

4.3 Correlation

Table 4.2: Correlations

	GDP	Exchange rate	Inflation Rate	Interest rate	Financial performance	
GDP	Pearson Correlation	1	.725**	-.963**	-.297	.041
	Sig. (2-tailed)		.008	.000	.349	.899
	N	12	12	12	12	12
Exchange rate	Pearson Correlation	.725**	1	-.682*	-.310	.067
	Sig. (2-tailed)	.008		.014	.326	.835
	N	12	12	12	12	12
Inflation rate	Pearson Correlation	-.963**	-.682*	1	.392	.137
	Sig. (2-tailed)	.000	.014		.208	.671
	N	12	12	12	12	12
Interest rate	Pearson Correlation	-.297	-.310	.392	1	-.049
	Sig. (2-tailed)	.349	.326	.208		.880
	N	12	12	12	12	12

	Pearson					
Financial	Correlation	.041	.067	.137	-.049	1
performance	Sig. (2-tailed)	.899	.835	.171	.180	
	N	12	12	12	12	12

Note:

** . Shows significance of correlation at 0.01 level (2-tailed).

* . Shows significance of correlation at the 0.05 level (2-tailed).

The above table shows the analysis of Pearson's correlation coefficient matrix. This analysis is intended to determine the relationship that exists among the independent or explanatory variables and correlation with the dependent variable, which is financial performance of agribusiness companies. The results reveal that financial performance has lowest positive correlation with inflation, at 0.171, which shows correlation is not significant at 99% confidence level. Financial performance has high positive correlation with gross domestic performance of 0.899% which shows correlation is significant at 99% confidence level. The results also show low positive correlation with interest rates of 0.180% which shows correlation is significantly low at 99% confidence level.

4.4 Regression

4.4.1 Regression of macro-economic factors on financial performance

In order to establish whether macro-economic factors influence financial performance of Agribusiness companies, regression has been done below.

Table 4.3: Output Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.741 ^a	0.549	0.291	1.32541

a. Independent variables which include, Interest Rate, GDP, Exchange Rate, and Inflation Rate

The results reveal that the R squared of 0.549 means that macro-economic factors accounted for 54.9% of the changes in financial performance of Agri-business companies changes ,while 45.1% cannot be explained by explanatory variables hence error term.

Table 4.4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.961	4	3.740	2.129	.0180 ^b
	Residual	12.297	7	1.757		
	Total	27.258	11			

a. Dependent Variable: Financial Performance

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

The above table indicates that the overall model was significant. This was supported by a p value of 0.080. The ANOVA results demonstrated that the macro-economic factors, that is, Interest rate, GDP, Exchange rate, Inflation rate are good predictors of financial performance of Agri-business companies.

Table 4.5: Co-efficients

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	80.791	44.836		1.802	.011
1 GDP	2.586	.955	2.920	2.706	.030
Exchange rate	-.117	.435	-.101	-.269	.007
Inflation rate	-10.081	3.472	-3.038	-2.903	.023
Interest rate	-.826	.609	-.404	-1.356	.021

a. Dependent Variable: Financial performance

The multiple regression analysis was done to find out the relationship between four macro-economic variables and financial performance of listed agri-business companies in Kenya. P-values were used to test for the significance of each predictor variables (macro-economic factors) in the model. The macro-economic factors were significant when the significance value was less than 0.05 (significance level). Stated below is the regression equation.

$(C = \beta_0 + \beta_1D_1 + \beta_2D_2 + \beta_3D_3 + \beta_4D_4 + \epsilon)$ becomes:

$$(C= 1.301+ 0.801X_1+ 0.707X_2+ 0.763X_3+ 0.763X_4+ \epsilon)$$

Relationship between GDP and financial performance of listed agri-business companies in Kenya. The t value and significance level were 2.586 and 0.030 respectively. At 0.03 significance level, the independent variable GDP accounted for a

higher variation in the dependent variable financial performance of listed agri-business companies.

The exchange rate and financial performance of listed agri-business companies in Kenya. The t value and significance level were -0.117 and 0.007 respectively. At 0.05 significance level, the exchange rate explained a highly significant negative proportion of the change in the financial performance of listed agri-business companies.

Inflation rate and financial performance of listed agri-business companies in Kenya. From the above table, the t value and significance level were -10.081 and 0.023 respectively. At 0.023, inflation rate explained a highly significant negative proportion of the change in the financial performance of listed agri-business companies.

Interest rate and financial performance of listed agri-business companies in Kenya. The t value and significance levels were -0.826 and 0.021 respectively, an indication that interest rate explained a highly significant negative proportion of the change in financial performance of listed agri-business companies.

CHAPTER FIVE: SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The data was analyzed and findings presented in tables for easier interpretation. This chapter specifically brings out the discussion findings based on the study in chapter four. It gives conclusion to the study and highlights recommendations for further studies. It also highlights the limitation of the study.

5.2 Summary

Table 4.1 presents the descriptive statistics for all the variables. As shown above, there were 12 observations made for all the variables. Also tabulated are the average values, minimum and maximum values and the standard deviation. The dependent variable financial performance of the companies has the mean (average) value of 4.08 (2009), 4.59 (2010), 4.93 (2011), 5.55 (2012) and 5.47 (2013); it has a minimum value of 1.37, 1.96, 2.23, 3.53 and 4.10 and a maximum value of 5.60, 6.40, 7.36, 7.36 and 7.25 for the respective years.

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(2013); it has a minimum value of 74.74, 75.79, 81.03, 82.90 and 84.15 and a maximum value of 80.26, 81.43, 101.27, 86.34 and 87.49 for the respective years.

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The trend in financial performance as depicted by return on equity, GDP, exchange rates, interest rates, inflation rates, over the years is presented in figure 4.1. The results indicate that exchange rate as a macro-economic factor has been volatile, it increased gradually from year 2009 to 2011, then slightly decreased in 2012 and then went up in the year 2013. The increase may be attributed to balance of payment account, confidence in the local currency, interest rates, and state of the economy.

Results also indicate that trend in inflation rate and interest rate as a macroeconomic factor was inconsistent. For the period 2009 to 2010 there was a gradual decrease with an increase in 2010 to 2011 and then a slight decline in 2012 and 2013. This could have been caused by excess demand in the economy or cost push factors.

The GDP trend revealed a gradual decrease from year 2009 to 2010 after which it remains relatively consistent. This can be explained by interest of few venture capital

firms to finance real estates. Results in Figure 4.1 also shows that there was a gradual increase in financial performance in year 2009 to 2012, followed by a slight drop in the following year of 2013

The above table shows the analysis of Pearson's correlation coefficient matrix. This analysis is intended to determine the relationship that exists among the independent or explanatory variables and correlation with the dependent variable, which is financial performance of agribusiness companies. The results reveal that financial performance has lowest positive with inflation rate that of 0.171 which shows correlation is not significant at 99% confidence level. Financial performance has high positive correlation with gross domestic performance of 0.899% which shows Correlation is significant at 99% confidence level. The results also show low positive correlation with interest rates of .180% which shows Correlation is significantly low at 99% confidence level.

The results in Table 4.3 reveal that the R squared of 0.549 meaning that macroeconomic factors only accounted for 54.9% of the changes in financial performance of Agribusiness companies changes ,while 45.1% cannot be explained by explanatory variables hence error term. Result shows that NSE Share index changes are significant 99% confidence interval.

The above table indicates that the overall model was significant. This was supported by a p value of 0.080. The ANOVA results demonstrated that the macroeconomic factors, that is, interest rate, GDP, exchange rate, inflation rate are good predictors of financial performance of Agribusiness companies.

Relationship between GDP and financial performance of listed agri-business companies in Kenya. The t value and significance level were 2.586 and 0.030 respectively. At 0.03 significance level, the independent variable GDP accounted for a higher variation in the dependent variable financial performance of listed agri-business companies.

The exchange rate and financial performance of listed agri-business companies in Kenya. The t value and significance level were -0.117 and 0.007 respectively. At 0.05 significance level, the exchange rate explained a highly significant negative proportion of the change in the financial performance of listed agri-business companies.

Inflation rate and financial performance of listed agri-business companies in Kenya. From the above table, the t value and significance level were -10.081 and 0.023 respectively. At 0.023, inflation rate explained a highly significant negative proportion of the change in the financial performance of listed agri-business companies. This finding is consistent with empirical finding of Cheechee (2002), who in his study found out that inflation rate is assumed to have a negative relationship with demand for life insurance.

Interest rate and financial performance of listed agri-business companies in Kenya. The t value and significance levels were -0.826 and 0.021 respectively, an indication that interest rate explained a highly significant negative proportion of the change in financial performance of listed agri-business companies.

5.3 Conclusion

The aim of this research was to explain and predict the financial performance of agribusiness firms as measured by return on equity (ROE) and effects of macro-economic variables if any. The four macro-economic variable with lead-lag relationships have an R2 of 0.549 or 54.9%. The study therefore concludes that current financial performance of the firms is a function of the prior year ROE, and aforementioned macro-economic variables. The firms may forecast their earnings going forward based on the government forecast of GDP figures if the same are accurate to an extent. As the macro-economic variables are largely influenced by government policy, policy this research therefore shows the connection between that policy and firm performance.

Overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables influences listed agri-business companies' financial performance. This study also found that interest rate, inflation rate, GDP and exchange rate are statistically significant with inflation rate, and real exchange rate and interest rate explaining a highly significant negative proportion of the change in the dependent variable financial performance of listed agri-business companies in Kenya.

5.4 Recommendations

Having laid down the finding, this research recommends that in order for the listed agri-business companies in Kenya to perform better, there is need to put into place policies that will ensure stable exchange rates in Kenya. Stable and perhaps lower

exchange rates would help the firms in the industry to perform better since they are negatively correlated with their financial performance.

The second recommendation has to do with managing money supply in the economy. There is some evidence to suggest that the higher the money supply, the better the performance of companies in the industry. This is largely due to the high disposable income by individual thus increasing demand for goods and offered by listed agribusiness companies in Kenya.

Finally, it recommends that the government should also look into policies that ensure stability and even lower inflation rate in the economy and create an enabling environment to enable borrowers especially firms to access finances at interest rates. This will greatly improve the financial performance of companies in agribusiness industry as they are negatively correlated with each other. Lower interest rates will help improve the liquidity in the general sector and therefore lead to more investments and consumption.

5.5 Limitations of the study

The study did not analyze any internal factors and other external variables beyond the control of the firms that affect their financial performance. Perhaps, competition, effectiveness of the companies, management decisions and operating efficiency and other factors could have influenced the financial performance.

5.5 Suggestions for Further Research

Suggested areas of study should be on internal and external factors that affect the financial performance of listed agribusiness companies in Kenya. This will analyze

critical factors that managers ought to consider in order to make their decisions on organization strategy to yield successful results.

Further studies should also include other macro-economic variables to establish their contribution whether positive or negative on financial performance of listed agribusiness companies in Kenya.

The present study covers a scope of only five years. For more comprehensive results, it can be extended to a longer period of time.

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APPENDICES

Appendix I: Exchange Rate from 2009 to 2013

2009	Jan	78.95
	Feb	79.533
	Mar	80.261
	Apr	79.626
	May	77.861
	Jun	77.851
	Jul	76.751
	Aug	76.372
	Sep	75.605
	Oct	75.244
	Nov	74.739
	Dec	75.431
2010	Jan	75.786
	Feb	76.73
	Mar	76.947
	Apr	77.254
	May	78.541
	Jun	81.018
	Jul	81.426
	Aug	80.44
	Sep	80.912
	Oct	80.714
	Nov	80.46
	Dec	80.568
2011	Jan	81.029
	Feb	81.473
	Mar	84.206
	Apr	83.89
	May	85.433

	Jun	89.049
	Jul	89.898
	Aug	92.786
	Sep	96.357
	Oct	101.27
	Nov	93.676
	Dec	86.663
2012	Jan	86.343
	Feb	83.176
	Mar	82.897
	Apr	83.188
	May	84.384
	Jun	84.789
	Jul	84.14
	Aug	84.075
	Sep	84.613
	Oct	85.112
	Nov	85.629
	Dec	85.994
2013	Jan	86.9
	Feb	87.446
	Mar	85.818
	Apr	84.189
	May	84.146
	Jun	85.488
	Jul	86.859
	Aug	87.493
	Sep	87.413
	Oct	85.31
	Nov	86.103
	Dec	86.309

Source: Central Bank of Kenya

Appendix II: Interest Rate from 2009 to 2013

YEAR	MONTH	91-Day Tbill	182-days Tbill	364-days Tbill
2009	Jan	8.46	8.93	-
	Feb	7.55	7.89	-
	Mar	7.31	7.91	-
	Apr	7.34	8.34	-
	May	7.45	8.77	-
	Jun	7.33	8.28	-
	Jul	7.24	8.14	-
	Aug	7.25	8.12	8.71
	Sep	7.29	8.09	
	Oct	7.26	7.98	8.44
	Nov	7.22	8.02	
	Dec	6.82	7.38	8.01
2010	Jan	6.56	7.02	
	Feb	6.21	6.61	7.38
	Mar	5.98	6.34	
	Apr	5.17	5.58	6.01
	May	4.21	4.41	-
	Jun	2.98	2.86	4.14
	Jul	1.6	1.72	-
	Aug	1.83	2.03	2.96
	Sep	2.04	2.14	-
	Oct	2.12	2.1	3.06
	Nov	2.21	2.28	-
	Dec	2.28	2.59	3.36
2011	Jan	2.46	2.7	3.69
	Feb	2.59	2.76	3.72
	Mar	2.77	3.06	4
	Apr	3.26	3.51	5
	May	5.35	4.57	6.77

	Jun	8.95	9.93	-
	Jul	8.99	9.85	10.22
	Aug	9.23	10.15	11.07
	Sep	11.93	11.28	12.54
	Oct	14.8	14.68	14.5
	Nov	16.14	15.9	16.62
	Dec	18.3	18.3	20.96
2012	Jan	20.56	20.69	21.96
	Feb	19.7	19.88	20.96
	Mar	17.8	18.24	17.04
	Apr	16.01	16.92	16.92
	May	11.18	12.71	12.43
	Jun	10.09	10.67	12.43
	Jul	11.95	12.21	13
	Aug	10.93	11.77	12.85
	Sep	7.77	9.36	10.34
	Oct	8.98	10.33	10.57
	Nov	9.8	10.47	11.94
	Dec	8.3	9.25	11.71
2013	Jan	8.08	8.09	11.67
	Feb	8.38	8.4	11.66
	Mar	9.88	9.89	12.54
	Apr	10.38	10.75	12.49
	May	9.46	10.04	11.29
	Jun	6.21	7.12	8.57
	Jul	5.92	6.23	8.81
	Aug	10.03	9.57	11.35
	Sep	9.58	10.15	10.91
	Oct	9.72	10.28	10.75
	Nov	9.94	10.54	10.97
	Dec	9.52	10.41	10.69

Source: Central Bank of Kenya

Appendix III: Inflation Rate from 2009 to 2013

Year	Month	Overall CPI	Inflation rate
2009	Jan	97.55	13.33
	Feb	100.00	14.62
	Mar	100.96	14.44
	Apr	101.84	12.10
	May	101.84	9.88
	Jun	102.05	9.86
	Jul	102.33	10.33
	Aug	102.94	9.76
	Sep	103.42	9.19
	Oct	103.68	8.80
	Nov	103.87	7.14
	Dec	104.66	8.02
2010	Jan	104.89	7.52
	Feb	105.18	5.18
	Mar	104.97	3.97
	Apr	105.56	3.66
	May	105.79	3.88
	Jun	105.61	3.49
	Jul	105.98	3.57
	Aug	106.25	3.22
	Sep	106.74	3.21
	Oct	106.97	3.18
	Nov	107.86	3.84
	Dec	109.38	4.51
2011	Jan	110.57	5.42
	Feb	112.05	6.54
	Mar	114.62	9.19
	Apr	118.29	12.05
	May	119.48	12.95

	Jun	120.91	14.48
	Jul	122.44	15.53
	Aug	123.97	16.67
	Sep	125.23	17.32
	Oct	127.20	18.91
	Nov	129.13	19.72
	Dec	130.09	18.93
2012	Jan	130.82	18.31
	Feb	130.76	16.70
	Mar	132.51	15.61
	Apr	133.74	13.06
	May	134.09	12.22
	Jun	133.06	10.05
	Jul	131.92	7.74
	Aug	131.51	6.09
	Sep	131.89	5.32
	Oct	132.46	4.14
	Nov	133.33	3.25
	Dec	134.25	3.20
2013	Jan	135.62	3.67
	Feb	136.59	4.45
	Mar	137.96	4.11
	Apr	139.28	4.14
	May	139.52	4.05
	Jun	139.59	4.91
	Jul	139.87	6.02
	Aug	140.29	6.67
	Sep	142.82	8.29
	Oct	142.75	7.76
	Nov	143.14	7.36
	Dec	143.85	7.15

Source: Kenya Bureau of Statistics

Appendix IV: Gross Domestic Product

Year	Month	GDP
2009	Jan	6.3
	Feb	7.6
	Mar	6.9
	Apr	1.5
	May	1.9
	Jun	2.3
	Jul	1.3
	Aug	1.8
	Sep	2.6
	Oct	0.9
	Nov	1.3
	Dec	1.7
2010	Jan	1.1
	Feb	1.9
	Mar	1.2
	Apr	5.6
	May	6.1
	Jun	6.6
	Jul	6.1
	Aug	7.4
	Sep	8.1
	Oct	7.6
	Nov	8.2
	Dec	9.1
2011	Jan	1.1
	Feb	1.9
	Mar	1.2
	Apr	5.8
	May	6.1

	Jun	6.4
	Jul	6.8
	Aug	7
	Sep	7.8
	Oct	7.9
	Nov	8.2
	Dec	8.8
2012	Jan	1.1
	Feb	1.9
	Mar	1.2
	Apr	5.9
	May	6.1
	Jun	6.3
	Jul	6.9
	Aug	7.3
	Sep	7.4
	Oct	8.1
	Nov	8.2
	Dec	8.6
2013	Jan	0.8
	Feb	1.8
	Mar	1.6
	Apr	5.7
	May	6.1
	Jun	6.5
	Jul	6.7
	Aug	8
	Sep	6.9
	Oct	7.9
	Nov	8.3
	Dec	8.7

Source: Kenya Bureau of Statistics

Appendix V: Financial Performance

	2013	2012	2011	2010	2009
Jan	5.48	5.26	4.98	3.9	3.23
Feb	7.25	7.36	6.75	6.26	5.16
Mar	4.63	4.12	3.66	3.65	3.37
Apr	6.04	5.89	5.03	5.38	5.44
May	4.1	3.53	2.23	1.96	1.37
Jun	5.76	7.03	7.18	6.25	5.46
Jul	6.11	5.96	5.09	5.45	5.51
Aug	4.15	3.57	2.26	1.98	1.39
Sep	5.83	7.12	7.27	6.33	5.53
Oct	6.19	6.04	5.15	5.51	5.57
Nov	4.20	3.62	2.29	2.01	1.40
Dec	5.90	7.20	7.36	6.40	5.60