THE EFFECTS OF FOREIGN EXCHANGE RATE VOLATILITY ON THE FINANCIAL PERFORMANCE OF LISTED CONSTRUCTION AND ALLIED COMPANIES IN THE NSE IN KENYA

BY

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DECLARATION

I, the undersigned, hereby declare that this Research Project is my original work and has not been presented for a degree in any other University or institution for academic purposes.

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DEDICATION

I dedicate this project to my parents and siblings who, through their prayers and encouragement, passed on a love of reading and respect for education. To my fiancée, Caroline, who have taught me not to give up at any point.

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LIST OF ABBREVIATIONS

CBK	Central Bank Of Kenya
FX	Foreign Exchange
KES	Kenya Shillings
NSE	Nairobi Securities Exchange
PPP	Purchasing Power Parity
USD	United States Dollar
ANOVA	Analysis Of Variance
PBT	Profit Before Tax
PBTM	Profit Before Tax Margins
IR	Inflation Rate
LM	Liquidity Management
VIF	Variance Inflation Factor

ABSTRACT

The main purpose of this research objective was to investigate the effects of foreign exchange volatility on the financial performance of listed construction and allied companies on the NSE in Kenya. The research used a population of the five listed companies. Secondary data was generated from CBK and from annual financial statements of individual companies for a period of ten years from 2008 to 2017.Various scholars had performed similar studies on different area and the results obtained contradict each other. This study has however addressed various gaps found in the previous studies. The results show that foreign exchange volatility has a positive insignificant impact on financial performance of listed construction and allied companies. The model summary shows that predictor variables namely the foreign exchange rate volatility, inflation rate, sales volumes, total assets and the liquidity levels predicts 78.2% of the changes in the profit before tax margins. The model coefficients show that an increase in inflation arte and the total assets leads to a decrease in the profit before tax but an increase in the foreign exchange rate volatility, liquidity levels and the sales volumes leads to an increase in the profit before tax.This research therefore recommend that government come up with appropriate measures, policies and structures that helps to boost sales volumes such as special economic zones as well as manage the macro-economic variables such as inflation rate that negatively affects the financial performance of construction firms

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Every developing country has the aim of attaining an optimal economic growth accelerated by the favorable balance of trade. The goal of any government is to promote the local firms by ensuring the costs of production and the prices of goods in the local and international markets are competitive enough. On the other hand, the management of the local firms has the objective of maximizing the shareholders' value that is brought about by many factors among them coming up with expansion strategy beyond the local markets. However, over the years, one of the major source of risks to the movement of goods across countries is the foreign exchange rate.

Shapiro (1984) developed the theory of foreign exchange exposure which asserts that the performance of the multinational corporations are affected by the volatility of exchange rates. In most cases the effects of exchange rate volatility affects the firm's export and import value. Such performances tend to fluctuate differently depending on the level of exposure to foreign exchange rate volatility. According to the theory many firms are exposed to the foreign exchange risks through the transaction, translation and economic exposure which not only affects the performance of the firms but also the performance of the industry as a whole.

For many years the issue of exchange rates movements has been a great concern to many stakeholders including the governments and the managers of corporations since 1971 when the Bretton woods fixed rate system was abolished. This system was replaced by the floating rate

where the prices of currencies are determined by the forces of demand and supply. Due to the frequent fluctuations of demand and supply of such currencies the floating system has now become responsible for the movement in exchange rates, Abor (2005).On the other side, according to Adler (1984), many economies are becoming more liberalized by opening up their borders to international trade. Therefore for these reasons companies involved in export and import become more exposed to foreign exchange rate volatility.

In Kenya the fluctuations in the foreign exchange rate is one of the macro –economic factors that affects the country ability to trade in the international markets as well as the price levels of goods and services. The foreign exchange rate of a country provides an opportunity to the country's economic stability making it to attract the interest of researchers. The exchange rate therefore becomes an important factor in the determination of the country's balance of payment, the international trade as well as the overall performance of the economy.

Across the country's borders, transactions are denominated in foreign currency which is accepted in both sides of the borders. Such transactions constitute an important aspect of manufacturing and construction industries. The major reason behind this could be because it functions as the medium in which both the seller and the buyer interact to establish a common negotiated price mutually acceptable which act as a point of furthering the cross border transactions and also become part of the settlement vehicles of international trades. Over time, such prices may fluctuate from one equilibrium point to another bringing in the volatility in exchange rates which poses a risk threat to the firms. In essence the fluctuations in the foreign exchange rates affects the performance of firms through the products selling price level, the investment decisions of the firms, their

profitability, export sales of goods and services as well as the overall competitiveness in the industries.

1.1.1 Foreign Exchange rate volatility

Foreign currency exchange rate is the price at which one country's currency can be bought for another country's currency. The Volatility of exchange rate is the degree to which the price of a currency varies or changes from time to time. If such changes occur more frequently from one price to another, then such currencies are said to be volatile, Musyoka (2012)

Exchange rate is one of the most important factor in an economy that directly influences the price of commodities in both the local and international markets. It also affects the financial performance of firms that trade in such goods as well as playing a critical role when making decisions on investments and resource allocation, Heintz (2011)

The greatest advantage of a stable foreign exchange rate is that it becomes the formidable bedrock in which most economic activities are carried out having been as a result of the adoption of seasonal paper of 1986 named the Stuctural adjustment programme (SAP). Since then, the responsiveness of exchange rates to the market forces has made the floating exchange rate being preferred by most countries compared to the fixed arrangement. Jackson (2007) asserts that the exchange rates volatility shows the level and extent of uncertainty in the prices goods and other financial assets.

Before the onset of floating system of exchange rates, it used to be the role of central banks to determine the price at which to fix the currencies and as such there used to be no currency risks

involved in international transactions. However, as the business transactions went global and more liberalized, the fixed exchange rate was replaced with floating rate.

All the years up to 1974, the CBK was using a system where the exchange was pegged on the US dollar rate. However, after a decade there was a devaluations of the Kenyan currency and this forced the regulator to change the peg to a special drawing rate (SDR). The consequences of this drastic change made the exchange rate for the KES/USD to became erratic between 1974 and 1981. In general, the economy registered a depreciation of the exchange rate by 14% which continues to accelerate in 1981/82 even with the continued devaluations of the Kenyan currency. It was until 1990 when the existing rate regime was again changed and a new system of establishing the exchange rate was introduced and that lasted up to the end of 1993. During that time , it was established that the rate continued to depreciate further which then provoked its abolition. Since then a new system was introduced where the exchange rate was now allowed to move with the market demand and supply. In this new system of floating exchange rate which has lasted upto date the rate was allowed to float, Ndung'u (2000).

Under this systems of floating rates, the price of currencies is determined by the free markets movements where the forces of demand and supplies fix the equilibrium price. In the recent past many developing nations has now moved to implement this system. According to Grier & Mark (2010), there being a number of external factors that affects the supply and demand of currencies, it went without noticing similar fluctuations in the foreign exchange rates. Such periodic fluctuations affect different firms differently exposing them to different levels of foreign exchange risks

1.1.2 Financial Performance

According to Meigs (2016), financial performance is the process of performing an activity that is monetary in nature. In other words, it is the extent or the length at which a pre-determined financial objective which had been pre-determined is being achieved or has been accomplished. Financial performance also refers to the process at which a firm's policies and operations are measured and quantified in monetary values. There are various ways in which the financial wellbeing of a firm can be measured. This include the time period in which the parameter is measured whereby the same parameters calculated differently can be used in capering various firms that operate in the same sector.

According to Choi & Prassad (1995) the volatility of exchange rates affects the cash flows of the firm and its financial performance through the transaction exposure, translation and economic effects. This has made the foreign exchange volatility to be of great interest and concern to various stakeholders including the investors, the managements, financial analysts and other shareholders. The financial performance and the long term financial health of the firms has been of great importance to the management of the particular firms, the scholars in the related fields of study and the governments and regulatory authorities making them to develop considerable interests on the industry and the firms and the macroeconomic factors that influence their general performance in terms of cash flows.

Molyneux & Thornton (1992) in their book analyses the internal factors that affect the financial performance of the firms and they include the exposure to risks and its controls thereof, labor productivity, size of the firm's capital base and its ease of access to its, the quality and efficiency of the firm's managements and its human capital. In addition to such internal factors, Brinson

(1991) found the macro economic factors that affect the financial performance of firms and which includes the prevailing interest rates, the growth in the country's GDP, the rate of inflation and the foreign exchange rates

There have been several research studies which has measured the firm financial performance in terms of return on equity(ROE) and Profits after tax while others use return on sales (ROS), return on assets (ROA) , Operating Profit margin and Earnings Before Interest and Tax. These parameters are generally used because of their general availability. Also most of the profit making organizations has to publish these figures from time to time, Chenhall & Langfield(2007).

1.1.3 Effect of foreign exchange rate volatility on financial performance

In general, the Exchange rate volatility can affect the domestic prices of goods and services through the demand and supply. According to Mishkin (2008) the local consumers of imported goods will be highly affected by the exchange rates movements. In an economy where all the local firms are price takers, a depreciation in the currency will lead to high prices of imported goods. Such high volatility impacts negatively to the firms which then contributes to the losses affecting the financial performance of the firms. In other words, the various operations model of a business determines the risk exposure i.e. a local firm may be making products at home for export or for the domestic market, or the products produced with imported and locally available raw materials.

In his study Bodnar (1993), asserts that there exist a relationship between the movements of the exchange rates and the firm's financial performance. Another similar view is recorded by Kituku (2014) suggesting that there is a direct negative impact associated with the fluctuations of the foreign exchange rate on the financial performance of the firms. Contrary, Mwanza (2014) had a

different findings suggesting that the effects of foreign exchange fluctuation on the financial performance of listed firms is insignificant

Foreign exchange exposure arises where a firm or an individual has or expect an income, an asset, an expenditure or a liability that are denominated in the currency other than that which is used in the firm's balance sheet. In case such volatility occurs, the cash flows of the firms are significantly affected. Such impact on cash flows consequently affects the profitability of the said firms Levi (2005).

1.1.4 Construction and Allied Companies on the NSE

The construction industry in Kenya is a sector that transform natural resources obtained locally and imported into constructed physical infrastructure that promote the social economic development of the country. In Kenya the stakeholders in the construction industry are involved in the planning and designing the infrastructures, procuring or producing the necessary materials for the said in structures and to some extent they are involved in the repairs and maintenance of the same structures including demolitions. In additions there are other allied activities that are involved or are part of the major constructions. These activities include preparing and providing parts in the construction work and they require specialized machineries and skills. Such works are carried out by the allied companies, Ibrahim (2015).

According to the Economic Survey (2017) of Kenya, the construction industry registered a growth of 17.5 per cent in 2017 compared to an expansion of 15.1 per cent recorded in 2016.The increase in the growth rate of the industry can be partly attributed to the ongoing construction development by the national government, the county government and the private sector. Among Such development include

the Standard Gauge Railway (SGR) construction works as well as the roads constructions. Cement consumption went up by 9.9 per cent from 6.2 million tonnes in 2016 to 7.7 million tonnes in 2017. Further the listed construction and allied companies contributed ksh 80.3B to the total market capitalization in the NSE as at 15/12/2017 which represent 3.3%, a significant performance that necessitate this study, Nairobi Securities Exchange (2017). For this reasons the construction and allied companies in Kenya has become a significant partner of such developments. This exponential growth in the construction industry has led to increase in demand for cement and other products locally made and imported.

According to the survey of Kenya national bureau of statistics (2017) there was an upward trend in the prices of construction inputs. The price index of the construction materials is highly correlated to the prices of fuels such as industrial diesels, petrol, and other automobile diesel fuels. Others include the prices of explosives, structural steels and hydrated limes most of which are imported from other countries to Kenya. For this reason, the whole industry become exposed to foreign exchange rates volatility. In Kenya the listed firms in the securities exchange which are categorized as constructions and allied companies include the Athi River Mining company, Bamburi cement Ltd, Crown Paints Kenya PLC, E.A Cables ltd and the E.A. Portland Cement Ltd.

1.2 Research Problem

Various theoretical foundations have been used to assess the impact of foreign exchange rate volatility on various aspects of the firm. The Purchasing Power Parity theory of 1918 developed by Gustav Cassel suggest the source of fluctuation in the exchange rates as the differential in the purchasing power and the differentials in the nominal interest rate of two given countries,

Cassel(1918). The theory of foreign exchange rate exposure explains the various ways in which the volatility affects the firm performance. There are various ways in which multinational firms are exposed to the risks associated with the fluctuations in foreign exchange rates through the economic exposure where such fluctuations directly bring in inflations and economic instability, translation exposure which affects the company's balance sheet and transaction exposure which not only affects the performance of the firms but also the performance of the industry as a whole. In their Flow Oriented Model, Dornbusch and Fisher (1980) found that exchange rates volatility usually affects the international competitiveness of a company and the performance of the balance of trade through the appreciation and depreciation of the currency.

Over the recent past Kenya has been growing its trade links with other countries both in Africa and across the whole world by opening up its boarders to allow local firms to export their products as well as import raw materials. This has led to an increase in direct foreign investment in the country. For this reason, many firms in the country are engaging in cross border trading. This liberation has also made most of the local firms to seek and raise financial capital from markets abroad. The government of Kenya has been encouraging the local firms through formulation of appropriate policies to focus not only on local markets but also on international markets. Such moves are meant to boost the cross-currency flow of money from and to different countries. Exchange rate volatility is an important factor while designing policies to maintain the value of the local currency and helps to reduce the huge effects on the price levels and thereon the financial performance. The consequences of such volatility will always be reflected on the firm's financial performances, Nyamao (2012).

Raheman Mustafa (2004) conducted a study at the Islamabad Stocks Exchange with the objective of investigating the impact of currency depreciation on the profitability of construction companies. The

research covered five years period 1999 to 2004 where the sample was the 9 listed companies. The findings of the study showed that currency depreciation significantly affects the profitability of the construction companies. Mohamed (2013) conducted a study to investigate the impact of foreign exchange rate volatility on the construction business performance in Nigeria. His study revealed that there is a positive but insignificant effects of exchange rate volatility on the financial performance of construction companies.

Owino (2005) did a study to investigate the impact of fluctuations in the foreign exchange rate on the country's economic growth rate. The outcome of the study showed that such fluctuations has a positive impact on the country's economic growth rate. In the same line of study, Musyoki et al. (2012) was investigating the effects of foreign exchange fluctuations on the economic growth rate in Kenya and the outcome of the study were that the effects were negatively correlated. According to Demir (2013), his study on the volatility of foreign exchange rate found that the fluctuations in the exchange rate negatively affects the growth rate on the firms that specializes on the manufacturing of goods locally. Contrary to the major findings on the effects of the foreign exchange volatility, Mwanza (2014) found an insignificant effects of exchange rate volatility on the firm's performance and the. Further, Khosa et al (2015), did a study on the effects of foreign exchange rate volatility on the performance of Kenyan exports and the results were that the volatility have a negatively effect on the Kenyan exports.

To this end, it can be established that the conclusions obtained by some scholars shows positive effects while others shows negative and no significant effects. This is to say that there is that evidence obtained on the effects of foreign exchange rate volatility on financial performance is deficient especially in the listed construction and allied companies in Kenya, Bhunia (2010). In addition, many studies have been done on the same regarding listed insurance companies, listed

financial services companies and all listed firms. However, it is worth noting that little has been done on the same topic on the listed construction and allied firms. Since there is a general perception that there exist a relationship between the two variables, it means that the construction companies may also be affected in one way or the other by the volatility of the exchange rates. Whilst the financial performance of these listed companies have been fluctuating from high to low over the last decade, there is no clear indication that such performance was wholly or partly attributed by the volatility of the exchange rates. For this reason, therefore this study has answered the question: What is the effects of the exchange rate volatility on the financial performance of the listed construction and allied firms in the Nairobi Securities Exchange?

1.3 Research Objective

To determine the effects of foreign exchange rate volatility on financial performance of listed construction and allied companies in the Nairobi Securities Exchange in Kenya.

1.4 Value of the Study

This study will benefit the said companies' managers since it will help them to determine the nature and extent of effects of volatility on the performance of their companies. With this in mind they are able to design and implement policies and controls that mitigates against the extreme effects of foreign exchange volatility on their company's financial performance. This means with this knowledge they are able to manage any loss that arise from such currency fluctuations

The study will provide investors with information and analysis to help them make an informed assessment on the amount of risks exposure for the listed constructions companies and as a result they will be able to know the risks associated with their investment choices. Therefore, the investors will use the results of this study to design an appropriate investment strategy. From time

to time whenever an investment opportunities arise as a result of foreign exchange fluctuations the investors will be able to take advantage and maximize on them.

To the Scholars and researchers this study will help them obtain new evidence which will be useful and will contribute to more knowledge to the area under study. They will benefit from the study as it adds more empirical literature regarding the two variables and their relationship thereof.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews on what has been studied on the foreign exchange rate fluctuation by other researchers and scholar. The review relates to the theoretical and empirical literature, local research review as well as the summary of knowledge gaps identified and the literature review. This will help the study to establish how far the researchers has done in studying the stated subject.

2.2 Theoretical Literature

There are various theoretical foundations that are used in explaining the exchange rate exchange rate fluctuations among the currencies of different countries and their effects. The theories are the foreign Exchange exposure theory, Purchasing Power Parity and Flow Oriented Model.

2.2.1 Foreign Exchange Exposure Theory

This theory was developed by Shapiro (1984) and it asserts that the volatility of the exchange rates usually affects the performances of the multinational corporations which are involved in trans-border trading through export and imports. Such transactions are denominated in other currencies other than the domestic currency. The theory also asserts that different multinationals are exposed in different ways to the foreign exchange risks through the transaction, translation and economic exposure which not only affects the performance of the firms but also the performance of the industry as a whole. However, there has been an empirical study on the companies with wide

network of operation in different countries but done on the same topic Levi (1994), Amihud (1994), Jorion (1990) and whose results shows no significant effects of foreign exchange rates volatility on the corporation's value. On the same basis of foreign exchange exposure theory, Bodnar & Gentry (1993) conducted a recent study on the effects of the movement of the foreign exchange rates on sales and net assets of the firms and the results were that the volatility of the exchange rates determines the value of a firm.

More recent studies conducted by Gao (2000) are more consistent with this theory and find that exchange rate movement which majorly affects the net sales value and the assets value remain to be an important factor in determining the value of the firm through its cash flows. Therefore this theory helps to show how the company's profitability is linked to the effects of the foreign exchange rate fluctuations through the assets values and the sales value

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2.2.2 Purchasing Power Parity Theory

This theory was developed by Cassel (1918) and is based on the postulates of one price. According to this theory and where the markets are efficient with no transaction costs, identical goods should have one price. However, there are some assumptions which are taken into account in this theory and they include homogeneity of the traded products in different countries where the trade restrictions are absent. In addition, the theory is used to analyze only for the tradeable goods as opposed to non-tradeable goods such as services and such analysis is useful for long-term currency valuation. Under the PPP model, after taking into account the movements on exchange rates, a bundle of goods in one country should be priced the same as another country.

According to Cassel (1924) in the long run a fluctuating system of exchange rate tend to push the exchange rates of any two currencies into an equilibrium point which is fixed by the two nations' purchasing power. In other words, this theory shows the nature of relationship between the foreign exchange rate and the rate of inflation of the two countries. Further to this, the interest theory shows the exchange rates expectations which explain the relationship between the foreign exchange rates and the prevailing relative rates of interests. In his book, Dufey (2007) states that the exchange rates fluctuations between two currencies are a reflection of the nominal interest rates differentials, a phenomenon known as the international Fisher effect. In the presence of this international Fisher effect, in a country where there the currency is depreciating the interest rates tend to be high as opposed to a country where the currency is appreciating making the interest rates to be low. As a result, any expected currency gains or loss is eliminated. To this end therefore given an efficient foreign exchange markets, the fluctuations in the foreign exchange rates is a factors of both the purchasing power differentials and the nominal interest rates differentials.

The importance of this theory is that in any given two countries it can be a tool for making data comparison as well as a theory explaining the cause in the exchange rates movements between two given countries. However, this theory may not be appropriate in determining the best equilibrium price due to the assumptions made that are not realistic in the real world and therefore best used as a comparison tool.

2.2.3 Flow Oriented Model

This theory was established by Dornbusch and Fisher (1980). The Postulate of the theory is that the fluctuations in the exchange rates causes the stock price movements. The logic behind this is that movements in the exchange rates affects the operations of the businesses and thus the future

expected cash flows of the firms is also affected. Since the current stock prices reflects the discounted present value of all the future cash flows expected by the firms, any exchange rates movements translate to stock price returns if the assumptions of the efficient market hypothesis hold. In other words, according to the theory the volatility of the exchange rates usually affects the international competitiveness of a company and the performance of the balance of trade.

An appreciation of the currency mean that the prices of the exports becomes expensive in the foreign markets. When the sales performance is affected negatively, this translate to reduced expected future cash flows to the firms. The financial performance of the company is affected by the reduced sales figures. This tend to lower the firms share price which is a discounted sum of future cash flows. Consequently, where there is an appreciation in the exchange rates goods made locally but sold in the international markets becomes cheaper. Such exports will lose their competitiveness in the international markets. Such companies will experience a drop in their profits thus reducing their corporate value. Although this theory is widely used to test the relationship between the exchange rates and the stock prices, it is imperative that the effects of the exchange rate must be felt in the financial performance of the firm before its being reflected on the share prices movements.

2.3 Determinants of Financial Performance of Construction and Allied Companies.

There are various factors that affects the performance of firms .Such factors can either internal or external factors. The internal factors are those that are firm specific and which are under the control of the management while external factors are market specific and are not unique to one firm, Giddy (2007).

2.3.1 Inflation Rates

Inflation can be defined as the frequent upward movement in the general prices of goods and services which subsequently leads to a rise in the general cost of living and the ultimate fall in the purchasing power of people. High inflation rates have contributed to negative financial results and the general performances of the economy and firms. Theoretically high inflation rate increases the cost of producing various goods and thereby reducing the firms' ability to generate profits, lowering the company's financial performance, Baumol (2006)

According to Perry (2002), impact of inflation on profitability depend on whether expenses as well as revenues increases at a high rate than the inflation rate and whether inflation is anticipated. The study confirms that inflation is one of the macroeconomic factor that affect firm's profitability. Masood and Ashraf (2012) also investigated the relationship between firms profitability and the inflation rate and found out inflation rate and profitability are positively related.

2.3.2 Liquidity Management

In any organization, one of the major roles of the firm's managers is liquidity management. Liquidity management as defined by Njoroge (2015) means ability to meet the short tem financial obligation such as the current liabilities and operating expenses. To measure the level of liquidity current ratios are used to establish how well the current assets can be able to meet the current liabilities. The importance of liquidity management is that various stakeholders in a firm are always keen on how it uses the short term assets at its disposal. Suppliers will always check whether the company has the ability to make payments upon supply of raw materials. Firm employees will always be concerned if the firm has ability to pay their salaries and the shareholders will always check if the firm has the cash

abilities to make dividend payments. Njoroge (2015) therefore established that liquidity management has a positive and significant influence on the financial performance of firms

2.3.3 Firm Size

Stierwald (2010) described firm size as the financial ability of the firm to provide various goods and services to its market as well as produce such goods with ease. The report found that firms which has financial muscles and are considered large had recorded more profits that the small firms. Large firms are in a better position to generate and attract more resources and utilize to greater extent the economies of scale. According to that report large firm were found to have positive and significant parameters that influence the company's' profitability and the conclusion was that size of a firm influences its financial performance. There were two parameter which were used to measure the firm size which are the total assets and the sales volumes

2.4 Empirical Literature

A study conducted by Forbes (2002) evaluated the impact of depreciation of local currency against major currencies on the firm's performance with respect to assets value, sales value and net income as well as the long term effects on the market capitulation of the firm. In addition the study investigated how other factors that explicitly characterizes the individual firms such as the firm size, the capital structure, output type, production structure of the firm as well as the profitability of the firm that influences the firm financial performance through currency fluctuations. The results showed that market capitalization in foreign currency of the firm was a significantly higher compared to the low net income in local currency flowing the year after currency depreciation. Notably there was a significant better performance for the organizations which experienced greater exposure on foreign sale. In addition, the organization with low net income had a higher gearing

ratios. It is critical to note that worse financial performance was recorded for the larger firms compare to the small firms. The conclusion of the study is that there exists no consistent relationship between the currency depreciation and the financial performance measured by profitability. However, market efficiency becomes the limiting factors for measuring the long term financial performance of the firms using market capitalizations method. The assumptions in this case is that where markets are efficient market all relevant information are reflected in the market which may not be applicable in all markets situations especially in the developing countries where there are less liquid emerging markets.

Demir (2013) conducted a research on the effects of exchange rate volatility on the growth performances of manufacturing firms by comparing the performance of foreign versus the domestic firms as well as private firms versus those that are publicly traded in turkey. The study used employer-employee dataset. The result showed that the volatility of exchange rates has a significant impact on the growth rate of the manufacturing firms. However, the study notes that those firms that raised its capital in the foreign equity markets had the impact of volatility significantly reduced compared to those that accessed the domestic equity markets. The studied further asserts that the impact of volatility could not be affected or reduced by the fact that any some firms were producing for export orientation, the level of external and internal indebtedness, the size of the firms, the level of productivity as well as the industrial characteristics of the firms.

According to Mohamed (2013) fluctuations in the foreign exchange rate has a direct effect on the financial performance of the construction organization in Thailand. The study further alludes that that this happens because the income and the expenses of any given construction organization are denominated in local currency whereas they are generated or incurred in foreign currencies. In addition, loan repayments may be made in foreign currencies. This means that a change in the

foreign exchange rates has a great effect on the construction firm's profitability commonly manifested in the reduced profit margins which affects the competitive advantages of the firm thereby reduces the market value of the firm.

Oguna (2014) conducted a similar study focusing on companies listed at NSE under manufacturing, category. It was a descriptive research study and data collected from 2010 to 2013 was analyzed using regression model. The data was analyzed using linear regression models using SPSS. The study findings was that no correlation between return on equity and financial performance Thus concluding that capital changes does not affect firm's performance.

On a different study Khosaet.al, (2015), investigated the effect of exchange rate volatility on emerging market exports using data generated from 1995 to 2010 for nine emerging economies namely. The study employed the panel data analysis where GARCH and conventional standard deviation aimed at establishing whether a relationship exist between the exchange rate volatility and the level of export in the country. The outcome of the study agreed with the hypothesis that the there is a significant negative impact of foreign exchange rates on the performance of the export. In order to sustain the export market at the time of exchange rate volatility there need to be in place some policy mix that makes the exchange rate competitive as well as one that will manage the exchange rate regime.

2.4 Review of Local Research

In her study, Irene (2011) conducted a study to establish the relationship between the fluctuations in the foreign exchange rates and the financial performance of the airline companies in Kenya. The research design was a case study. The finding of the research study is that there exists a negative relationship between the variables regarding the airlines companies in Kenya. Her conclusion was

that there is an impact of fluctuations of the exchange rates on the price of services offered by the airline companies which in turn negatively affects the firm's cash flows which are denominated in foreign currencies.

According to Mwanza (2014) the objective of his study was to establish the effects of the foreign exchange rate fluctuations on the performance of NSE in Kenya. The research design of the study was Descriptive and longitudinal designs which were made to obtain information about the foreign exchange rates, inflation and interest rates as well as helped track changes over time. The results of the study showed that the three variables significantly explain 73% of the changes in the performance of the overall stock prices. However, as a single factor the Foreign exchange rate has an insignificant impact on the stock prices and therefore it does not significantly affect the performance of the NSE

In his study, Kituku (2014) did a study to determine the effects volatility of exchange rates on the financial performance of the of Motor vehicles companies in Kenya. The study used secondary data from year 2003 to 2012 generated from the Companies Financial Report. The research design used was descriptive design. The results showed that the fluctuations experienced in the foreign exchange rates had a significant effect that negatively affects the financial performance of the firms. Further the study revealed that there were other factors which could be accounted for and which also affects the financial performance including the translation by sales figure, costs of raw materials, transaction exposure by both payables and receivables as well as economic exposure by marketable securities and equipment's.

According to Onyango (2014) whose main objective was to investigate the effects of volatility in exchange rates on the economic growth rate in Kenya, found that a positive but insignificant

impact of the foreign exchange rates volatility on the GDP growth rate in Kenya. This analysis was carried out using the secondary data generated for the period of 1980 to 2012 and the method of estimation was the ordinary least square method. To establish the order of integration the researcher used the Augmented Dickey-Fuller test (ADF) which was used in the unit root testing. This method was used to establish whether the series was stationary or non-stationary. The recommendations are that the equilibrium should be established on the point of devaluation and revaluation of the domestic currency in regard to other major currencies. Such measures should encourage economic growth through reduction of import and promotion of export.

Edna (2015) did a study whose objective was to establish the effects of the fluctuations in the foreign exchange rates on the profitability of insurance companies in Kenya. The research design used was a descriptive design. According to the finding of the study the volatility of the foreign exchange rate has a negative but insignificant impact on the profitability of insurance companies in Kenya. Other factors including the GDP, the rate of inflation and the interest rates affects the insurance companies positively. In this study the key variables used to measure the profitability was the Return on assets (ROA). The conclusion of the study was that the macroeconomic factors are responsible in influencing the performance of the insurance companies but only to a small extent.

In addition, there are other factors that has an impact on levels of the financial performance of the construction and allied companies. Njoroge (2015) conducted a study to investigate the effects of firm's liquidity on its financial performance. The study analyzed the five listed companies in the construction and allied section at the NSE from year 2005 to 2014. A regression model was used and the results of the study show that there is an effect on the financial performance brought about by the various factors of liquidity. That is, a positive relationship was noted between the Current

ratio, total sales and operating ratio and the financial performance of the construction and allied companies.

2.5 Summary of Literature Review and Knowledge Gaps

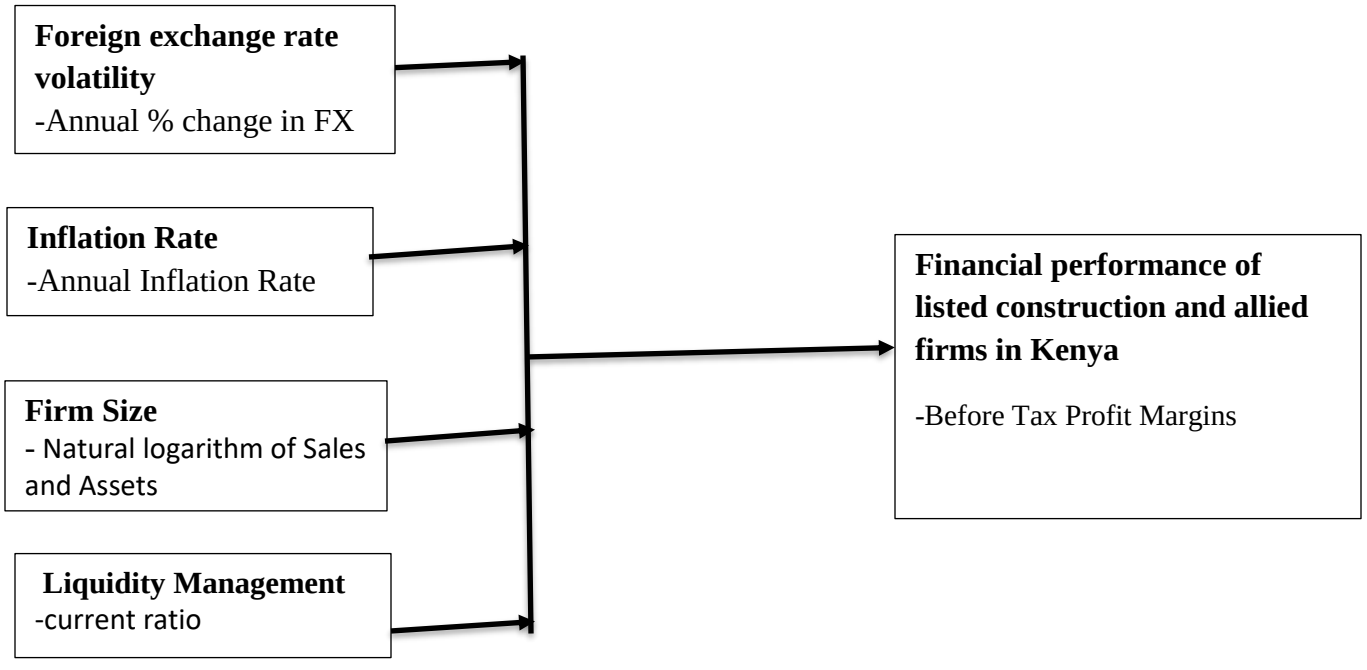
According to the literature review above, it is very clear that there is a relationship between the foreign exchange rates volatility and the profitability of firms and specifically the construction and allied firms. The theoretical review shows that various aspects of the company's financial pillars are affected differently. Volatility may affect sales performance in terms of the cash flows originating from the foreign markets through exports. It may also affect the value of foreign debts as well as the cost of doing business through increased costs of imported raw materials.

The empirical literature reviews what other researcher has done on the same topic. It can be established that various conclusion has been obtained with some studies showing a positive effect while others shows insignificant effects. In other words the evidence obtained by various researchers are deficient in one way or the other and very few studies has been conducted on the effects of foreign exchange rate volatility on the financial performance of the construction and allied companies listed in the NSE. In addition to the deficiency of evidence, it is also very clear that may research studies has been carried out on the insurance firms, airline companies, the Nairobi stock exchange, financial services firm, export and imports, motor vehicle companies as well as the economic growth parameters but very few studies has been conducted in regard to the construction and allied companies.

2.6 Conceptual framework

Regression analysis was used to analyze the data. Regression model is a tool used to establish the casual linkages and relationships between two or more measurable variables. In other words,it helps to know the effects caused by one variable on another variable. Therefore, this regression analysis was used to demonstrate the effect of foreign exchange rates volatility on the financial performance of listed construction and allied firms in the NSE.

Figure 2.1 Conceptual Framework



Independent Variables

Dependent Variable

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design and methodology which was adopted in the study. It covers research design to be used in the study, Population**,** Data and Data Collection Instruments, Data Analysis and Test of Significance.

3.2 Research Design

This is an overall outline that shows how a study was conducted giving out a strategy of how different component in a research study will be integrated together to ensure there is coherence and logical flow. The chosen design ensures there is a framework that effectively answers the research questions. The research design will shows the method used to collect, measure and analyze the data, Churchil (2007).

This research employed descriptive design which is a method that entails observing the outcomes and describing the trends and behaviors of the specific variables. The advantage of using descriptive design is that the researcher makes observation of the variables in its unchanged environment as well as large amounts of rich data are gathered and analyzed. It is recommended for this research because it will allow the description, comparison of variables in the study as well as interpretation of the existing relationships between variables. In this study the relationship to be determined is that between the foreign exchange rates and the financial performance of listed construction and allied companies in Kenya.

3.3 Population and Sample

Mugenda and Mugenda (2003) define a target population as the entire set of unit for which the data is to be used to make inferences. Its part of the population the researcher is interested in the group about which the researcher wishes to draw conclusions and fulfil the research objectives. In this study the target population was all construction and allied firms listed at the NSE in Kenya.

The population of this study comprised the 5 constructions and allied companies listed at the Nairobi securities exchange (NSE) as at 2017.The data to be used in this study was derived from the Central bank of Kenya and World Bank for the period of ten years (2008 to 2017). The annual performance data for each construction and allied firm listed in NSE was derived from their published financial statement for the same period of ten years. The choice of this period is to enable this study use the most recent data which was then to ensure the results of the study are more current.

3.4 Data and Data Collection Instruments

Mugenda and Mugenda (2003) defined data collection as the process of gathering appropriate information as evidence that helps to get an answer to a question in a research study or help get a new insights concerning a certain situation.

This research study used secondary data derived from the Central bank of Kenya for the period of ten years (2008 to 2017) as well as the published annual financial statements for the five listed construction and allied firms. The information derived from the financial statements will include the sales volumes, the total assets, the current assets, current liabilities and profit before tax

3.5 Data Analysis

3.5.1 Analytical Model

The linear regression model that was used for the study is as follows:

$$\pi_t=\alpha+\beta_1 IR_{+}\beta_2 FX+ \beta_3 LM + \beta_4 S+ \beta_5 FS + \varepsilon$$

Equation 3.1 Linear Regression Model

Where

π_t= represent the financial performance of listed construction and allied firms as measured by the Before Tax Profit margin.

α = will be the constant term in the model

βi = will be the Regression coefficients of independent variables which measures the responsiveness of financial performance to changes in *i*

FX = is the foreign exchange volatility at a given point in time as determined by the percentage change in foreign exchange (usd/ kes) rate.

LM= is the Liquidity management as measured by the current ratio

S= is the natural logarithm of the sales Volume

FS=is the Firm Size as measured by the Natural logarithm of Total Assets

ε_t = is the error term.

3.5.2 Test of Significance

The research study used an F-test whose aim is to establish the level of significance of foreign exchange rates volatility against the financial performance. The confidence level will be established at 95% confidence level. At this point where variables with a ‘p’ value of 0.05 and above will be considered as significant while those variables with ‘P’ values below 0.05 will be insignificant. In addition, any variation in the financial performance due to changes in the foreign exchange rates volatility will be determined by the R squared.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter present data analysis and results of the research findings on the effect of foreign exchange volatility on the financial performance of listed construction and allied firms on the NSE in Kenya. The secondary data was collected on the five listed firms for a span of 10 years from 2008 to 2017.The study used linear regression model models, descriptive statistics and correlation analysis. Correlation analysis shows the strength of the relationships between the variables used in the model.

4.2 Response Rate

This research study used data from the central bank of Kenya and from individual company's annual audited financial statement. Date was obtained for the 5 companies listed under construction and allied in the NSE. The response rate of 100 % was obtained which is excellent for analytical inference, Mugenda and Mugenda (2003).

Table 4.1 Response Rate

Response	**Frequency**	**Percent**
Responsive	5	100%
Unresponsive	0	0%
Total	5	100%

Source: Research Findings

4.3 Descriptive Statistics

This section describes the mean, standard deviation, minimum and maximum as well as the variance of the variables.

Table 4.2 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Before Tax Profit Margin	10	-9.210	26.940	13.30900	9.085702	82.550
Liquidity (Current Ratio)	10	67.600	186.060	136.21600	39.942067	1595.369
Size By Sales	10	17.636	18.103	17.89580	.185448	.034
Size By Assets	10	17.700	18.701	18.30990	.347072	.120
Inflation Rate(%)	10	3.97	16.23	8.6710	3.81828	14.579
Fx Volatility (Annual %)	10	1.01	16.98	6.6560	5.46424	29.858

Source: Research Findings

According to the research findings the financial performance as measured by the Profits before tax margins had a mean of 13.309,a standard deviation of 9.085702,a maximum of 26.940 and a minimum of -9.210.The firms liquidity which is measured by the current ratio had a mean of 136.216,a standard deviation of 39.94,a minimum of 67.600 and a maximum of 186.060.The firms size which is measured by the natural logarithm of sales revenues had a mean of 17.89580 ,a standard deviation of 0.185448 and a minimum and maximum of 17.636 and 18.103 respectively. Inflation which is measured annually had mean of 8.6710,a standard deviation of 3.81828 and a minimum and maximum of 3.97 and 16.23 respectively. The mean for the exchange rate volatility was 6.6560 and a minimum of 1.01 while its maximum is 16.98.

4.4 Correlation Analysis

4.4.1 Correlation Coefficients

This is a statistical method that is used to test how strong the relationship is between two variables. This can be tested using the Pearson correlation coefficient, r, which ranges +1 to -1. When the value of the coefficient is less than 0, it means that the variable measured have a negative association such that a change in one variable leads to correspondent change in a similar direction in the other variable. When the coefficient is equal to Zero, it means that there is no association between the variables. But when the coefficient is greater than zero the two variables have a positive correlation and an increase in one variable leads to an increase in the other variable.

The table below shows that foreign exchange volatility and inflation rate have a Correlation coefficient of 0.701 which is positive meaning that a change in inflation leads to a change in volatility in the same direction. Similarly, liquidity and the Profit before tax margins also have a positive correlation coefficient of 0.348 and 0.385 respectively. This means that an increase in volatility leads to an increase in liquidity as well as financial performance. On the contrary an increase in volatility leads to a decrease in the firm size as shown by the negative coefficients (-0.520 for size by sales and -0.442 for size by assets).

Inflation has a negative correlation with Firm size measured by assets (R= -0.593) as well as the sales values(R= -0.607) but positively correlated with liquidity (R= 0.412) and financial performance (R=0.124).

Table 4.3 Correlations Analysis

		FX VOLATILITY (%)	INFLATION RATE(%)	SIZE BY ASSETS	SIZE BY SALES	LIQUIDITY (CURRENT RATIO)	PBT MARGIN
Fx Volatility	Pearson Correlation	1	.701*	-.520	-.442	.348	.385
	Sig. (1-tailed)		.012	.062	.100	.162	.136
	N	10	10	10	10	10	10
Inflation Rate	Pearson Correlation	.701*	1	-.593*	-.607*	.412	.124
	Sig. (1-tailed)	.012		.036	.031	.118	.367
	N	10	10	10	10	10	10
Size By Assets	Pearson Correlation	-.520	-.593*	1	.894**	-.834**	-.594*
	Sig. (1-tailed)	.062	.036		.000	.001	.035
	N	10	10	10	10	10	10
Size By Sales	Pearson Correlation	-.442	-.607*	.894**	1	-.663*	-.362
	Sig. (1-tailed)	.100	.031	.000		.018	.152
	N	10	10	10	10	10	10
Liquidity (Current Ratio)	Pearson Correlation	.348	.412	-.834**	-.663*	1	.776**
	Sig. (1-tailed)	.162	.118	.001	.018		.004
	N	10	10	10	10	10	10
Before Tax Profit Margin	Pearson Correlation	.385	.124	-.594*	-.362	.776**	1
	Sig. (1-tailed)	.136	.367	.035	.152	.004	
	N	10	10	10	10	10	10

Source: Research Findings

Assets Values has a strong positive correlation with sales (R=0.894) but strong negative correlation with liquidity (R=0.834) and financial performance (R=0.594).Sales Volumes has a strong negative correlation (R=-0.663) with liquidity measure and weak negative correlation with financial performance(R=-0.362).Liquidity has a strong positive correlation with financial performance (R=0.776)

4.4.2 Test for Multicollinearity

This is a test that is done to test whether there exists any causal relationship between the independent variables in the regression model. The effects of multicollinearity in the model is that

it will lead to very strong correlation.to test for multicollinearity in the model VIF values are obtained and a decision made. Where the VIF values range between 1 and 10, then there is no multi-collinearity. But where the VIF values are below 1 and above 10 then there is presence of multicollinearity.

Table 4.4 Collinearity Statistics

	Unst Coefficients		Standardized Coeff.	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-149.334	322.510		-.463	.667		
Fx Volatility (Annual %)	.771	.577	.464	1.335	.253	.453	2.207
Inflation Rate(%)	-1.179	.881	-.496	-1.338	.252	.398	2.512
Liquidity (Current Ratio)	.194	.105	.851	1.847	.138	.257	3.888
Total Assets	-4.132	21.165	-.158	-.195	.855	.084	11.971
Sales Volumes	12.127	28.582	.248	.424	.693	.160	6.233

According to the above table, the VIF values for FX volatility, Inflation, liquidity and sales volumes are all between 1 and 10. This means that there is no absence of multicollinearity. However the VIF values fort total assets is above 10 meaning that there is presence of multicollinearity.

4.5 Regression analysis

A regression analysis was carried out to determine the model summary, the variance and the regression coefficients. The model, as explained in chapter 3, is given by the following

$$\pi_t = \alpha + \beta_1 IR_+ \beta_2 FX + \beta_3 LM + \beta_4 S + \beta_5 FS + \varepsilon$$

4.5.1 Model Summary

The model summary shows the coefficient of determination, denoted R^2. The coefficient of determination, is the proportion of the total variance in the dependent variable that can be attributed from the independent variable(s)

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884[a]	.782	.509	6.369487

Source: Research Findings

Table 4.4 above shows the R^2 is 0. 782.This means that 78.2% of variation in the changes in the Profit Before Tax Margins of the construction and allied firms is predicted by the changes in the predictor variables namely the Foreign exchange volatility, Inflation Rate, liquidity ,Sales volumes and the Assets values.

4.5.2 Analysis of Variance

The ANOVA statistics establishes the level of significance between the financial performance and the other predictor variables.

Table 4.6 ANOVA

Model		Sum of Squares	d. f	Mean Square	F	Sig.
1	Regression	580.668	5	116.134	2.863	.165[b]
	Residual	162.281	4	40.570		
	Total	742.950	9			

Source: Research Findings

The ANOVA represented in Table 4.5 shows the F Value of the entire regression model was 2.863 d.f (5,4) p> .05. As shown in the table the overall p value was greater than 0.05 (0.165) and the interpretation is that the predictor variables when used together does not reliably estimate the dependent variable. In other words, the variables were not significant in influencing the financial performance.

4.5.3 Model Coefficients

This shows the regression coefficients of predictor variables that explains the changes in dependent variable (PBTM).

Table 4.7 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-149.334	322.510		-.463	.667
Fx Volatility (Annual %)	.771	.577	.464	1.335	.253
Inflation Rate(%)	-1.179	.881	-.496	-1.338	.252
Liquidity (Current Ratio)	.194	.105	.851	1.847	.138
Sales Volumes	12.127	28.582	.248	.424	.693
Total Assets	-4.132	21.165	-.158	-.195	.855

Source: Research Findings

The results of the regression analysis show that there was no independent factor that was significant in explaining the changes in the dependent variable at 5% level of significant.

The coefficients are substituted in the model as shown below

π_t =-149.334 -1.179IR+0.771FX +0.194LM+12.127S-4.132AS+ ε

This model therefore shows the strength of each variable to predict the dependent variable.

The liquidity which is measured by the current ratio has a coefficient of 0.194 which means that an increase in liquidity leads to an increase in financial performance as measured by the Profits before tax margins. The p value in this case is 0.138 which is higher than 0.05 and therefore the variable is statistically insignificant.

The foreign exchange rate volatility has coefficient of 0.771 meaning that the positive coefficient shows a direct relationship between the two variables. Again the P value of FX volatility is greater than 0.05 showing that the predictor variable is statistically not significant.

Inflation rate has coefficient of -1.179 showing a negative relationship. Any increase in inflation leads to a decrease in Profit margins

Sales volumes has a coefficient of 12. 127.An increase in sales volumes leads to an increase in profit before tax margins. Conversely total assets have a coefficient of -4.432 showing the inverse relationship between the assets value and the financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the research findings, draw the conclusion of the study and makes the necessary recommendations for further studies.

5.2 Summary of Findings

This research study sort to establish the effects of foreign exchange rate volatility on the financial performance of listed construction and allied companies in the NSE in Kenya. Secondary data was collected from the individual company's published financial statements and from Central bank of Kenya. The research used a descriptive research design with a population of 5 listed construction and allied companies.

The regression analysis carried out shows that the volatility of foreign exchange rate has a positive impact on the financial performance of the listed construction and allied firms. The results shows that an increase in volatility has led to increase in the profit before tax margins for the data analysed between 2008 and 2017.

According to the research findings, inflation has a negative impact on the financial performance of construction and allied companies. The coefficient of -1.179 means an increase in inflation leads to a decrease in PBT margins. Both liquidity and the sales volumes has a direct impact on the performance of the construction companies. On the contrary, an increase in the total assets leads to a decrease in the PBT margins.

All these predictor variables when combined together has no significant influence on the financial performance of the construction and allied companies as shown by the significance level of 0.165(which is greater than the P value of 0.05) of the regression model.

5.3 Conclusion

It is from the results of the study and the summary of findings that that a conclusion can be drown that foreign exchange rate volatility have a positive but insignificant effects on the financial performances of listed construction and allied firms. It can also be concluded that inflation rate have a negative impact on the financial performance as well as the changes increase in total assets. Overall, foreign exchange volatility, inflation, liquidity, sales volumes and total assets can predict 78.2% of the changes in the profit before tax margin for the construction and allied companies

5.4 Recommendations

The results of this research study has found that the R-squared is 0.782.this means that the listed predictor variable in the model explain only 78.2% of the changes in the dependent variable. This therefore means that there are other variables not covered in this study that influence the financial performance of the construction and allied companies.it is therefore recommended that other such factors be explored.

This research was studying the five listed construction and allied firms in Kenya which may not adequately represent all the firms involved in the construction activities. It is therefore recommended that that more forms be involved.

The study results shows that there was a positive correlation between the foreign exchange rates volatility and the financial performance of the construction firms although the level of significance

is low. This means that the companies may adopt risk retention strategies when the level of gains or losses that arise from the movement of foreign exchange rate movements are low. However when such volatilities are high the firms may adopt a risk transfer strategies and should also control and reduce currency risks

Based on the results of this study it is clear that inflation has a negative impact on the financial performance of the construction companies.it is therefore recommended that the policy makers and other concerned government agencies come up with a strategy to control the levels of inflation in the country It has been established that Sales volumes has a greater impact on the financial performance of firms.The government is therefore required to come up with measure, policies and concrete structures that help to boost the sales volumes for the local firms. This may be achieved by special economic zones

5.5 Limitations of the Study

This research study used the USD/KES only as the exchange rate. It is important to note that there are other major currencies that are used to settle foreign transaction which this study did not consider. In addition this research study considered only five firms that are listed in the NSE in the construction and allied segment. However there are other firms that rare not listed and which command a high market share that were left out in the study.

The study used Profit Before Tax Margins only as the measure of financial performance for the construction and allied firms. It is critical to note that there are other variables which can also be used to measure the financial performance. This research study only used five predictor variables which may not be sufficiently enough to explain the changes in the financial performance.

5.6 Suggestions for Further Research

The purpose of this study was to establish the effects of foreign exchange volatility on the financial performance of listed construction and allied companies in Kenya. Such instability in exchange rates has been a major challenge to the developing economies like Kenya. There are other major macroeconomic factors that are likely to affect the financial wellbeing of local construction firms. It therefore call for further studies on such macro-economic variables that may be responsible for the changes in the financial performance of construction and allied firms.

This research study was conducted on Kenyan construction and allied firms. More research could be done on firms across the East African region to establish the effects of such volatility on the financial performance of construction and allied firms listed in the East Africa Securities Exchanges.

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APPENDICES

APPENDIX I: ANNUAL INFLATION RATE

YEAR	Inflation Rate(%)
2008	16.23
2009	9.39
2010	3.97
2011	13.98
2012	9.64
2013	5.72
2014	6.88
2015	6.58
2016	6.30
2017	8.02

APPENDIX II: ANNUALIZED FOREIGN EXCHANGE RATE VOLATILITY

YEAR	Forex Rate (%)
2008	16.98%
2009	6.31%
2010	4.20%
2011	10.94%
2012	6.39%
2013	3.39%
2014	2.23%
2015	13.63%
2016	1.01%
2017	1.48%

APPENDIX III: EXTRACT OF FINANCIAL STATEMENTS

ALL FIGURES IN THOUSAND SHILLINGS

BAMBURI CEMENTS LTD

YEAR	SALES	PBT	TOTAL ASSETS	CUR RENT ASSETS	CURRENT LIABILITIES
2008	27,467,000	4,889,000	28,215,000	10,036,000	5,443,000
2009	29,994,000	9,596,000	32,112,000	12,773,000	4,944,000
2010	28,075,000	7,564,000	33,306,000	12,863,000	7,464,000
2011	35,884,000	8,466,000	33,502,000	13,356,000	5,097,000
2012	37,491,000	7,176,000	43,038,000	16,462,000	7,011,000
2013	33,928,000	5,516,000	43,016,000	16,037,000	5,991,000
2014	36,029,000	5,801,000	40,991,000	15,545,000	6,768,000
2015	39,200,000	8,458,000	42,030,000	18,133,000	7,693,000
2016	38,281,000	8,271,000	40,811,000	19,000,000	7,046,000
2017	35,974,000	4,116,000	47,203,000	13,978,000	8,133,000

ATHI RIVER MINING LTD

YEAR	SALES	PBT	TOTAL ASSETS	CURRENT ASSETS	CURRENT LIABILITIES
2008	4,619,473	705,450	6,352,478	1,885,011	1,842,931
2009	5,144,822	948,714	12,141,091	3,362,746	3,353,762
2010	5,964,670	1,112,962	16,564,899	4,240,062	3,206,460
2011	8,180,992	1,362,912	20,549,023	3,723,221	4,420,053
2012	11,400,569	1,790,296	26,953,100	7,936,410	6,502,840
2013	14,179,208	2,000,060	29,705,254	6,848,562	7,246,584
2014	13,743,185	2,018,133	36,970,051	8,205,777	17,490,596
2015	14,735,936	(3,539,156)	51,936,664	7,768,257	20,258,902
2016	12,823,826	(3,978,831)	51,058,802	8,285,671	14,159,435
2017	8,697,333	(7,521,366)	42,699,067	3,723,487	17,194,544

E.A CABLES LTD

YEAR	SALES	PBT	TOTAL ASSETS	CURRENT ASSETS	CURRENT LIABILITIES
2008	3,929,312	669,927	3,043,593	1,973,398	1,188,676
2009	2,811,861	526,444	3,543,383	1,699,156	1,247,084
2010	3,604,366	258,645	4,518,445	1,795,686	1,399,362
2011	4,971,665	464,756	4,993,032	2,407,504	2,074,312
2012	4,300,608	753,243	6,248,642	3,031,439	2,532,226
2013	4,502,964	585,400	6,809,265	3,583,184	2,746,108
2014	5,098,417	507,483	7,889,498	3,846,795	3,293,689
2015	3,724,212	(1,087,004)	8,384,143	2,945,075	3,155,110
2016	3,650,451	(810,349)	7,548,406	2,229,562	3,319,124
2017	2,345,086	(926,945)	7,038,421	2,376,559	3,966,544

E.A. PORTLAND CEMENTS LTD

YEAR	SALES	PBT	TOTAL ASSETS	CURR ASSETS	CURRENT LIABILITIES
2008	7,204,479	715,889	9,073,345	2,661,738	1,176,375
2009	8,101,377	1,881,678	12,035,963	3,131,045	1,512,392
2010	9,408,711	(338,571)	12,037,565	2,911,680	1,836,650
2011	10,172,140	(119,059)	13,530,871	3,172,070	2,100,179
2012	8,508,120	(1,032,914)	13,976,795	2,635,509	2,265,774
2013	9,211,462	1,419,478	16,133,703	3,602,063	3,319,478
2014	9,057,292	(373,700)	15,717,257	3,324,061	3,512,289
2015	8,417,621	7,342,071	23,112,582	3,157,336	3,765,371
2016	8,871,456	3,734,752	27,842,120	2,114,848	4,962,120
2017	6,928,307	(1,712,903)	27,357,388	1,949,095	6,196,213

CROWN PAINTS LTD

YEAR	SALES	PBT	TOTAL ASSETS	CURRENT ASSETS	CURRENT LIABILITIES
2008	2,389,520	77,781	1,948,281	1,376,483	1,030,327
2009	2,543,657	139,818	1,858,452	1,326,166	923,649
2010	3,068,468	169,480	1,972,337	1,480,069	991,781
2011	3,853,569	200,539	2,215,352	1,569,315	1,071,998
2012	4,432,877	224,170	2,258,263	1,589,244	1,034,709
2013	5,158,992	333,442	2,945,434	2,167,353	1,568,798
2014	6,039,061	151,481	3,852,814	2,866,643	2,500,558
2015	6,737,108	216,697	4,539,148	3,293,507	2,976,463
2016	7,347,557	272,043	5,059,029	3,781,745	3,250,210
2017	7,351,326	398,129	5,871,607	4,545,367	3,817,884

APPENDIX IV: LISTED COMPANIES

CONSTRUCTION AND ALLIED
Athi River Mining Ord 5.00
Bamburi Cement Ltd Ord 5.00
Crown Paints Kenya PLC. 0rd 5.00
E.A.Cables Ltd Ord 0.50
E.A.Portland Cement Ltd Ord 5.00