

**THE EFFECT OF FOREIGN EXCHANGE RATE VOLATILITY ON THE  
FINANCIAL PERFORMANCE OF OIL MARKETING COMPANIES IN KENYA**

**BY**

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**DECLARATION**

This research project is my original work and has not been submitted for a degree in any other University or Institution.

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Signature..... Date.....

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

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## **DEDICATION**

I would like to dedicate this research to my dear wife Asma Alinoor for her continued support and encouragement throughout my studies. My family, friends and colleagues who supported me throughout the process. Thank you all and may God bless you.

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## **LIST OF ABBREVIATIONS**

APT-Arbitrage Pricing Theory  
ARM -Autoregressive Moving Average  
ASD-Average Standard Deviation  
CAPM-Capital Asset Pricing Model  
EAC-East African Community  
ERC-Energy Regulatory Commission  
NFIFO-Net Firm Income From Operations  
NGO-Non-Governmental Organizations  
NSE-Nairobi Stock Exchange  
OPM-Operating Profit Margin  
OTS-Open Tendering System  
PIEA-Petroleum Institute of east Africa  
RER -Real Exchange Rate  
ROA-Return on Assets  
ROE-Return on Equity

## **ABSTRACT**

The main objective of the study was to establish the effect of foreign exchange rate volatility on financial performance of local oil marketing companies in Kenya. The population under study was 55 oil marketing companies. The collection of the primary data was done using structured questionnaires that were pilot tested in order to ensure that there was reliability as well as validity. Secondary data was also used in the study and was obtained from the Petroleum Institute of East Africa, Central Bank of Kenya and Kenya National Bureau of Statistics respectively. The data was analyzed with the use of Microsoft Excel as well as SPSS in order to generate the descriptive statistics for instance frequencies and percentages. The presentation of the results was in form of figures, tables as well as cross tabulations. The findings on the background information revealed that the majority of the respondents were of male while females were the minority. The results indicated that there exists no significant relationship between inflation and financial performance with a p value of .392. In the same regard, the study revealed that there was no significant relationship between performance and interest rates with a p-value of (.497). Further the study showed no significant relationship between foreign exchange volatility and performance with a p-value of (.306). This paper gives a recommendation that oil marketing companies should consider adopting Domestic or Multi-domestic strategies which are suitable for local economic environment other than applying global strategies that may be affected by forex volatility. The study further observes and recommends blending of foreign exchange rate risk management strategies that are best suited for the oil marketing companies.

## **CHAPTER ONE: INTRODUCTION**

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

Trade and investment in a country are likely to be impacted by the happenings in the foreign exchange market. This means therefore that a stable exchange rate, is likely to have positive effects on household incomes and consumption; firms' investment, import and employment decisions; government's fiscal, debt and monetary policies; and trade balance (Adebiyi, 2006). Moreover, exchange rate stability is likely to discourage capital flight and speculation in the foreign exchange market.

It has been established that foreign exchange developments affect all aspects of an open economy including its financial markets. Charles (2006) for instance established that floating exchange rate appreciation reduces the competitiveness of export markets; and has a negative effect on the domestic stock market of export dominated economies. However, it has positive effect on the stock market by lowering input costs, for an import dominated country. In effect countries such as Kenya which is import oriented can experience price instability in the face of exchange rate volatility because its economy is heavily dependent on imports of raw materials, capital goods and consumer goods, hence, the need to manage the foreign exchange market.

Exchange rate therefore plays an increasingly significant role in any economy as it directly affects domestic price level, profitability of traded goods and services, allocation of resources and investment decision. The impact of exchange rate volatility on trade has been studied more in industrialised countries than in less developed economies. Agu(2002) state that this lack of attention in developing countries is caused by insufficient time series data. According to Gachua (2011) there is a need for this kind of empirical studies to be undertaken in developing countries such as Kenya with time-variant exchange rates in order to counter this prevalent ambiguity in the literature and fill the research vacuum in less developed countries. This study therefore seeks to fill this gap by examining the effects of foreign exchange rate volatility on the financial performance of oil marketing companies in Kenya.

### **1.1.1 Foreign Exchange Volatility**

Forex volatility can be defined as exchange rate movements that emanate from currency fluctuations. Such volatility affects both the cash flow of a firm's operations and the value of a firm. From a theoretical perspective, it is a generally held view that exchange rate fluctuations are an important source of macroeconomic uncertainty. Economic theory suggests that changes in the exchange rate can produce a shift in stock prices, directly in the case of multinational firms, exporting and importing companies, firms which import part of their inputs and indirectly for other companies. Exchange rate movements affect both the prices of imported finished goods and the costs of imported inputs, thus influencing indirectly those companies that compete with such firms (Grambovas and McLeay, 2006). They should thus have a significant impact on firm value, regardless of whether the firm is domestically or internationally oriented. This is because growing globalization has encouraged many corporations to extend their businesses beyond the geographical boundaries in order to benefit from competitive advantage and economies of scale. Penetration into new markets has increased the firm's profitability, on one hand, and on the other it has also increased the variability in net income because of various financial risks. Therefore, the managers of the multinational firms are focusing on the importance of risk management techniques to reduce variability of their cash flows from foreign operations due to the fluctuations in foreign exchange rates, (Afza and Alam, 2014).

Foreign exchange rates and inflation rates in Kenya over the last two decades have been characterized by volatility which creates uncertainty in the investment market. Prediction of the future rates for these two variables is made difficult both in the short and long-run by the constant fluctuations causing uncertainty in the global investment market. This uncertainty implies that potential international businesses are naturally exposed to exchange rate risk if they are to invest in Kenya. This therefore leads to the need to answer the question: what is the effect of exchange rate volatility on financial performance of oil marketing companies in Kenya?

### **1.1.2 Financial Performance**

Profitability measures the extent to which a business generates a profit from the use of land, labor, management, and capital. It is measured by net firm income from operations (NFIFO), rate of return on firm assets (ROA), rate of return on firm equity (ROE) and operating profit margin

(OPM) (Miller et al, 2000). Net revenues available from normal operations after fixed and variable expenses have been deducted and for accuracy, it is calculated on an accrual basis. Operating profit reflects ability to generate revenues and control costs. It is revenue available to compensate debt and equity capital.

Return on Assets measures the profitability of the firm in relation to total assets employed. Is the net income generated by all assets, after labor has been compensated but before interest payments. The higher the return on assets the better the firm's performance. Return on Equity commonly used to measure profitability. It shows how oil marketing companies reinvest earnings to generate future profit. Foong (2008) indicated that the efficiency of oil marketing companies can be measured using ROE which illustrates to what extent they use reinvested income to generate profits.

According to Dobbins et al (2000), liquidity (cash flow) is the ability of a firm to meet financial obligations as they come due in the short term, without disrupting the normal operations of the business. It is measured by the Current ratio which is Current assets divided by the Current liabilities. It is a basic indicator of short-term debt servicing and/or cash flow capacity and also indicates the extent to which current assets, when liquidated, will cover current obligations. According to Mongeri et al (2011) solvency gauges the firm's ability to pay all financial obligations if all assets are sold and to continue viable operations after financial adversity. It is measured by Debt to asset ratio, Debt to equity ratio and Equity to asset ratio.

In evaluating the hypotheses of whether local or global capital investment viewpoints are more profitable, the standard financial measures are: net profit, return on investment, and cash flow. Net profit is an absolute measure of profit (or loss), but it is not relative to the investment that was made to obtain that level of profit (or loss). Return on investment is a relative measure. It correlates the firm's investment to its level of earnings, but says nothing about the actual size of the profit (or loss). Cash flow refers to the amount of money available to meet the financial obligations of the company. When manufacturing firms make decisions that result in improvement to the financial measurements, the firm is obviously moving toward the goal of the firm. Oil marketing firms have to comply with the controls applied by the regulators, these are currently mainly financial.

### **1.1.3 Forex Volatility on Financial Performance**

Empirical studies have been done locally. Irene (2011) did a study on the relationship between foreign exchange risk and financial performance of Airlines in Kenya whose objective was to establish the relationship between foreign exchange risk and financial performance of Kenya Airways. She used a case study design. From her findings, there is a negative relationship between forex risk and financial performance. Currency fluctuations impact on prices hence negative impact on revenues and expenses denominated in foreign currency. Muriithi (2011) did a study whose objective was to establish the relationship between foreign exchange rate and market performance for manufacturing companies. The study used a descriptive research design.

His study showed that exchange rates had a positive influence on market performance. In addition, Mongeri, (2011) did a study on the impact of foreign exchange rates and foreign exchange reserves on the performance of NSE share index whose objective was to determine the impact of foreign exchange rates and foreign exchange reserves on the performance of NSE index. The study used a longitudinal study design. Results showed a positive relationship between forex rates and stock market performance. Differences in forex rates had a direct impact on stock market performance. Finally, Onyancha (2011) did a study on the impact of foreign exchange gains and losses in the financial performance of international Non-governmental organizations. The study used a survey research design. His findings showed that exchange rate risk can reduce project quality. The present study therefore seeks to establish if indeed foreign exchange rate volatility affect financial performance of oil marketing companies in Kenya.

### **1.1.4 Oil Marketing Firms in Kenya**

Petroleum is Kenya's major source of commercial energy and has, over the years, accounted for about 80% of the country's commercial energy requirements. Demand for oil in Kenya is quite small in global standards but the highest in East Africa making it a Key Market in the region for Oil Products. The domestic demand for various petroleum fuels on average stands at 2.5 million tons per year, all of it imported from the Gulf region, either as crude oil for processing at the Kenya Petroleum Refineries Limited or as refined petroleum products.

Prior to liberalization in 1994, Kenyan government was well involved in the sector especially on controlling pricing. Mostly Multination Corporation participated with correspondingly low level

of local company's involvement. Since liberalization, many new companies have been licensed by the government to engage in petroleum trading, especially import and export, wholesale and retail of petroleum products.

Kenya refines 50% of local oil requirements with a mandatory processing by all marketing companies on the basis market share. The rest is imported as fully refined through an Open Tender System OTS supervised by ministry on Energy. Kenya Pipeline Company Limited which is wholly owned by the government offers primary transport of refined products to Nairobi and western Kenya. National Oil Corporation of Kenya limited was incorporated in 1981 under the Companies Act (Cap 486) with main objective then to coordinate oil exploration (upstream) activities. In 1988 the company was mandated on behalf of the government to supply 30% of the country's crude oil to help stabilize local oil prices.

A Marketing firm is one that has a business that affects the distribution and sales of goods and services from producer to consumer; including products or service development, pricing, packaging, advertising, merchandising, and distribution. In Kenya Oil Marketing firms can be classified into three categories based on market and strategy, Global Multinational Corporations, Regional Emerging Multinationals, and Local and "Independents" Oil Companies with mainly local presence. According to Energy Regulation Commission Data (2011) there are 55 licensed Oil Marketing companies in Kenya. These are companies that currently import and market oil product in Kenya. According Petroleum Institute of East Africa (2011), global and regional multinationals dominate the market with over 88% market share.

According to Dunning (1993), a multinational corporation is "an enterprise that engages in foreign direct investments and owns or controls value adding activities in more than one country. Multinational Oil Companies in Kenya include, Total Kenya Limited, Libya Oil and Kenya Shell. These companies operate in all sectors of oil marketing in Kenya including Supply trading, Wholesale and Retail Marketing and Export. According to Petroleum Institute of East Africa (2011), these three Multinationals had a combined market share of 42%. They tend to adapt global strategies in their local businesses

The Regional Emerging Multinational Companies mainly have their business in Africa and more spread in East and Southern region. These companies apply Multi-Domestic Strategies in



countries where they operate. In 2011 they had a total of about 47% market share according to Petroleum Institute of East Africa (2011). The main players in this category include Kenol/Kobil, Libya Oil, Gapco and Engen. These companies are mainly represented in Africa and mainly in South of Sahara and started acquiring already established affiliates of global multinational companies.

The other category of Oil Marketing Companies in Kenya are referred to as Locals and “Independents” Oil Companies and represented about 11% market share according to Petroleum Institute of East Africa (2011) with National Oil Corporation which is government owned representing about 5.4%. National Oil has was incorporated in April 1981 and charged with participation in all aspects of the petroleum industry with the main objective of stabilizing Supply and Pricing of oil products in the country. Other “Independents are mainly Kenyan owned and started their business mainly as resellers of big Multinationals before growing to Oil Marketing Companies in the last decade. Most of these companies have no own storage facilities and heavily depend on Kenya Pipeline and Multinational for Storage and handling using an industry facility referred to as Hospitality Arrangement where they pay a premium for storage and handling.

## **1.2 Research Problem**

Foreign investment in Kenya continues to increase drastically, as a result of Multi-national and transnational corporations making their way into the Kenyan market. Kenyan corporate units are also engaging in a much wider range of cross border transactions with different countries and products. The firms have also been more active in raising financial resources abroad. It is generally believed that foreign exchange fluctuations and the unpredictability of foreign sales affect the firms’ level of profitability. All these developments combine to give a boost to cross-currency cash flows, involving different currencies and different countries.

Exchange rates represent one of the major sources of macroeconomic risk for oil marketing companies. In the long run exchange rate changes influence a company’s volume of foreign trade. The costs of foreign purchases alter its domestic and international competitive profile and the structure of foreign markets in which the company operates. These changes have a large impact on small and internationally oriented economies (Hommel, 2008). In this regard

therefore the strategic responses of the firms in addressing changes in the dynamic foreign exchange market, is key to achieving competitive advantage and their ultimate survival.

Previous studies by Hollensen (2007), as well as Schiozer and Saito (2009) focused on exchange risk management practices of multinational corporations. Little has been done with respect to oil marketing companies in Kenya except for Chiira (2009), who conducted a survey of foreign exchange risk management practices by oil companies in Kenya, he however did not examine how foreign exchange rate fluctuations affect financial performance. As such, there is no evidence of local study in Kenya conducted on the impact of foreign exchange rates fluctuations on a firm's financial performance of oil marketing companies in Kenya.

The study has selected the Kenyan context because the country has been experiencing a sharp increase in foreign investment. Multi-national and transnational corporations continue to play a very essential role in the country's business. Oil Marketing companies are not left behind in this endeavor as they are constantly engaging in a much wider range of cross border transactions with different countries and products. Such fluctuations expose oil marketing companies to foreign exchange risk. Moreover, the Kenyan economy getting more and more open with international trading constantly increasing and as a result firms are become more exposed to foreign exchange rate fluctuations Mudida and Ngene (2010). These fluctuations bring increased uncertainty to traders; this risk may influence the volume of international trade. Oil marketing companies therefore face the challenge of currency fluctuations attributable to the fact that there have been periods of rapid depreciation of the Kenyan currency an event that has adversely affect the financial performance of Kenyan companies. With this in mind, the study aimed to answer the question of how does foreign exchange rate volatility affect financial performance of oil marketing companies in Kenya?

### **1.3 Research Objective**

To establish the effect of foreign exchange rate volatility on financial performance of local oil marketing companies in Kenya.

#### **1.4 Value of the Study**

The study will help oil marketing companies to have a clear understanding of how foreign exchange rate fluctuations affect their financial performance. The study will make multiple contributions to the literature on foreign exchange volatility through investigation of optimal investment decisions in continuous-time downside risk-based foreign exchange system. In addition study paves the road for further research on continuous-time downside risk in foreign exchange investment decisions. Students interested in finance as a subject will find it useful and build on the existing body of knowledge.

Finally the study will come in handy to support the Government and ERC as regulators in their quest to streamline operations in the oil sector putting in mind that the economy as a whole inches on how the oil sector performs. Inappropriate resource allocation can hinder growth in the economy.

## **CHAPTER TWO: LITERTURE REVIEW**

### **2.1 Introduction**

This section examines literature on foreign exchange rate volatility and financial performance among oil marketing companies.

### **2.2 Theoretical Review**

This part explores the theoretical literature applicable to this study, with considerations being made to the Flow oriented model, Stock oriented model and the Arbitrage Pricing Theory.

#### **2.2.1 Flow Oriented Model**

This model was developed by Dornbusch and Fisher in 1980. This model claims that changes in exchange rates alter the international competitiveness of a firm as well as the balance of trade position, and thus exchange rate changes affect real income and output in a country. Share prices of companies are influenced by exchange rate changes and future cash flows of firms. This implies that exchange rate changes lead to stock price returns, and that they are positively correlated. The flow oriented model maintains that a causal relationship, which runs from the exchange rate to the stock prices. This simply means that exchange rate changes affect the competitiveness of firms as a result of its effect on input and output prices (Joseph, 2002). It follows therefore that if exchange rate appreciates, exporters are likely to be affected negatively. In the same regard an appreciation of the currency is likely to cause goods and services to be dearer on the international market. This will therefore bring about a decline in exports, as they will be seen as expensive by buyers on the international market. It means therefore that such goods will lose their competitiveness internationally. Consequently, their profits will drop and if profits decrease the firms will lose competitiveness on the domestic stock market. Their attractiveness on the domestic stock market will decrease and this will result in their stock prices decreasing in value. Resultantly, a negative relation between domestic currency and stock price can be confirmed.

### **2.2.2 Stock Oriented Model**

This model was developed by Branson and Frankel in 1983. These models show exchange rates as serving the supply and demand for financial assets such as stocks and bonds. This approach suggests that an increase in stock prices induces investors to demand more domestic assets and thereby causes an appreciation in the domestic currency, implying that stock prices lead exchange rates and that they are negatively related. The appreciation of the domestic currency attracts more foreign capital and investments into the domestic market, which then leads to further currency appreciation.

Pilbeam (1992) points out an obvious problem with the flow oriented model as being that they have nothing to say about international capital movements, although it is known that international capital movements are very large, broad and comprehensive review of the literature on the relationship between real exchange rate volatility and trade shows that there are theoretical models that postulate both positive and negative effects of the exchange rate volatility on trade. However, earlier empirical evidence, using different measures of exchange rate volatility, usually fails to establish statistically significant relationship between exchange rate variability and volume of trade, where such a relationship is established the coefficient of exchange rate volatility is either negative or positive dominate the foreign currency market. Stock oriented models put much stress on the role of the financial (formerly capital) account in the exchange rates determination. In other words, currency fluctuations may influence stock price movements.

### **2.2.3 Arbitrage Pricing Theory**

The Arbitrage Pricing Theory (APT) model was developed by Ross (1976) whose starting premises are that markets are competitive and that individuals homogeneously believe that the return of all assets in the economy are driven by a linear structure of  $k$  risk factors. The APT model represented an answer to criticisms suffered by the popular Capital Asset Pricing Model. CAPM establishes a linear relation between the excess assets' return and a single risk factor – the excess return on the market portfolio. It assumes that all assets can be held by an individual investor. Although it can be considered a particular case of APT, the theoretical construction of CAPM requires normality of returns or quadratic utility function, what isn't always easy to

justify. Besides, it can be proved that any mean-variance portfolio satisfies exactly the CAPM equation. So, testing the CAPM is equivalent to testing the mean-variance efficiency of the market portfolio. However, the true set of all investment opportunities would include everything with worth. Risk factors (in the APT) emanate from changes in some fundamental economic and financial variables such as interest rates, inflation, real business activity, exchange rate among other variables. Rashid and Karachi (2007) also argue that according to the Arbitrage theory, a rise in real interest rate is likely to reduce the present value of a firm's future cash flows and therefore result in a fall in prices to fall. At the same time a higher interest rate is likely to stimulate the capital inflow, and eventually lead to a fall in exchange rate. It means therefore that the real interest rate disturbance can be a factor of a positive relationship between the average level of stock prices and exchange rates.

### **2.3 Determinants of Financial Performance**

The following subsection presents a summary of findings with regards to the various determinants of financial performance. The internal factors of oil marketing companies are specific variables which influence the profitability of specific firms. These factors are within the scope of the firm to manipulate them and that they differ from one organization to another. These include capital size, size of liabilities, size and composition of credit portfolio, labor productivity, and state of information technology, risk level, management quality, firm size, ownership and the like (Dang, 2011). The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are also other macroeconomic variables that affect the performances of firms

#### **2.3.1 Capital Adequacy**

Capital is one of the specific factors that influence the level of firm's profitability for oil marketing companies. Capital is the amount of own fund available to support the business and act as a buffer in case of adverse situation (Athanasoglou et al. 2005). Capital creates liquidity for the bank due to the fact that it reduces the chance of distress. However, it is not without drawbacks that it induce weak demand for liability, the cheapest sources of fund Capital adequacy is the level of capital required by the oil marketing firms to enable them withstand the risks such as credit, market and operational risks.

### **2.3.2 Inimitable Resources**

Inimitable resources give sustained competitive advantage to oil marketing companies when they are valuable, rare, imperfectly imitable and non-substitutable. Resources must yield a superior product/ service or lower costs in order to be valuable and they must be rare to ensure that the resource holders do not compete away the value they create. The resources must be imperfectly imitable and not substitutable in order to prevent entry using either the same resource or an equivalent one.

The need to invest large financial resources by oil marketing companies in order to compete creates an edge, particularly if the capital is required for risky or unrecoverable up-front advertising or research and development. Even if capital is available on the capital markets, imitation represents a risky use of that capital which should be reflected in risk premiums charged the prospective entrant; these constitute advantages for going firms. Although a specific resource or capability may be found to exhibit a strong correlation with competitive advantage or performance in a particular context, that resource or capability may simply not fit with the enterprise level of all firms operating in that context. Managers need to autonomously identify and in turn seek out and exploit resources and capabilities that might not only contribute to their firm's competitive position but also fit with their idiosyncratic business models. The magnitude of a firm's performance is a function of its resources and capabilities; firms whose resources and capabilities are of marginal value will at best attain competitive advantage while firms whose resources and capabilities are of great value will likely attain sustainable advantage (Dang, 2011).

### **2.3.3 Management Efficiency**

Efficiency is one of the key internal factors that determine the profitability of oil marketing companies. It is represented by different financial ratios like total asset growth, growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for

management efficiency. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of this ratios used to measure management quality is operating profit to income ratio (Sangmi and Nazir, 2010). The higher the operating profits to total income the more the efficient management is in terms of operational efficiency and income generation. The other important ratio is that proxy management quality is expense to asset ratio. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Athanasoglou et al. 2005).

#### **2.3.4 Gross Domestic product**

For instance, the trend of GDP affects the demand for a firm's asset. During the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of firms. On the contrary, in a growing economy as expressed by positive GDP growth (Athanasoglou et al., 2005). The same authors state in relation to the Greek situation that the relationship between inflation level and firm's profitability is remained to be debatable. The direction of the relationship is not clear (Vong and Chan, 2009). It will be interesting to show how GDP affects financial performance of oil marketing companies in Kenya.

#### **2.3.5 Interest Rates**

In addition to income, there are other variables that need to be considered in performance function. One important controversial variable is the interest rate. The domestic interest rate represents the opportunity cost of holding money; thus the public would prefer to hold more financial assets such as treasury bills, bonds, etc., during times of high interest rate. Bank interest rate spreads are provided by net interest margin. An empirical study to find out the relationship between macroeconomic variables, other variables and profitability. Net interest income divided by total assets. Here the spread is measured as the difference between the average interest rate earned on loans and the average interest rate paid. If the interest margin is lower, the social costs of financial intermediation will be lower (Maudos &Guevara, 2004). The analysis of net interest margins measured by the cost of financial intermediation; that is, the difference between the gross cost paid by a borrower and the net return received. In the money demand function for the financially developed industrial countries, this is beyond controversy. However, the role of interest rate in developing economies deserves some attention. The standard demand for money



model which requires a well-developed financial market has been corroborated by many theoretical and empirical studies. It will be interesting to show how interest rates affect financial performance of oil marketing companies in Kenya.

### **2.3.6 Inflation**

The expected rate of inflation is universally related to financial performance. So, an increase in the general price level erodes the real value of money and induces a portfolio shift. Friedman treats the rate of inflation as the rate of return on real assets just as the rate of interest is the rate of return on financial assets. Therefore, higher inflation rates lead people to shift part of their wealth from money and financial assets to real assets which, in turn, means that higher inflation rates are associated with lower demand for money. Empirical work on developing countries has been less successful in discovering significant and stable coefficients for inflation elasticities than for income elasticities (Vong and Chan, 2009). It will be interesting to show how inflation affects financial performance of oil marketing companies in Kenya

### **2.3.7 Other Factors**

Government can limit or even foreclose entry into industries with such controls as licensing requirements and limits on access to raw materials (Porter, 1998). Regulatory pressures constrain heterogeneity by prescribing uniform resource standards, competencies and ways of deploying resources across given industries and by defining what resources are socially acceptable or permissible as inputs. These pressures limit diversity by constraining the range of firms' permitted resource options and by imposing common societal expectations across competing firms about how inputs should be combined and deployed in production. Political processes and legislation influence the environmental regulations with which industries must comply; as with many factors in the general environment, changes can benefit or damage an industry (Dutta et al., 2003).

## **2.4 Empirical Studies**

The following subsection presents a review of empirical studies on how forex volatility affects performance of firms. The subsection reviewed empirical studies done locally and internationally as well.

### **2.4.1 International Evidence**

The behavior of volatility of foreign exchange rate has been extensively studied using the ARCH-GARCH framework pioneered by Engel (1982) and which was further developed by Bollerslev (1986), and others. However, the results of some of these studies are inconclusive. Adjasi and Biekpe (2005) for instance investigated the relationship between stock prices and exchange rate movement in Ghana, South Africa, Egypt, Kenya, Mauritius and Nigeria. He made use of A VAR model to examine the relationship between exchange rates and stock prices. Findings from their study revealed that there was no long-run stable relationship between stock market prices and exchange rates for Egypt, Ghana, Kenya, Mauritius, Nigeria and South Africa.

Another study by Todani and Munyama (2005) which employed ARDL bounds testing procedure on quarterly data revealed that there was a significant relationship between exchange rate variability on aggregate South African exports to the rest of the world as well as on goods, services and gold exports. Todani and Munyama (2005) while further employing the moving average standard deviation and GARCH (1, 1) as measures of variability established that there exists no statistically significant relationship between South African exports and exchange rate volatility or when such significant relationship exists it is positive

Obadan (2009), while carrying out a study in Nigeria while using the moving average standard deviation and GARCH (1, 1) as measures of variability also established the exchange rate plays a role in connecting the price system in different countries thus enabling traders to compare price directly. Changes in exchange rate have a powerful effect on imports and exports of the countries concerned through effects on relative prices of goods. He considered the exchange rate to be an important conditioning variable for counter- inflationary policy. This stems from the basic make-up model of pricing and the view that nominal wages tend to adjust to price changes. Exchange rate under this condition conveys information about the fundamentals in the economy and a fast-depreciating local currency may fuel inflationary expectations.

Adebiyi (2009) in his study on Nigeria stock exchange while using the vector error correction modeling technique made an argument that a lasting solution to the problem of achieving a realistic exchange rate will only be found if we get to the root cause of the upward sloping demand curve and the almost vertical supply curve of foreign exchange and develop a framework that will ensure that foreign exchange is money demand for productive purposes.

In another study, Pilinkus and Boguslauskas (2009) made use of the impulse response function to test the existence of the short-run relationship between stock market prices and macroeconomic variables. Their study concluded that unemployment rate, exchange rate, and short-term interest rates negatively influence stock market prices. Muhammad and Rasheed (2011) also conducted a study on the relationship between stock prices and exchange rates in four South Asian countries; Pakistan, India, Bangladesh and Sri-Lanka, for the period January 1994 to December 2000. The study employed cointegration, vector error correction modeling technique and standard Granger causality tests to examine the long-run and short-run association between stock prices and exchange rates. Results of the study showed no short-run association between the variables for all four countries. There was no long-run relationship between stock prices and exchange rates for Pakistan and India as well.

Sekmen (2011) examined the effects of exchange rate volatility, using the squared residuals from the autoregressive moving average (ARMA) models, on stock returns for the U.S. for the period 1980 to 2008. The study found that exchange rate volatility negatively affected U.S. stock returns since the availability of hedging instruments could not lessen the negative effect of exchange rate volatility on trade volume.

In another study, Olugbenga (2012) examined the long-run and short-run effects of exchange rate on stock market development in Nigeria using the Johansen cointegration tests. Results showed a significant positive stock market performance to exchange rate in the short-run and a significant negative stock market performance to exchange rate in the long-run. Empirical literature investigated by the study showed that there are mixed views on the link between the two variables.

A study by Agu (2012, in Nigeria using Egarch model revealed that indeed optimal exchange rate policies must be aimed at cooling real exchange rate (RER) that maintain internal and external balance in an economy. Internal balance here is defined in terms of the level of economic activities consistent with satisfactory control of inflation and full employment of resources. External balance on the other hand is defined in term of payment equilibrium, a sustainable current account deficit finance in a lasting basis of expected capital flow. Any distribution in the real exchange rate will mostly probably lead to instability in both external and internal balance. The study argues that a depreciation of the exchange rate only offer protection to domestic industry when the domestic cost of production increases much less than the rate of depreciation, while prices of imported equivalent increases by the full amount of the depreciation. Bah and Amusi (2013) while using the ARCH and GARCH models to examine the effect of real exchange rate volatility in South established that the real exchange rate variability exerts a significant and negative impact of exports both in the long and short-run.

#### **2.4.2 Local Evidence**

Empirical studies have been done locally. Irene (2011) did a study on the relationship between foreign exchange and financial performance of Airlines in Kenya whose objective was to establish the relationship between foreign exchange and financial performance of Kenya Airways. She used a case study design. From her findings, there is a negative relationship between foreign exchange risk and financial performance. Currency fluctuations impact on prices hence negative impact on revenues and expenses denominated in foreign currency.

Muriithi (2011) did a study whose objective was to establish the relationship between foreign exchange rate and market performance for manufacturing companies. The study used a descriptive research design. His study showed that exchange rates had a positive influence on market performance. In addition, Mongeri, (2011) did a study on the impact of foreign exchange rates and foreign exchange reserves on the performance of NSE share index whose objective was to determine the impact of foreign exchange rates and foreign exchange reserves on the performance of NSE index. The study used a longitudinal study design. Results showed a

positive relationship between forex rates and stock market performance. Differences in forex rates had a direct impact on stock market performance.

Finally, Onyancha (2011) did a study on the impact of foreign exchange gains and losses in the financial performance of international Non-governmental organizations. The study used a survey research design. His findings showed that exchange rate risk can reduce project quality. Also, exchange rate movements have an impact on financial performance of NGOs. Huge foreign exchange loss reduces asset quality.

## **2.5 Summary of Literature**

Extensive studies have been done on the effect of unstable foreign exchange rate on various macroeconomic variables and its impact on the different sectors of the economy. Existing empirical evidence is however mainly based on developed countries whereas a few empirical investigations had been undertaken in African countries like Kenya. There is therefore a gap as far as studying Forex exchange rate volatility versus financial performance by oil marketing companies in Kenya is concerned. It is evident that it has not been done fully especially in the emerging markets. In addition, most of the studies conducted have been in developed countries and they are not conclusive. This study therefore seeks to fill this gap by examining the effects of foreign exchange rate volatility on the financial performance of oil marketing companies listed at the Nairobi Stock Exchange.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter discusses the research design and methodology of the study; it highlights a full description of the research design, the research variables and provides a broad view of the description and selection of the population. The research instruments, data collection techniques and data analysis procedure have also been pointed out.

### **3.2 Research Design**

This study employed a descriptive research design. Burns and Bush (2010) state that, descriptive research design is a set of methods and procedures that describe variables while Churchill and Brown (2007) postulate that a descriptive research design is typically concerned with determining the frequency with which something occurs or the relationship between variables. In concurrence also are Burns and Bush (2010) who aver that a descriptive research design is a set of methods and procedures that describe variables. The design was appropriate, as it allows the description, interpretation of existing relationships, and comparison of variables under study. In this case, the relationship between foreign exchange rate volatility and financial performance of all oil marketing companies was determined. The dependent variable was financial performance while the independent variable was foreign exchange rates.

### **3.3 Target Population**

The population of interest in this study was composed of all oil marketing companies in Kenya between years 2009 and 2013 (5 years). The target population of this study was all 55 oil marketing companies in Kenya, classified in three levels namely Global Multinationals, Regional Emerging Multinationals and Local and “Independents” Oil Companies in Kenya. Census method was used. The choice for census is based on the fact that the entire population is sufficiently small with only 55 companies. The census method has an advantage in that it helped obtain data from each of the companies which then provided greater accuracy and reliability.

### **3.4 Data Collection**

This included data that has been collected by other people for other purposes but which are still usable in this type of research study. Primary data was collected from the oil marketing companies using a questionnaire. Self-administered drop and pick questionnaires were distributed to Chief Executive Officers (CEOs) or their Equivalent currently working for oil marketing companies in Kenya. The respondents will be CEOs or their equivalents in these companies. These are persons directly dealing with the financial performance the oil marketing companies. Secondary data was collected from annual reports submitted the Petroleum institute of east Africa (PIEA) website. Annual reports of the oil marketing companies were analyzed for the period between 2009 and 2013, which is the study period. All the oil marketing companies under study were continually in business between 2009 and 2013 and were included to ensure that the sampling frame is current and complete.

In order to maximize the response of the respondents, the researcher made personal visits to the respondents' place of work where he requested the respondents to participate by responding to the questionnaires. Where the respondents were unable to complete the questionnaires on the spot, the researcher left them for a period of one week for the respondents to fill them at their convenience.

### **3.5 Data Analysis**

Regression analysis was used to analyze the data that was collected. The research was both quantitative and qualitative in nature. Data was analyzed through the Statistical Package for Social Sciences (SPSS) package version 19. Data was analyzed using descriptive statistics such as frequency tables and percentages. The analysis was on the financial performance versus foreign exchange volatility. To achieve the objectives of this study, models were developed using Total income/profit, Ratios, Liquidity/ Cash flow and foreign exchange income as independent variables and financial performance as dependent variable. The first measure is the moving sample standard deviation of the percentage real exchange rates, which has been the most extensively used in the literature (Churchill and Brown, 2007). Typically, it is one-period ahead and has a window of one or two years, so it has been referred to as short-term exchange rate volatility. Exchange rate volatility were looked at by establishing the daily ratio of the day's

exchange rate to the previous day from which the monthly volatility figure were calculated and thereafter the standard deviation were used in the analysis.

### **3.5.1 Analytical Model**

The following multiple regression model was used.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where Y= Financial Performance as measured by return on assets (ROA)

$X_1$ = The weighted average of US Dollar, Sterling Pound, Euro and Japanese Yen exchange rate to Kenya shilling

$X_2$ = Interest Rates (Average annual interest rate)

$X_3$ = Inflation (Average annual inflation)

e = Random error term

$\beta_0$  = Regression constant

**NB:** - Financial performance is the dependent variable while foreign exchange volatility is the independent variable. Foreign exchange trading is described real effective exchange rates between the Kenya shilling and the US Dollar, while financial performance, for the sake of the paper conceptualization is described by Return on Asset (ROA).

### **3.5.2 Test for Significance**

The test of hypothesis required the use of multiple regression analysis. This was performed using the field data and the results interpreted according to the Coefficient of determination ( $R^2$ ) values and the t and F at the 95% level of significance. Analysis of Variance (ANOVA) tests were also used to test significance.



## CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

### 4.1 Introduction

This chapter presents the results and findings of the study on the research questions with regards to the data collected from the respondents in oil industries in Kenya. The initial section covers the background information with respect to the respondent as well as the company background that relates to ownership and strategy. This was to enable the researcher to know the nature and type of the oil company, while the second will be on how foreign exchange volatility affects financial performance of oil marketing companies in Kenya. The target population was fifty five (55) oil companies in Kenya.

### 4.2 Findings

This section offers the background information with regards to the respondents' gender, level of education as well as the experience in the oil industry. This was put into consideration because of the meaningful contribution it offers to the study as the variables help to provide the logic behind the responses issued by the respective respondents.

#### 4.2.1 Gender of the Respondents

Table 4.1 provides a summary of the gender of the respondents as a result of the responses given by the respondents.

**Table 4.1 Gender of the Respondents**

Gender		Distribution	
		Frequency	Percent
	Male	34	63
	Female	21	37
	<b>Total</b>	<b>55</b>	<b>100.0</b>

**Source: Research Findings, 2014**

As clearly indicated in the table, the female respondents were the minority whereas the male respondents were the majority. The findings show that 37 percent were female while 63 percent were male. This is a clear indication of minimal gender consideration in the organizations of study.

#### 4.2.2 Level of Education of the Respondents

The study sought to establish the level of education of the respective respondents in the organizations of study. Table 4.2 provides a summary of the level of education of the respondents.

**Table 4.2 Level of Education of the Respondents**

Level of Education		Distribution	
		Frequency	Percent
	Diploma	1	2
	Bachelors	25	45
	Master's	25	45
	Doctorate	3	6
	Other	1	2
	<b>Total</b>	<b>55</b>	<b>100.0</b>

**Source: Research Findings**

According to the study most of the respondents had high level of education qualification. Specifically 45 percent had bachelor's degree qualification, and Master's degree qualifications respectively. Only 2 percent of the respondents were diploma holders while 6 percent of the respondents had doctoral degrees. The remaining 2 percent of the respondents had other qualifications. This broad category of respondents included certificate holders including computer studies, industrial training, accountancy holders, just to name but a few. The high level of education among the respondents is a clear indication of that most of the respondents are well aware of the economic dynamics and therefore well versed with the performance of the oil companies in Kenya.

#### 4.2.3 Number of Years in the Oil Industry

In order to establish the experience of the respondents in the oil industry, the respondents were asked to state how long they have been working in the industry. Table 4.3 provides a summary of the findings in this regard.

**Table 4.3 Number of Years of Respondents in the Oil Industry**

No. of Years in the Oil Industry		Distribution	
		Frequency	Percent
	Less than 2	2	4
	3-5	15	27
	6-9	26	47
	10 years and Above	12	22
	<b>Total</b>	<b>55</b>	<b>100.0</b>

**Source: Research Findings**

Whereas 4 percent of the respondents have been in the oil industry for less than 2 years, the majority of the respondents have been in the oil industry more than 3 years. Specifically, 27 percent of the respondents have 3-5 years experience, while 47 percent of the respondents have 6-9 years of experience. Also 22 percent of the respondents have 10 years and above in terms of experience in the oil industry. Given many years of respondents' experience in the oil industry, as such they were equipped with the knowledge of the forex market in Kenya. Since the respondents were at the epitome of decision making in their respective organizations, this could have an impact on the performance of the oil companies.

#### **4.2.4 Position in the Company**

In order to establish the effect of forex volatility on financial performance of oil companies in Kenya, the study sought responses from top managers in these organizations. Table 4.4 provides a summary of the study findings with regards to the respondents' position in their respective organizations.

**Table 4.4 Position of Respondents in the Company**

<b>Position in the Company</b>		<b>Distribution</b>	
		<b>Frequency</b>	<b>Percent</b>
	Board of Directors	0	0
	Top Management	48	90
	Line/Section Manager	7	10
	Other	0	0
	<b>Total</b>	<b>55</b>	<b>100.0</b>

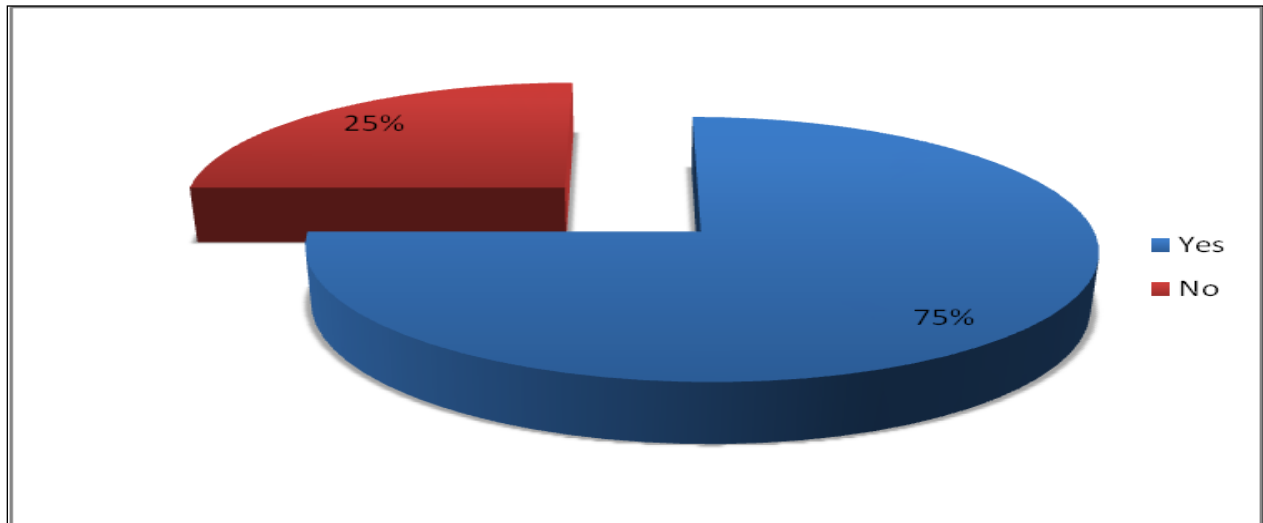
**Source: Research Findings**

Whereas 90 percent of the respondents were in the top management only 10 percent of the respondents were wither line or section managers in their respective organizations but who had delegated authority. None of the respondents were from the remaining categories. The study findings show that indeed, the respondents were directly involved in the strategic decision making by these organizations and therefore likely to provide first hand information as far as the performance of the organization is concerned.

#### **4.2.5 Company Having Branches all over Kenya**

Figure 4.1 provides the respondents view with regards to their knowledge on whether their respective companies had branches all over Kenya.

**Figure 4.1 Company Having Branches all over Kenya**



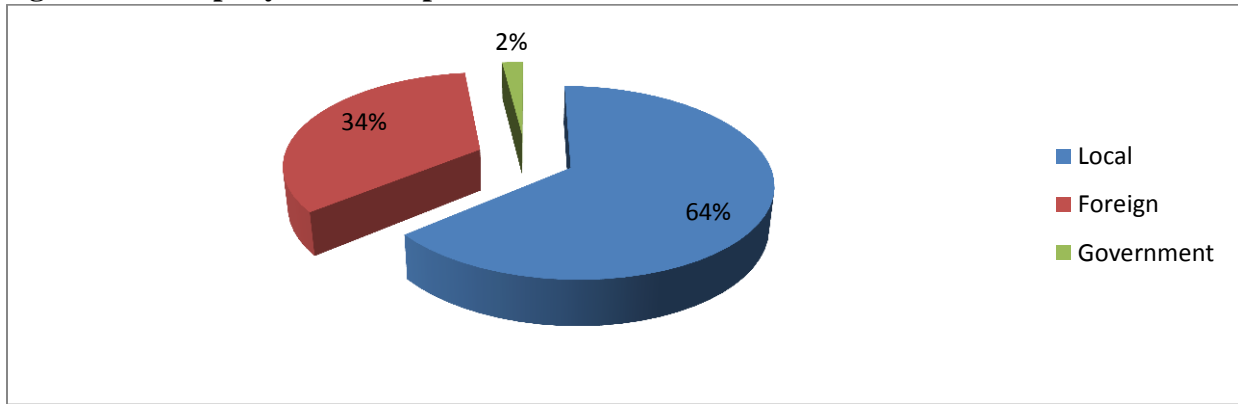
**Source: Research Findings**

As seen in the figure, majority of the respondents said that they were aware of their companies having branches all over Kenya. The results indeed indicate that most oil marketing companies in Kenya have a wide branch network in the country. This in effect had an impact on performance by these companies as would be country wide

#### **4.2.6 Company Ownership**

The ownership of the company is likely to have an impact on the operations of the oil marketing company. This is because companies will apply different strategies based on management structure and ownership. Example is where companies with foreign ownership are likely to apply a different strategies as compared to locally owned company due to the global nature of decision making. This is also the case with government owned oil marketing companies. Figure 4.2 presents a summary of the study findings on the company ownership as given by the respondents.

**Figure 4.2 Company Ownership**



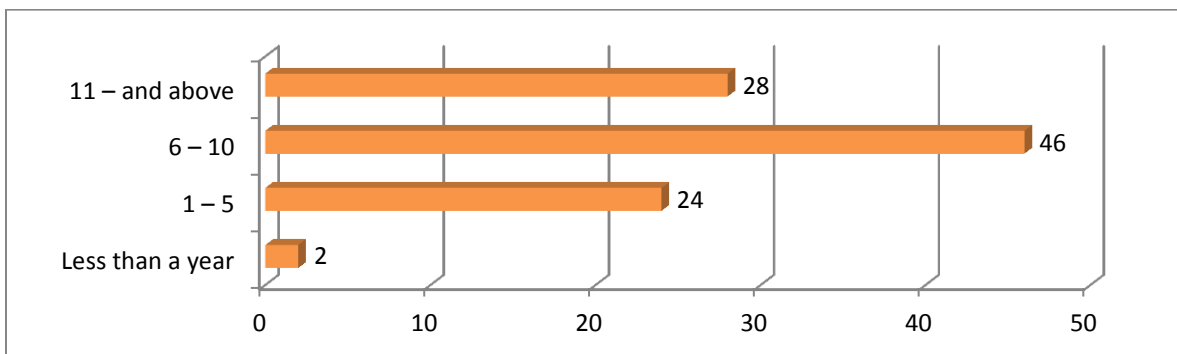
**Source: Research Findings**

Majority of the oil marketing companies are locally owned, specifically 34 percent of the oil marketing companies are owned by foreigners the remaining 66 percent of the oil companies are owned locally as well as by the government respectively. There is minimal (only one company) ownership by government representing only 2 percent

#### **4.2.7 Years of Operation of the company in Kenya**

Years of operation of the company in Kenya was considered as a key variable on organization performance. This is because oil companies who have been operating in Kenya for longer periods are well versed with the forex volatility in Kenya and therefore the way they operate will be influenced by their experience in the country. The respondents' responses in terms of years of operation of the company in Kenya are summarized in Figure 4.3.

**Figure 4.3: Years of Operation of the company in Kenya**



**Source: Research Findings**

As seen in the figure 46 percent of the oil marketing companies have been in the country between 6-10 years whereas 28 percent of the oil marketing companies have been in the country 11 years and above. Consequently 24 percent of the oil companies have been operating in Kenya between 1-5 years as the remaining 2 percent have only operated less than a year. Over 70 percent of oil marketing companies have entered Kenyan Market in the last decade mainly driven by oil industry liberalization in late 90s.

#### 4.2.8 Cross tabulation

Table 4.5, presents findings with regards to the level of education and the position of the company.

**Table 4.5: Level of Education and Position of the Respondent in the Company**

		Position in the Company		Total
		Senior Management	Other	
Level of education	Diploma	3.6%		3.6%
	Bachelor	47.3%		47.3%
	Master's	34.5%	12.7%	47.3%
	Doctorate	1.8%		1.8%
Total		87.3%	12.7%	100.0%

**Source: Research Findings,**

As seen in the table 4.5, it is evident that majority of the respondents (47.3 percent), who were in senior management had bachelor's degrees followed by Master's degree. This implies that indeed senior managers in the oil marketing companies are well educated to fully comprehend the various determinants of financial performance.

#### 4.2.9 Years of Operation and Branches

Table 4.6 further presents a cross tabulations on the number of years the companies have been operating and branches being all over Kenya.

**Table 4.6: Years of Operation of the Company and Branches all over Kenya**

		Branches all over Kenya		Total
		Yes	No	
Years of Operation of the Company	6-10 years	40.0%	23.6%	63.6%
	1-5 years	16.4%	10.9%	27.3%
	Less than 1 year	5.5%	3.6%	9.1%
Total		61.8%	38.2%	100.0%

**Source: Research Findings**

Table 4.6 shows that most companies with branches all over Kenya (40.0%) have been operational between 6-10 years followed by 16.4 percent who have operated between 1-5 years.

**4.3 Managing Foreign Exchange Risk**

The study sought to establish the study findings with regards to how to manage foreign risk exposure. Table 4.7 presents a summary of the respondents view in this regard.

**Table 4.7: Managing Foreign Exchange Risk**

Statement	Most Traded	Fairly Traded	Uncertain	Not Traded	Least Traded	Mean
	%	%	%	%	%	
Derivative Instruments	70.1	20.9	5.0	2.0	2.0	<b>3.68</b>
Currency Forwards	60.1	11.9	20.0	8.0	0	<b>3.6</b>
Currency futures	55.0	35.0	5.0	5.0	0	<b>3.61</b>
Currency Forwards	72.0	15.0	3.0	5.0	5.0	<b>3.61</b>
Options	69.0	24.0	7.0	0	0	<b>3.51</b>
Swaps	74.0	23.0	3.0	0	0	<b>3.91</b>

**Source: Research Findings**

**4.4 Correlation Analysis**

The Pearson (r) correlations coefficient was used to explore the nature of the relationships between the study variables. This Correlation coefficient helps understand the nature of the relationships between the study variables and the relationship can be negative or positive



depending on the trends that occur within the data that was captured from the field. Table 4.8 presents the correlation analysis between the variables.

**Table 4.8: Correlation Analysis**

		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Sig.</b>
Foreign Exchange	-1	1	-.815	.643	-.767	.326
Performance	-2	-.815	1	-.268	.664	.322
Inflation	-3	.643	-.268	1	-.102	.264
Interest Rates	-4	-.767	.664	-.102	1	.431

Dependent Variable: Performance

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

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

**Source: Research Findings**

The results in the table above indicated that there is no significant relationship between inflation and foreign exchange volatility. In the same regard, the study revealed that there was no significant relationship between performance and interest rates. Further the study showed a negative insignificant relationship between foreign exchange volatility and performance. It was also revealed that there was a negative insignificant relationship performance and inflation. Finally the study revealed no significant relationship between interest rates and foreign exchange volatility.

#### **4.4 Regression Results**

The model summary on the relationship between foreign exchange volatility and performance is presented in table 4.9.

**Table 4.9: Forex Volatility and Financial Performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815 <sup>a</sup>	.665	.553	3.28218

a. Predictors: (Constant), foreign exchange volatility

**Source: Research Findings**

The R squared value in Table 4.9 (a) was 0.665 shows that only 66.5% of financial performance is explained by forex volatility. The remaining 33.5 % is explained by other factors. the standard error term is 3.28218. The ANOVA results on the relationship between foreign exchange volatility and performance is presented in table 4.10.

**Table 4.10: ANOVA Table**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.124	1	64.124	5.952	.093 <sup>b</sup>
	Residual	32.318	3	10.773		
	Total	96.443	4			

a. Dependent Variable: performance

b. Predictors: (Constant), foreign exchange volatility

**Source: Research Findings**

The study findings as seen in table 4.10, reveals that the model was insignificant this is because the F value was not significant at 05.952. The mean square value was also at 64.124. The coefficient results on the relationship between foreign exchange volatility and performance is presented in table 4.11.

**Table 4.11: Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant)	90.577	35.347		2.563	.083
foreign exchange volatility	-1.043	.427	-.815	-2.440	.093

a. Dependent Variable: performance

**Source: Research Findings**

As depicted in Table 4.11, it was revealed that there exists no significant relationship between forex volatility and financial performance of oil marketing companies with a beta value of -1.043 and a t value of -2.440 and p value of 0.093. In terms of the significance of the predictor variables, the individual variables whose t-values are significant ( $p < 0.05$ ) are considered. Table 4.12 below presents a hierarchical regression analysis with interest rates and inflation rates controlling for forex volatility.

**Table 4.12: Hierarchical Regression**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	-1.794	8.076		-.222	.845
	Inflation Rates	-.124	.314	-.202	-.395	.731
	Interest rates	1.039	.827	.643	1.257	.336
2	(Constant)	231.179	121.467		1.903	.308
	Inflation Rates	.619	.438	1.008	1.412	.392
	Interest rates	-1.389	1.375	-.860	-1.010	.497
	Foreign Exchange Volatility	-2.715	1.414	-2.123	-1.920	.306

a. Dependent Variable: Performance

**Source: Research Findings**

As seen in the table 4.12, Inflation Rates had a beta value of -124, Interest rates (1.039), but in the second model, the interest rate beta value changed to -1.389 while the inflation rates beta value was -.619. On the other hand the model was still insignificant with p values of .497 and .306 respectively.

#### **4.5 Interpretation of Findings**

The results indicated that there is no significant relationship between inflation and foreign exchange volatility. In the same regard, the study revealed that there was no significant relationship between performance and interest rates. Further the study showed no significant relationship between foreign exchange volatility and performance. It was also revealed that there was no significant relationship between performance and inflation. Finally the study revealed negative insignificant relationship between interest rates and foreign exchange volatility. The study also revealed that there exists a negative insignificant relationship between forex volatility and financial performance of oil marketing companies.

The findings are in agreement with Todani and Munyama (2005) who established that there exists no statistically significant relationship between South African exports and exchange rate volatility. Similarly the findings agree with Sekmen (2011) examined the effects of exchange rate volatility, using the squared residuals from the autoregressive moving average (ARMA) models, on stock returns for the U.S. for the period 1980 to 2008. The study found that exchange rate volatility negatively affected U.S. stock returns since the availability of hedging instruments could not lessen the negative effect of exchange rate volatility on trade volume. The findings also agrees with studies done locally for instance Irene (2011) did a study on the relationship between foreign exchange and financial performance of Airlines in Kenya whose objective was to establish the relationship between foreign exchange and financial performance of Kenya Airways. She used a case study design. From her findings, there is a negative relationship between foreign exchange risk and financial performance. Currency fluctuations impact on prices hence negative impact on revenues and expenses denominated in foreign currency.

The study however disagreed with Muriithi (2011) who did a study whose objective was to establish the relationship between foreign exchange rate and market performance for manufacturing companies. His study showed that exchange rates had a positive influence on market performance. In addition, Mongeri, (2011) did a study on the impact of foreign exchange

rates and foreign exchange reserves on the performance of NSE share index whose objective was to determine the impact of foreign exchange rates and foreign exchange reserves on the performance of NSE index. The study used a longitudinal study design. Results showed a positive relationship between forex rates and stock market performance. Differences in forex rates had a direct impact on stock market performance.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter consists of four sections, namely summary, discussion, conclusions, and recommendations following that order. The first section provides a summary of the important elements of the study which includes the study objectives, methodology and the findings. The second section discusses the major findings of the study with regards to the specific objectives. The third section discusses the conclusions based on the specific objectives, while using the findings and results which are obtained in the fourth chapter.

### **5.2 Summary**

The main objective of the study was to establish the effect of foreign exchange rate volatility on financial performance of local oil marketing companies in Kenya. The population under study was 55 oil marketing companies. The census survey technique was used, because it has an advantage in that it will obtain data from each of the companies which will provide greater accuracy and reliability. The collection of the primary data was done using structured questionnaires that were pilot tested in order to ensure that there was reliability as well as validity. Secondary data was also used in the study and was obtained from the Petroleum Institute of East Africa, Central Bank of Kenya and Kenya National Bureau of Statistics respectively. The data was analysed with the use of Microsoft Excel as well as SPSS in order to generate the descriptive statistics for instance frequencies and percentages. The presentation of the results was in form of figures, tables as well as cross tabulations.

The findings on the background information revealed that the majority of the respondents were of male while females were the minority. The findings also indicated that most of the respondents were bachelor degree and master's degree holders respectively. The findings also revealed that more than 95 percent of the respondents have been in the oil industry more than 2 years. This is a clear indication that the respondents had massive experience of the oil industry in Kenya; as such they were equipped with the knowledge of the forex volatility in Kenya.

The results indicated that there exists no significant relationship between inflation and financial performance with a p value of .392. In the same regard, the study revealed that there was no significant relationship between performance and interest rates with a p-value of (.497). Further the study showed no significant relationship between foreign exchange volatility and performance with a p-value of (.306).

### **5.3 Conclusion**

The results lead to a conclusion that indeed there exists no significant relationship between inflation and foreign exchange volatility. In the same regard, the study revealed that there was no significant relationship between performance and interest rates. Further the study concludes that there is no significant relationship between foreign exchange volatility and performance. It can also be concluded that there was a negative relationship performance and inflation. Finally the study concludes negative insignificant relationship between interest rates and foreign exchange volatility. The study also concludes that there exists a negative insignificant relationship between forex volatility and financial performance of oil marketing companies.

### **5.4 Policy Recommendations**

From the findings of this research, the study recommends that firms listed in the Nairobi Stock Exchange should explore avenues to enhance capacities within firms for managing foreign currency risk exposure. They should explore the route of continued education for those in workplaces through short term training that should be very practical oriented, this could involve professional organizations for finance specialists, bankers, accountants and consultants. Such training should ideally be out of site because of the need to meet participants from diverse businesses and orientations for training and assessment to avoid internal interruptions. These trainings should not only cover foreign currency risk alone but rather could be preceded by introductory contents on the import-export trade and the practical market challenges facing the industries. As found out in this study, the exchange fluctuations faced by firms, forms a significant component of their risk profile. It is therefore imperative that oil marketing firms and generally all firms in Kenya with and without international operations effectively manage forex fluctuation.

Secondly this paper gives a recommendation that oil marketing companies should consider adopting Domestic or Multi-domestic strategies which are suitable for local economic environment other than applying global strategies that may be affected by forex volatility. The study further observes and recommends blending of foreign exchange rate risk management strategies that are best suited for the oil marketing companies.

Finally whereas it cannot be conclusively said based on this study, the recent exits by large multinationals (Kinuu, 2007) could be as a result of forex fluctuation in Kenya. In the last decade alone three multinational companies have left, Mobil in 2006, BP in 2007 and Chevron in 2010. Shell which took over BP assets in Kenya, has already sold a joint stake with BP in Mombasa-based Kenya Petroleum Refineries to India multinational, Essar. Over 70 percent of companies have entered the market in the last decade and most of these are either regional or locally owned. The researcher therefore recommends that since the sector is still growing and very dynamic, it is important for the organizations to put into consideration the aspects that influence financial performance.

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

There first limitation for the study was time, the study was conducted for a duration of three months and therefore it was not possible to carry out an analysis on the financial performance for longer periods of time.

Secondly there was the element of confidentiality given that the study focused on a sensitive area of financial performance. It was expected that some managers were not willing to offer detailed information on their financial performance as a matter of caution.

Finally the measurement for data collection and questionnaire survey that stood in the way of the study. Whereas it cannot be conclusively said based on this study ,the recent exits by large multinationals (Kinuu,2007) could be as a result of Forex fluctuation in Kenya.



## **5.6 Recommendations for Further Research**

In an increasingly globalizing economy, domestic corporations, their suppliers, and their customers are not insulated from the effects of international economic cycles, currency movements, and global competition. However, the foreign exchange fluctuations of oil marketing companies has not been fully investigated in prior literature a good suggestion worth of future research. In this regard therefore the researcher recommends that additional studies should be conducted on forex fluctuations in Kenya and how this has impacted the oil market especially with view of establishing the recent exits by multinational corporations and the emergence of local and regional companies. There is also need to identify and study other macroeconomic factors that affect company's financial performance. Further research can also be conducted to establish whether there is relationship between companies net worth and the strategies adopted to mitigate forex volatility. The research also recommends a study to establish the effects of forex volatility on the financial performance of other industries apart from the oil marketing industry.

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## APPENDICES

### *Appendix 1: Questionnaire*

Please Tick  $\surd$  as appropriate

#### **PART A: General Information**

1. Please indicate as appropriate:

Gender:

Male

Female

2. Please indicate your level of education

a. Diploma [ ]

b. Bachelor [ ]

c. Masters [ ]

d. Doctorate [ ]

e. Other (Please specify) \_\_\_\_\_

3. How long have you been working in the oil industry?

a. Less than 2 year [ ]

b. 3 – 5 years [ ]

c. 6 – 9 years [ ]

d. 10 years and above [ ]

**4. What is your position in the company?**

- a. Board of Directors
- b. Senior Management
- c. Other (Please specify) \_\_\_\_\_

**5. Does your company have branches all over Kenya?**

- a. Yes
- b. No
- c. Don't Know

**6. What is your Ownership of the company**

- a) Local (over 51%)
- b) Foreign (Over 51%)
- c) Government (over 51%)
- d) Other Specify.....

**7. Years of Operation of the company in Kenya**

- a. Less than a year
- b. 1 – 5
- c. 6 – 10
- d. 11 – and above

8. Does your company operate internationally?

- a) No
- b) East African region only
- c) Africa only
- d) The whole world

9. Does foreign exchange volatility contribute significantly to your financial performance?

Yes ( ) No ( )

10. Foreign exchange volatility management

(a) Does your firm have clear policies regarding Foreign Exchange volatility?

Yes ( ) No ( )

(b) Does your bank have adequate internal regulation for foreign exchange volatility?

Adequate ( ) Enough ( ) More than enough ( ) I am not aware ( )

(d) How regularly does your firm review the foreign exchange volatility policy?

Quarterly ( )

Half yearly ( )

Yearly ( )

Other, specify.....

11. Which of the following forms a big part of your bank's foreign exchange volatility management strategy?

	Least traded			Most traded	
	1	2	3	4	5
Currency Forwards	( )	( )	( )	( )	( )
Currency Futures	( )	( )	( )	( )	( )
Currency Spot	( )	( )	( )	( )	( )
Currency Options	( )	( )	( )	( )	( )
Currency Swaps	( )	( )	( )	( )	( )

Others (state as appropriate).....



*Appendix 2: Oil Marketing Companies in Kenya*

1	Metro Petroleum Limited
2	Tecaflex Limited
3	Mbaraki Bulk Terminal Limited
4	Ranway Traders Limited
5	Quantum Petroleum Limited
6	Samhar Petroleum Products Limited
7	Orix Oil Kenya Limited
8	Keroka Petroleum Limited
9	East African Gasoil Limited
10	Regnol Oil (K) Limited
11	Kenol Limited
12	Kobil Petroleum Limited
13	Olympic Petroleum Limited
14	P.J. Petroleum Equipment Limited
15	Intoil Limited
16	Muloil Limited
17	Libya Oil Kenya Limited
18	Hass Petroleum Kenya Limited
19	Bakri Int. Energy Company Limited
20	Topaz Petroleum Limited
21	Galana Oil Kenya Limited
22	Riva Petroleum Dealers Limited
23	National Oil Corporation of Kenya
24	Oil City Services Limited

25	Jaguar Petroleum Limited
26	Global Petroleum Products Kenya Limited
27	Total Kenya Limited
28	Gulf Energy Limited
29	Ainushamsi Energy Limited
30	Jade Petroleum Limited
31	Alba Petroleum Limited
32	Petro Oil Kenya Limited
33	Kenya Shell Limited
34	Royal Energy (K) Limited
35	Tosha Petroleum (Kenya) Limited
36	MGS International (K) Limited
37	Addax Kenya Limited
38	Banoda Oil Limited
39	Gapco Kenya Limited
40	Fossil Fuels Limited
41	Oilcom Kenya Limited
42	Engen Kenya Limited
43	Trojan International Limited
44	Hashi Energy Limited
45	Kamkis Trading Company Limited
46	Premium Petroleum Company Limited
47	Al leyl Petroleum Limited
48	Fast Energy Limited
49	Essar Petroleum (East Africa) Limited
50	One Petroleum Limited

51	Dalbit Petroleum Limited
52	Millenium Dealers Limited
53	Mafuta Products Limited
54	Kenya Petroleum Refineries ( <b>New – Licensed to allow conversion to merchant refinery</b> )
55	Cape Supplies Ltd ( <b>New</b> )

**Source: Energy Regulation Commission (2011)**