

**THE EFFECT OF FOREIGN EXCHANGE RATE FLUCTUATION
ON THE FINANCIAL PERFORMANCE OF MOTOR VEHICLE
FIRMS IN KENYA**

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DECLARATION

I declare that this research project is my original work and has not been submitted to any other University for examination.

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

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DEDICATION

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ABBREVIATIONS

ANOVA	-	Analysis of Variance
APT	-	Arbitrage Pricing Theory
BCBS	-	Basel Committee on Banking Supervision
CAPM	-	Capital Asset Pricing Model
CBK	-	Central Bank of Kenya
CMC	-	Cooper Motor Corporation
CPI	-	Consumer Price Index
FDI	-	Foreign Direct Investment
GBP	-	Great Britain Pound
GMEA	-	General Motors East Africa
KMIA	-	Kenya Motor Industry Association
KVM	-	Kenya Vehicle manufacturer
PPP	-	Purchasing Power Parity
SDF	-	Stochastic Discount Factor
SML	-	Security Market Line
TKL	-	Toyota Kenya Limited
UCIRP	-	Uncovered Interest Rate Parity
US	-	United States
USD	-	United States Dollar

ABSTRACT

Exchange rate plays an increasingly significant role in motor vehicle industry in Kenya as it directly affects domestic selling price level, profitability, allocation of resources and investment decision in the industry. The fluctuation or volatility in the exchange rate has attracted public attention especially from importers who have argued that the strengthening shilling is eroding their competitiveness (Ndung'u, 2000). The study objective was to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. Secondary data was collected from the Companies Financial Report. Regression analysis was done for the periods to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. The study covered a period of 10 years from year 2003 to 2012. The study revealed that there was negative relationship between translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, total machinery and equipment, economic exposure and firm financial performance, this is an indication that foreign exchange rate fluctuation negatively affect the firm financial performance , thus the study concludes that foreign exchange rate fluctuation negatively affect financial performance of motor vehicle firms in Kenya. From the findings and conclusion the study recommends that companies in motor vehicle industry should apply various hedging techniques which are most effective in order to reduce the risk by foreign exchange rate fluctuation.

CHAPTER ONE:

INTRODUCTION

1.1 Background to the Study

The foreign exchange market is characterized by volatility and uncertainty which makes prediction of future prices difficult. These fluctuations pose a threat to any importer/exporter engaging in international business as they are naturally exposed to currency risks (Allayannis, Ihuig and Weston, 2001). Firms dealing with importation and assembling of motor vehicles in Kenya are vulnerable to potential gains and losses due to changes in the values of its raw materials and purchase prices for motor vehicles that are denominated in foreign currencies. Exporting and importing from abroad expose these firms to foreign exchange risks.

In the year between 1944 and 1973, Central Bank interventions in foreign currency markets were frequent due to Bretton Woods Agreement. This led to relatively minor changes in exchange rates (Allen, 2003). Managers in motor vehicle industry then could afford to ignore foreign exchange rate exposure. After 1973, exchange rates for major currencies have fluctuated freely. These currency fluctuations constantly change the values of foreign currency thereby creating foreign exchange risks. Managing these foreign exchange risks is one of the greatest challenges facing finance managers in motor vehicle industry in Kenya.

Stephen *et al* (1998) defined financial market as where one country's currency is exchanged for another's. He further explained that this market is an over the counter market i.e. it is not a single location where traders get together to do such transactions. Major participants in this market are commercial and investment banks around the

world. The price of a country's currency is determined by market forces of its demand and supply existing within a day and thus the fluctuation of the exchange rate. Stephen *et al* (1998) further defined foreign exchange rate fluctuations as either appreciation or depreciation of one currency against the other. Appreciation of a currency is a rise in its value against other currencies. Depreciation is thus a fall in value of one currency against other currencies. This appreciation and depreciation of a currency is what is termed as foreign exchange rate fluctuations.

1.1.1 Foreign Exchange Rate Fluctuation

Thomas (2006) explains that foreign exchange rate system had been a floating one in most countries since 1970s. He found that, those nations permitted exchange rates to fluctuate in the market place from day to day as per market forces. Initially, central banks intervened in determination of the exchange rate by fixing the rate. This meant that international transactions were never subjected to exchange rate fluctuations risk. He further stated that since the collapse of this exchange rate system, it is market forces of demand and supply that determine the exchange rate of a nation's currency. Thus such rates keep on fluctuating as per market forces and therefore exposing international transactions to foreign exchange fluctuation risks. Mathur (1982) argues that foreign currency exposures arise whenever a company has an income or expenditure or an asset or liability in a currency other than that of the balance-sheet currency.

Movements in exchange rates tend to be influenced by two important variables; the relative prices of goods in two countries and relative interest rates. The Purchasing Power Parity (PPP) theorem explains the relationship between relative prices of goods

and exchange rates. The PPP theorem propounds that under a floating exchange regime, a relative change in purchasing power parity for any pair of currency calculated as a price ratio of traded goods would tend to be approximated by a change in the equilibrium rate of exchange between these two currencies (Shapiro and Rutenberg 1976).

1.1.2 Financial Performance

Financial performance is a subject measure of how well a firm can use its assets from its primary mode of business to generate income. Analysts or investors may wish to look deeper into financial statements and seek out margin growth rates (Hales, 2005). Common examples of financial performance measures include operating income, earnings before interest and taxes, and net asset value. It is important to note that no one measure of financial performance should be taken on its own. Rather, a thorough assessment of a company's performance should take into account many different measures (BCBS, 1996).

In traditional management studies, ratios are classified according to the following performance aspects measured: profitability, liquidity, leverage, and efficiency (Richard et al., 2009). These ratios can be computed directly using financial statement information. Valuation ratios are added with the traditional classification of ratios, which incorporate more current assessments by the market of the company's "worth". Simple balance sheet and income statement items are used to compute ratios to analyze financial statements of the financial institutions.

According to Combs et al. (2005) some of the more commonly used ratios and measures in financial analysis are: Ratios that measure the Profitability; Operating Income/Sales, Operating Income/Average Total Assets, Net Income /Sales, Net Income/Average Stockholders' Equity and Earning per share. Ratios that measure the Operating Efficiency; Cost of Goods Sold/Average Inventories, Average Collection Period, Sales/Average Fixed Assets, Sales/Average Total assets, Gross Profit/Sales, Marketing and Administrative Expenses/Sales. Ratios that measure Financial Leverage: Earnings before Interest and Taxes/Interest Expenses, Total Liabilities/Total Equity. Solvency ratios; Current Assets/Current Liabilities, (Current Assets-Inventories-Prepayments)/Current Liabilities. Ratios that measure Valuation; Price/Earnings, Net Asset Value, Market Value of Equity/Book value of Equity, divided per Share/Market Price per Share, Market capitalization.

1.1.3 Foreign Exchange Rate Fluctuations and Financial Performance

Currency fluctuations enter directly into the import price, producer price and Consumer Price Index (CPI). Exchange rate movements are transmitted to domestic prices through three channels (Hales, 2005). First is through prices of imported consumption goods. Exchange rate movement affects domestic prices directly. Second is through prices of imported intermediate goods. In this case, exchange rate movement affect production cost of domestically produced goods. Finally is through prices of domestic goods priced in foreign currency. The extent to which those changes are reflected in the consumer price index (CPI) depends on the share of imports in the consumption basket. If depreciation results in higher prices for imported goods, demand for domestic goods that compete with imports will increase. As demand rises, there will be upward pressure on domestic

prices and nominal wages. Rising wages will exert further upward pressure on domestic prices (Bailliu and Bouakez, 2004).

Pass-through consists of two stages. In the first stage, changes in exchange rates are transmitted into the prices of imported goods (McCarthy, 1999). A depreciation of a country's domestic currency is typically expected to result in an increase in import prices. If the effect of the depreciation is fully reflected in import prices, then pass-through is said to be full or complete. If only a portion of the depreciation is reflected in import prices, then pass-through is described as partial or incomplete. In the second stage, change in import prices is transmitted to consumer prices.

Exchange rate fluctuations may have implications on the general price level in any economy depending on the share of imported goods in overall consumption (imports penetration ratio). Open economy macroeconomics theory postulates that a small open economy is an international price taker. Therefore in every aspect of trade in exports, the government will make deliberate efforts to encourage exports at all costs. In this pursuit, the government will deflate the exchange rate (Barasa, 2013). Mbungu (2013) adds that more often, exchange rate risk will affect a company's price competitiveness in a product or service also offered by a competitor whose costs are incurred in a foreign currency. If the competitor's currency weakens, its relative competitive position improves because its costs decline, enabling the competitor to reduce its price and attract a larger share of a market (Hales, 2005).

According to Goldberg and Knetter (1997), only about 60% of exchange rate changes are passed onto import prices in the US. The main explanation for this

phenomenon is that many importing and exporting firms choose to hold their prices constant and simply reduce or increase the mark up of prices. When the exchange rate is changing, such behavior is referred to as—pricing-to-market. Many firms might choose to make temporary losses on their revenue not to lose market share to competition.

1.1.4 Motor Vehicle Firms in Kenya

The Kenya Motor Vehicle Industry Association defines motor or automotive industry as a wide range of companies and organization involved in design, development, marketing and selling of motor vehicles. It is one of the world's most important economic sectors by revenue. The Automotive industry does not include industries dedicated to the maintenance of automobiles i.e. motor repair shops and motor fuel filling stations (Kenya Motor Industry Association, 2012).

The Kenya Motor Industry Association reports show that the automobile industry in Kenya is primarily involved in assembling, retailing and distribution of motor vehicles. There are a number of motor vehicle dealers operating in the country with the most established being Toyota Kenya Limited (TKL), Cooper Motor Cooperation (CMC), General Motor East Africa (GMEA), DT Dobie, Simba Colt, RMA Motors (Kenya) ltd. Major assemblers include Kenya Vehicle manufacturer (KVM), General Motors East Africa, Honda Motor cycles Kenya, Associated Vehicle Assembly and T.VS motors Kenya (KMIA Reports, 2013).

The K.M.I.A reports (2012) further explains that established dealers face intense competition from imported second hand vehicles mainly from Japan and united Arabs

emirates. Another issue that arises is that there is more demand for secondhand vehicles rather than new one due to the fact that Kenya is generally a low income country. Experts in the Motor Sector argue that new vehicle trade is characterized by big businesses and substantial initial capital investment as opposed to second hand car dealership, which is dominated by small businesses with low initial capital requirements. This therefore implies that the operators in the new vehicles sub-sector will not be able to pull out whenever business environment changes due to the huge potential losses of exit.

1.2 Research Problem

Exchange rate plays an increasingly significant role in motor vehicle industry in Kenya as it directly affects domestic selling price level, profitability, allocation of resources and investment decision in the industry. The fluctuation or volatility in the exchange rate has attracted public attention especially from importers who have argued that the strengthening shilling is eroding their competitiveness (Ndung'u, 2000). A good performing motor industry in Kenya is of great importance to Kenya industry as all other industries depend on this industry to cater for transportation needs. Transportation cost is a major component of any produced goods hence high transportation cost will have a negative impact on the entire economy. Motor industry is also a major source of employment both directly and indirectly (K.M.I.A reports, 2012).

Kenya exchange rate policy has undergone various regime shifts over the year which has led to introduction of various techniques with the view of finding the most appropriate method for achieving acceptable exchange rate for the Kenya Shilling.

Ndung'u (2000) explains that the shifts were driven by economic events especially the balance of payment crisis in the 70's. In the 1960's and the early 1970's, a fixed exchange rate was maintained. This was changed in 1974 when the Kenyan Shilling was pegged to the US dollar and after a number of discrete devaluations the peg was changed from the US dollar to the Special Drawing Right. Despite these policies, the exchange rate of the Kenya Shilling has remained unstable since the deregulation period. The need to investigate the effect of this volatility of exchange rate on the performance of motor vehicle firms in Kenya is important for the economy. For a country that is import dependent, the stability of its exchange rate is important for credit allocation (Adebiyi, 2006).

When a company with transactional foreign exchange exposure suffers a business interruption loss during an extended period and when relevant exchange rates fluctuate, it is important to appreciate the impact that exchange rates can have on lost sales, cost of sales and gross profit. Exchange rate fluctuations affect operating cash flows and firm value through translation, transaction, and economic effects of exchange rate risk (Choi and Prasad, 1995).

Exchange rate movement in Kenya has been variable with periods of rapid depreciation of the domestic currency Kenya Shilling, which adversely affect the Kenyan economy (Abor, 2005). Ambunya (2012) studied the relationship between exchange rate movement and stock market returns volatility at the Nairobi Securities Exchange and concluded that there is a strong relationship between exchange rate movement and stock market returns volatility. He recommended development of forward, futures and options markets to enable the companies to certainly forecast the

expected exchange rates in the future.

Even though studies have been conducted on the exchange rate regimes and the implications for macroeconomic management and managing foreign exchange risk (Abor,2005), there is no evidence of local study in Kenya conducted on the effect of foreign exchange exposure on financial performance of motor vehicle firms. This study sought to fill the existing research gap by conducting a study on the effect of foreign exchange exposure on financial performance of firms in Kenya motor vehicle industry. The study sought to fill the existing research gap by answering the following research question: What is the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya?

1.3 Research Objective

To determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya.

1.4 Value of the Study

The study is significant in the fact that it adds to the body of empirical knowledge and literature on exchange rate exposure of firms in the motor vehicle industry. It will enhance export and import terms to help businesses dealing with motor vehicle importation and assembling to remain competitive, reduce non-cash flows risk because of local currency devaluation, help firms understand and learn best practice procedures to monitor and manage these risks and their impact on profits.

The findings of the study are of great importance to help researchers, corporate managers, shareholders and academicians in thirt international financial management. The findings of this research will draw more personal insight in understanding foreign exchange risk management and increase knowledge in this area. Since this study assesses the existing capacity in the country for foreign currency risk management, its findings generate more knowledge in this area.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

The effects of foreign exchange rate fluctuations are generally understood and general methods of hedging against them well documented. Despite this, an organization needs to do careful analysis of these effects on its operations before making a decision on how to deal with them. This chapter highlights the theories associated with international transactions and exchange rate systems. It also review empirical evidence from other similar research work done before in order to conceptualize and operationalize the study.

2.2 Theoretical Framework

2.2.1 Classical International Trade Theory

According to the theory, international trade is a case of geographical speculation. Different countries have different set of resources. Smith (1776) held that for two nations to trade with each other voluntarily, both nations must gain absolute advantage theory. If one nation gained nothing or lost, it would refuse it. According to Smith, mutually beneficial trade takes place based on absolute advantage. The assumptions made by smith were trade is between two countries only, two commodities are traded, free trade exists between the countries and the only element of cost of production is labor. Although Smith's ideas about absolute advantage were crucial for the development of classical thought for international trade, it is generally agreed that Ricardo (1817) is the creator of the classical theory of international trade on comparative advantage, where he showed that the potential gains from trade are far greater than Smith envisioned in the concept of absolute advantage (Ingham, 2004).

The abundance of a resource gives cost advantage in the production of a commodity. The cost advantage is the basic of specialization and international trade. The assumption made is that theory of international trade is based on the labor theory of value. With this, value of any product can be explained in term of labor units. The theory assumes barter system of exchange. It is a case of free trade without any restriction from either country and no transport costs are involved while perfect competition and full employment and factors of production are perfectly mobile within a country and immobile between countries. The classical theory of international trade is explained in three parts, absolute cost advantage, equal cost advantage and comparative cost advantage. However, trade can take place even in absence of absolute cost advantage and when the domestic exchange rates are different (Krugman and Obstfeld, 2009).

2.2.2 Purchasing Power Parity Theory

The Purchasing Power Parity (PPP) theorem explains the relationship between relative prices of goods and exchange rates. The PPP theorem propounds that under a floating exchange regime, a relative change in purchasing power parity for any pair of currency calculated as a price ratio of traded goods would tend to be approximated by a change in the equilibrium rate of exchange between these two currencies (Shapiro and Rutenberg, 1976).

The relationship between relative interest rates and foreign exchange rates is explained within the interest rate theory of exchange rate expectations. Nominal interest rate differentials between two countries tend to reflect exchange rate fluctuations. Giddy (1977) called this the international Fisher effect, a close

relationship to the Fisher effect, a phenomenon observed by Irving Fisher (1896). Therefore, foreign exchange rates take into account all expected interest rate and purchasing power differentials. As such, critics of foreign currency risk management, argue, there is no exchange risk to justify risk management activity.

Unsystematic risk can be diversified away by investors themselves in accordance with portfolio theory by adding low-risk, low- return securities to the portfolio. Systematic risk, on the other hand, is already discounted in asset pricing. Therefore, if foreign exchange pricing is in line with CAPM, then a firm cannot increase its value through hedging. Movement of its share price will be along the Security Market Line (SML) only, which takes account of the systematic risk (Logue and Oldfield, 1977).

2.2.3 Aliber Theory

Aliber (1970) found that multinational enterprises through financial market relations, namely exchange risk and the market's preferences for holding assets denominated in selected currencies. More specifically he hypothesized that it is the financial market which enables firms to have advantages over host country firms and applicable to all firms whose assets and borrowing are based in selected currencies. Aliber reasoned that multinationals tend to flow from strong currency areas to weak currency areas.

Critics of Aliber argued that while the view is compatible with the early post-war American domination, it gave no account of the rise of European and Japanese multinationals. In defense, Aliber (1983) attributed the upsurge of FDI from Japan and Europe to the decline of market values of US firms relative to the market value of firms headquartered abroad. Another criticism pin-pointed an important issue that

many international firms raise much of their funds for investment in host countries and currencies where the investments take place and financial capital is not the most important component of multinationals.

2.2.4 Arbitrage Pricing Theory

The Arbitrage Pricing Theory (APT) was developed primarily by Ross (1976). It is a one-period model in which every investor believes that the stochastic properties of returns of capital assets are consistent with a factor structure. The Arbitrage Pricing Theory (APT) describes the price where a mispriced asset is expected to be. It is often viewed as an alternative to the capital asset pricing model (CAPM), since the APT has more flexible assumption requirements. Whereas the CAPM formula requires the market's expected return, APT uses the risky asset's expected return and the risk premium of a number of macro-economic factors.

The basis of arbitrage pricing theory is the idea that the price of a security is driven by a number of factors. These can be divided into two groups: macro factors, and company specific factors. Ross (1976) formal proof shows that the linear pricing relation is a necessary condition for equilibrium in a market where agents maximize certain types of utility. The subsequent work, which is surveyed below, derives either from the assumption of the preclusion of arbitrage or the equilibrium of utility-maximization. A linear relationship between the expected returns and the betas is tantamount to an identification of the stochastic discount factor (SDF). The APT is a substitute for the Capital Asset Pricing Model (CAPM) in that both assert a linear relationship between assets' expected returns and their covariance with other random variables (Ross, 1976).

Ross (1976) further argues that the difference between CAPM and arbitrage pricing theory is that CAPM has a single non-company factor and a single beta, whereas arbitrage pricing theory separates out non-company factors into as many as proves necessary. The beta of each factor is the sensitivity of the price of the security to that factor. The implication to the study variables is that firms can minimize currency risk exposure by constantly analyzing the currencies that are more affected by exchange rate changes and apply financial instruments which minimize the risks. The arbitrage model takes into consideration market risk and other internal risk. The relevance of this is that currency risk, economic exposure and interest rate risk are internal risk. Hedging against this reduces operation cost.

2.2.5 Interest Rate Parity Theorem

It was developed by Keynes in 1930 and applies the law of one price. To IPP, the law of one price applies in the market of goods and services. In IPP, the law of one price applies in securities markets. It holds when quoted in a common currency, identical securities in different countries should have the same price. This is irrespective of interest rate prevailing in the different countries. Under IPP, the forward markets adjust the exchange rate such that any arbitrage gains made in investing in higher interest rate countries are wiped out depreciation of local currency. Covered interest rate parity (CIRP), holds a riskless arbitrage relationship exists where an investment in a foreign money market instrument is completely hedged against exchange rate risks and should yield identical return to domestic money market investment. For this to happen, a forward contract is executed to transact foreign currency to home currency (Shapiro and Rutenberg, 1976).

Empirically, using weekly observations from January 1962 to November 1967, Frenkel and Levich (1975) confirmed that CIRP held. Later in 1977 they extended their studies into three periods: 1962–67, known as the “tranquil peg”; 1968–69, the turbulent peg”; and 1973–1975, the managed float, and strengthened the findings of their previous study that CIRP still holds during these periods even when the effect of transaction costs is taken into account. They indicated that deviations from CIRP might occur due to four major reasons: transaction costs, political risk, potential tax advantages, and liquidity preference.

Logue and Oldfield (1977) uncovered interest rate parity (UCIRP); holds expected return on unhedged foreign currency investment should equal the return on a comparable domestic currency investment. It states the change in spot rate over an investment horizon should on average equal to the differential interest rates between two countries percentage change in spot rate interest rate differential in two countries. Very few empirical studies support UCIRP. For example, using a K-step-ahead forecasting equation and overlapping techniques on weekly data of seven major currencies. Hansen and Hodrick (1980) rejected the market efficiency hypothesis for exchange.

2.3 Determinants of Financial Performance

2.3.1 Capital Structure

Capital structure, which is defined as total debt to total assets at book value, influences both the profitability and riskiness of the firm (Bos and Fetherston, 1993). There are several commonly used debt ratios in studies on capital structure. In Muhammad (2003), the main issue of investigation is laid out on the premise of the

static trade off theory, which in simple terms states that some amount of debt is desirable, but too much of it brings in financial distress. In the present study debt-to-equity ratio proved to have a negative impact on firm's profitability. In previous studies, the financial indication has either a negative or a positive impact. According to the theory, if high debt-to-equity ratio shows greater uncertainty then higher risk may lead to higher profit margins.

2.3.2 Liquidity

Liquidity management is important in good times and it takes further importance in troubled times. The efficient management of working capital is important for a company's profitability and wellbeing. In the words of Fraser (1998), "there may be no more financial discipline that is more important, more misunderstood, and more often overlooked than cash management". According to Abuzar (2004), he found that a significant negative relationship between profitability and liquidity.

2.3.3 Firm Size

The size of a firm plays an important role in determining the kind of relationship the firm enjoys within and outside its operating environment. The larger a firm is, the greater the influence it has on its stakeholders. The growing influences of conglomerates and multinational corporations in today's global are indicative of what role size plays within the corporate environment (Ezeoha, 2008). Punnose (2008) shows positive relationship between firm size and profitability. According to Nguyen (1985), profitability is largely independent of variations in firm size, although large foreign-owned firms generally earn higher profits than large domestic firms.

2.3.4 Interest Rates

Increasing interest rate and capital flow volatility are found to raise inflation uncertainty and encourage financial investments while discouraging fixed investments by real sector firms (Felix, 1998). Furthermore, World Bank (2000) estimates that reducing consumption volatility may create welfare gains in the order of 4%-10% of consumption in 20 Latin American countries (with an overall mean of 20% and median of 7.7%) though such gains would be 1.2% on average in developed countries. Persistent capital market imperfections and high real interest rates in developing countries continue to hurt firm profitability.

2.3.5 Cost of Production

McGlaphren (2003) cites that production costs are expenses, such as materials and labor that a company incurs in the course of producing the product to sell to consumers. In general, the lower the production cost, the higher the profit, or the amount left over after subtracting expenses from sales revenue. However, low production costs do not necessarily guarantee a high profit. A business may have unsustainably high fixed costs, such as rent, or may cut production costs of producing an inferior product that nobody wants.

2.3.6 Bargaining Strength of Suppliers and Customers

If handful suppliers control essential raw materials, they tend to influence the market price and quality and may even demand special terms from customers which may negatively affect profitability of their customers. Powerful buyers force prices to go down, bargain for higher quality or more services at the expense of industry

profitability. A buyer is powerful if they purchase large volumes and faces few switching costs (porter, 1980).

2.3.7 Pressure from Substitutes, New Entrants and Rivalry among Competitors

Substitutes limit potential returns of an industry by placing a ceiling on the prices firms can charge. Substitutes pose threat on returns if switching costs from one substitute to another are low (porter, 1980). New entrants to industry bring new capacity and desire to gain market share. Prices may go down and costs inflated reducing profitability. Extent of rivalry among existing competitors lead to price competition, advertising battles and increased customer service leading to high cost and possible low prices hence reduce profitability (porter,1980).

2.4 Empirical Review

Jorion (1991) estimates exposure using a two-factor model that thereafter became the norm for estimating foreign exchange exposure controlling for market risk. For a sample of firms drawn from the Fortune 500, he finds that the degree of exposure varies directly with the degree of foreign involvement. Other studies have re-confirmed these basic findings regarding the foreign exchange exposure faced by internationally involved and multinational companies, and explored in greater detail various issues that arise in the procedures used for estimating such exposure.

Bodnar and Gentry (1993) using data from the US, Canada and Japan also find industry differences in foreign exchange exposure and note that that the exposure direction and level are broadly consistent with economic theory. Exchange rates changes have important implications for financial decision-making and for the

profitability of firms. One of the central motivations for the creation of the euro was to eliminate exchange rate risk to enable European firms to operate free from the uncertainties of changes in relative prices resulting from exchange rate movements.

Bartov and Bodnar (1996) found an increase in equity volatility following the breakdown of the Bretton Woods agreement and increased exchange rate volatility but equity risks increased much more for firms with a multinational presence than it did for a control sample of domestic firms. They also found that, exchange rate exposure is asymmetric over different appreciation depreciation periods. These asymmetries are more pronounced in the financial and non-cyclical sectors.

Using a sample of firms in the automotive industry in the US and Japan, Williamson (2001) found that foreign sales are a major determinant of exposure but there is considerable time variation in exchange rate exposure. However, Griffin and Stulz (2001) find the effect of exchange rate shocks is minimal in explaining relative US industry performance and is even smaller in other countries that are more open to trade finding that industry effects are more significant than exchange rate effects. While there may be some differences in empirical findings, foreign exchange exposure most likely depends on the competitive structure in an industry. Additional firm characteristics have also been assessed as to their impact on foreign exchange exposure.

Another issue in developing foreign exchange exposure estimates has to do with portfolio size. Generally, there are two major choices in this regard. The first method

is to estimate exposure on the firm level and the other method is to estimate the exposure for portfolio groupings, formed either by size, industry, level of international activity, or another criteria. Many studies assess both the firm level and portfolio level exposures. As indicated earlier, prior studies have focused on exposures of internationally involved or multinational firms. Using a large sample of firms from many different countries, Doidge, Griffin and Williamson (2002) found that foreign exchange exposure is related to the level of foreign activity. They also find that large firms exhibit more foreign exchange exposure than smaller firms.

Mutwiri (2013) conducted a study that sought to investigate the effect of foreign exchange rate volatility on the financial performance of commercial banks in Kenya. The study found that foreign exchange market in Kenya is not efficient in the weak form which is attributed to seasonal patterns in foreign exchange returns and volatility. The volatility clusters arise from random shocks to the market and are likely to persist in the market which suggests that new information in the market is not instantaneously incorporated into exchange rates. She recommended use of information technology infrastructure to provide information on exchange rates to public so as to improve information efficiency. However, her study relied on secondary data which can be unreliable as they were intended for other purposes like convincing external stakeholders that the business performs well.

Wanja (2013) conducted a study to investigate relationship between foreign exchange hedging methods and financial performance of firms listed at the NSE. He found that there had been significant percentage change in imports and exports for firms listed in the Nairobi Securities Exchange hence foreign exchange has an effect on import costs

and accounts payables with the net effect on the Net Income of multinational companies. He recommended use of a foreign exchange risk management framework which clearly shows its currency risk assessment procedure and implementation of foreign exchange risk management strategies. However, his study had some weaknesses inherent in using questionnaires for data collection purposes due to possibility of misinterpretation of questions by respondents. Sample findings from the sample may not reflect the behavior of the entire population.

Barasa (2013) in his study to investigate exchange rate volatility and balance of payments in Kenya found that exchange rates affect the prices at which a country trades with the rest of the world and is integral economic analysis and policy formulation. He found a direct relationship between foreign exchange rates volatility and balance of payments. It is through exports that the country earns foreign exchange. He recommended that the government through its relevant offices promote the export industries like tourism which earn the country foreign exchange which can then be used to pay off imports to balance payments. His study was however weakened by the fact that the data used was secondary generated for other purposes. The measures used may keep on varying from one year to another subject to the prevailing condition.

Mbaya (2013) did a research to investigate effect of interest rates in stabilizing foreign exchange rate in Kenya economy. He concluded that interest rate and money supply have a significant impact on the exchange rate of USD, EURO and GBP. For a country to stabilize its foreign exchange rate, the interest rate and money supply should be checked. The government through CBK should come up with monetary

policy that will have an impact on exchange rate thereby making government intervention significant in stabilizing the foreign exchange rate. The research was carried out when many western countries and the rest of the world were in recession or just from recession and soaring of oil prices, a further research should be carried out to period prior to recession and global soaring of oil and petrol prices. The study was limited to period of five years this is because data for earlier years were not available from relevant website and getting them proved costly. A much longer period will increase the accuracy of the findings.

Mbungu (2013) analyzed relationship between long and short run dynamic between the stock prices and exchange rates in Kenya. From the findings of the study, he concluded that there is a one-way causality relationship running between stock market prices and exchange rates. This means that the present value of exchange rate today is the discounted sum of the expected future cash flows (dividends and capital gain from stocks). As such, today's exchange rates therefore reflect the expected future dividends from stocks. In order to develop the Kenyan stock market further, he recommended that the government should put in place structures and policies aimed at stabilizing the Kenya Shilling against foreign currency to be able to control not only stock prices but the trade portfolio and potential of both domestic and foreign investors.

2.5 Summary of Literature Review

Overall, studies of foreign exchange exposure find that multinational corporations have significant foreign exchange exposure. Foreign exchange movements causes unanticipated foreign exchange risks which tend to have an impact in the value of the

firm. Firms can minimize currency risk exposure by constantly analyzing the currencies that are more affected by exchange rate changes and apply financial instruments and techniques which minimize the risks. Firms commonly use operational hedges to manage long term exposure, whereas foreign exchange derivatives, financial hedges are often used for managing short term exposure.

Empirical literature review confirms that there are various contributions of several authors as far as this research is concerned both globally and in Kenya. Foreign exchange affects balance of payment and import costs. Some well documented and applicable instrument of managing foreign rate exchange fluctuations risks in developed markets are underutilized in Kenya. Empirical review concludes that no study exists on the effect of foreign exchange rate volatility on the financial performance of motor vehicle firms in Kenya. This is the gap the present study seeks to bridge.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction

The chapter presents the research design, population of the study, sample size, data sources and data analysis procedure together with the model specification.

3.2 Research Design

The descriptive research design was employed in this research. This design generally describes the characteristics of a particular situation, event or case. It suggests causal linkages between variables by observing existing phenomena and then searching back through available data in order to try to identify plausible causal relationships. This research design was the best in explaining if two variables are related because its main concern is to determine cause and effect relationship and to understand which variable is dependent and which is independent. This is established by use of enough information and data for testing cause and effect relationship. In this case, it explored the cause and effect relationship between foreign exchange rate fluctuation and financial performance of motor vehicle firms in Kenya. It also looked at the characteristics of each variable and how they affect financial performance.

3.3 Target Population

The target population refers to the entire group of individuals or objects from which the study sought generalize its findings (Cooper and Schindler, 2008). The target population was drawn from all the 12 firsthand motor vehicle dealers and assemblers in Kenya (K.M.I.A, 2012) for 10 years period starting from year 2003 to year 2012. The study period was selected since it is the time when there was so much internal

borrowing and was characterized by rampant shifts in foreign exchange rates due to political and economic factors. Mugenda and Mugenda (2003), explain that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study. All the 12 firms in the population were used in the study .This is because firms in this sector are few and they have unique characteristics in that some are assemblers while others are retailers. They also differ in terms of size and the type of vehicles they deal in giving a comprehensive representation of Kenya's motor vehicle industry. The study period was 10 year period starting from 2003 to 2013?

3.4 Data Collection Procedure

Secondary data from companies reports and financial statements was collected on the study variables, they include: transaction exposure , economic exposure , transalation exposure and financial performance. The study was collect secondary data for the last 10 years starting year 2003 to 2012.

3.5 Data Analysis Techniques

Data analysis was done using SPSS Version 22 whereby inferential statistics was applied whereby a multiple regression model will be employed. Analysis of Variance (ANOVA)-According to Tredoux and Durrheim (2002), ANOVA is used to test for differences between the means of more than two groups, and can be used in designs with more than one independent variable. In the present study, ANOVA was used to test the mean score differences between foreign exchange rate fluctuation and financial performance of motor vehicle firms in Kenya and to test for significance at 95% confidence level and 5% level of significance.

In line with past studies and to better analyze and determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya, the multivariate statistical model specification used variables like transaction exposure, economic exposure, translation exposure and economic growth that have been shown empirically to be robust determinants in this relationship. We therefore proceeded by using a modified version of Adofu and Abula (2010) Classical Linear Normal Regression Model (CLRM) of the following form:

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

Where:

Y = is the firm financial performance which was measured using the Return on Assets. Given by Operating Income/Average Total Assets

X₁ = is a measure of translation exposure using sales i.e effect of dollar fluctuation on firm's sales due to conversion of income statement denominated in foreign currency. Given by: Sales (Average Dollar exchange Rate – Actual Dollar Exchange Rate)

X₂ = is a measure translation exposure using Raw material cost i.e. effect of Dollar fluctuation on cost of raw material due to conversion of income statement denominated in foreign currency. Given by: Raw material Cost (Average Dollar exchange Rate – Actual Dollar exchange Rate).

X₃ = is the transaction exposure measured through foreign currency denominated Accounts Receivable. Given by: Average Accounts Receivable (Average Dollar exchange Rate –Actual Dollar Exchange Rate).

X₄ = is the transaction exposure measured through Accounts Payable denominated in foreign currency. was given by: Average Accounts payable (Average Dollar Exchange Rate –Actual Dollar Exchange Rate).

X_5 is the economic exposure (also known as operating exposure). It was represented by firm size. This was measured using Total Assets owned by the firm.

X_6 is total machinery and equipment denominated in foreign currency. Effect of dollar fluctuation is given by: Average M & E (Aver. dollar Rate – Actual Dollar rate).

X_7 is marketable securities owned by the firm denominated in foreign currency. Dollar fluctuation was measured by: Average Marketable Security (Actual Dollar Rate – Average Dollar Rate).

U_t = Stochastic variable (error term)

Actual Dollar rate is prevailing dollar exchange rate at the end of the year.

Average Dollar rate represents expected rate at the end of the year. Given by (Opening exchange rate + Closing exchange rate)/2

Average A/C receivable=(Opening A/C Receivable + Closing A/C Receivable) / 2

Average A/C Payable=(Opening A/C Payable + Closing A/C Payable) / 2

Average Marketable securities=(Opening Mkt. Securities +Closing Mkt. Securities) /2

Average Machinery and Equip.=(Opening M & E +Closing M &E)/2

Analysis of Variance (ANOVA) was used to test the regression model level of significance at 95% confidence level and 5 % level of significance. F test and T-tests were used to test for any significance difference between foreign exchange rate fluctuation and financial performance of motor vehicle firms in Kenya. Adjusted R squared was used to determine the variation in the dependent variable due to changes in the independent variables.

CHAPTER FOUR:

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data findings to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. These data were collected from the Companies Financial Report and Regression analysis was done for the period to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. The study covered a period of 10 years from year 2003 to 2012.

4.2 Response Rate

The study targeted a sample size of 12 companies in the Motor Vehicle industry from which secondary data was collected for 10 years, the study obtained data for 12 companies for 10 years, this made a response rate of 100%. This response rate was satisfactory to make conclusions for the study as it acted as a representative. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. Based on the assertion, the response rate was excellent.

4.3 Descriptive Statistics

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Median	Mean	Std. Deviation
Y	10	42.60	99.10	71.32	69.4100	16.81418
X1 (Usd 'Millions')	10	8962.00	14500.00	12.522	11663.80	2006.58016
X2 (Usd 'Millions')	10	2752.00	4386.00	3.325	3525.9000	594.80239
X3 (Usd 'Millions')	10	1290.00	1983.00	1.548	1638.9000	272.84446
X4 (Usd 'Millions')	10	390.00	742.00	440.21	565.3000	116.49802
X5 (Usd 'Millions')	10	671.00	1260.00	908.21	1054.7000	195.74703
X6 (Usd 'Millions')	10	65.00	164.00	112.61	118.8000	29.37043
X7 (Usd 'Millions')	10	1890.00	3800.00	2925.0	2715.6000	636.15166

4.4 Correlation Analysis

Table 4.2: Correlations

	Y	X1	X2	X3	X4	X5	X6	X7
Y Return On Assets	1							
X1 Sales Exposure	-.487**	1						
X2 Raw Material Exposure	-.832**	.685**	1					
X3 Accounts Receivable Exposure	-.574**	.490**	.596**	1				
X4 Accounts Payable Exposure	-.284	.577**	.268	.279	1			
X5 Economic Exposure	-.088	.422*	.139	-.073	.642**	1		
X6 Total Machinery and Equip. Exposure	-.048	.244	.290	-.184	.271	.422*	1	
X7 Marketable Securities Exposure	.164	.229	.210	.300	.547**	.476**	.218	1

The study conducted a Pearson moment correlation, to determine the strength of the relationship between the study variable. From the findings on the correlation analysis between firm financial performance and various aspect of foreign exchange exposure, the study found out that there was negative significant correlation between firm financial performance and translation exposure using sales , translation exposure using raw material cost and transaction exposure using accounts receivable, the negative correlation between firm financial performance and transaction exposure using accounts payable , total machinery and equipment and economic exposure , the study also found a positive correlation between firm financial performance and marketable securities.

4.5 Regression Analysis and Hypothesis Testing

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 20) to code, enter and compute the measurements of the multiple regressions.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.969 ^a	.939	.921	.0753

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings the value of adjusted R squared was 0.921 an indication that there was variation of 92.1% on firm financial performance due to changes in translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts

receivable, transaction exposure using accounts payable, economic exposure, total machinery and equipment exposure, and marketable security exposure at 95% confidence interval. This shows that 92.1% changes in firm financial performance could be accounted for by translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, economic exposure, total machinery and equipment exposure, economic exposure and marketable security exposure. R is the correlation coefficient which shows the relationship between the study variables, from the findings there was a strong positive relationship between the study variables as shown by 0.969.

Table 4.4: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.142	7	0.449	3.869	.015 ^b
	Residual	12.992	112	0.116		
	Total	16.134	119			

From the ANOVA statistics in table above, the processed data, which is the population parameters, had a significance level of 0.015 which shows that the data is ideal for making a conclusions on the population's parameter as the value of significance (p-value) is less than 5%, an indication that translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, economic exposure, total machinery and equipment exposure , economic exposure and marketable security exposure, significantly influence the firm financial performance . The significance value was less than 0.05 indicating that the model was significant.

Table 4.5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant	.298	.453		2.165	.006
	Translation Exposure Using Sales (X1)	-.231	.126	-.245	-1.834	.001
	Translation Exposure Using Raw Material Cost (X2)	-.281	.114	-.031	-.246	.016
	Transaction Exposure Using Accounts Receivable (X3)	-.237	.160	-.198	-1.479	.012
	Transaction Exposure Using Accounts Payable (X4)	-.239	.145	-.008	-.065	.023
	Total Machinery & Equip. Exposure(X5)	-.088	.104	-.104	-.844	.001
	Economic Exposure (X6)	-.058	.100	-.075	-.573	.018
	Marketable Security Exposure (X7)	.204	.240	.230	.850	.028

From the data, the established regression equation was:

$$Y = 0.298 - 0.231 X_1 - 0.281 X_2 - 0.237 X_3 - 0.239 X_4 - 0.088 X_5 - 0.058 X_6 + 0.204 X_7.$$

From this regression equation it was revealed that holding translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, total machinery and equipment exposure, economic exposure and marketable security exposure to a constant zero, firm return on asset would be at 0.298, a unit increase in translation exposure using sales would lead to a decrease in firm return on asset by a factor of 0.231, unit increase in translation exposure using raw material cost would lead to decrease in firm return on asset by a factor of 0.281, a unit increase in transaction exposure using accounts receivable would lead to an decrease in firm return on asset by a factor of 0.237, unit increase in transaction exposure using accounts payable would lead to decrease in firm return on asset by a factor of 0.239, a unit increase in Total Machinery And Equipment exposure would lead to decrease in firm return on asset by a factors of 0.088, a unit increase in economic exposure would lead to decrease in firm return on asset by a factors of 0.058 and unit increase in marketable security exposure would lead to increase in firm financial performance by a factor of 0.204. All the variables were significant ($p < 0.05$).

4.6 Discussion of Research Findings

From the finding on the Adjusted R squared, the study found that there was variation of 92.1% on firm return on asset due to changes in translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, total machinery and equipment exposure, economic exposure and marketable security exposure, this

clearly shows that major changes in firm financial performance could be accounted for by translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, economic exposure, total machinery and equipment exposure, and marketable security exposure. The study further revealed that there was strong negative relationship between translation exposure by sales, translation exposure by raw material cost, transaction exposure by accounts receivable, transaction exposure by accounts payable, economic exposure, total machinery and equipment exposure, marketable security exposure and firm financial performance .

From the finding on the Anova statistic the study revealed that translation exposure by sales, translation exposure by raw material cost, transaction exposure by accounts receivable, transaction exposure by accounts payable, economic exposure, total machinery and equipment exposure , economic exposure and marketable security exposure, significantly influence the firm financial performance .

These finding of the study concur with the finding of Jorion (1991), who found that the degree of exposure varies directly with the degree of foreign involvement. Bartov and Bodnar (1996) found an increase in equity volatility following the breakdown of the Bretton Woods agreement and increased exchange rate volatility but equity risks increased much more for firms with a multinational presence than it did for a control sample of domestic firms. They also found that, exchange rate exposure is asymmetric over different appreciation depreciation periods. These asymmetries are more pronounced in the financial and non-cyclical sectors.

Griffin and Stulz (2001) found that the effect of exchange rate shocks is minimal in explaining relative US industry performance and is even smaller in other countries that are more open to trade finding that industry effects are more significant than exchange rate effects. Doidge, Griffin and Williamson (2002) found that foreign exchange exposure is related to the level of foreign activity. They also find that large firms exhibit more foreign exchange exposure than smaller firms. Mutwiri (2013) found that foreign exchange market in Kenya is not efficient in the weak form which is attributed to seasonal patterns in foreign exchange returns and volatility. Wanja (2013) found that there had been significant percentage change in imports and exports for firms listed in the Nairobi Securities Exchange hence foreign exchange has an effect on import costs and accounts payables with the net effect on the Net Income of multinational companies.

CHAPTER FIVE:

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the results of the study and the main conclusions drawn from the analysis of the data in chapter four. From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. The researcher had intended to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya.

5.2 Summary of Findings

The study objective was to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. Secondary data was collected from the Companies Financial Report. Regression analysis was done for the period to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. The study covered a period of 10 years from year 2003 to 2012. The study found that major changes in firm financial performance could be accounted for by translation exposure by sales, translation exposure by raw material cost, transaction exposure by accounts receivable, transaction exposure by accounts payable, economic exposure, total machinery and equipment exposure, and marketable security exposure. The study further revealed that there was strong negative relationship between translation exposure by sales, translation exposure by raw material cost, transaction exposure by accounts receivable, transaction exposure by accounts payable, economic exposure, total

machinery and equipment exposure, marketable security exposure and firm financial performance .

From the finding on the Anova statistic the study revealed that translation exposure by sales, translation exposure by raw material cost, transaction exposure using accounts receivable, transaction exposure by accounts payable, economic exposure, total machinery and equipment , economic exposure and marketable security, significantly influence the firm financial performance . The study revealed that there was a negative relationship between translation exposure using sales, translation exposure using raw material cost, transaction exposure using accounts receivable, transaction exposure using accounts payable, total machinery and equipment, economic exposure and firm financial performance. The study revealed that there was negative relationship between marketable security and firm financial performance.

5.3 Conclusion

Several conclusions can be drawn from the findings. The study revealed that there was negative relationship between translation exposure by sales, translation exposure using raw material cost, transaction exposure by accounts receivable, transaction exposure by accounts payable, total machinery and equipment exposure, economic exposure and return on asset, this is an indication that foreign exchange rate fluctuation negatively affect the firm financial performance , thus the study concludes that foreign exchange rate fluctuation negatively affect financial performance of motor vehicle firms in Kenya.

The study further revealed that a unit increase in translation exposure by sales and translation exposure using raw material cost among motor vehicle companies in Kenya would lead to decrease in their return on asset, this is an indication that translation exposure by sales and raw material cost exposure negatively affects the return on asset meaning that it has a negative effect on firm financial performance.

The study found that a unit increase in transaction exposure by accounts receivable and transaction exposure by accounts payable would lead to decrease in return on asset of companies in the motor vehicle industry in Kenya, thus the study concludes that transaction exposure by accounts receivable and transaction exposure by accounts payable negatively affect the financial performance of companies in motor vehicle industry in Kenya.

The study established that an increase in total machinery and equipment exposure among companies in motor vehicle industry would lead to decrease in return on asset of companies in the motor vehicle industry in Kenya, thus the study concludes that total machinery and equipment exposure negatively affect the financial performance of companies in the motor vehicle industry in Kenya. Economic exposure was found to negatively affect the firm financial performance.

5.4 Recommendations

From the findings and conclusion, it is evident that foreign exchange rate fluctuations pose a real risk to profitability of firms dealing with motor vehicles in Kenya. Consequently, the study recommends that companies in motor vehicle industry should develop a robust foreign exchange risk management framework which clearly shows

its currency risk assessment procedures and implementation of foreign exchange risk management strategy. These strategies should be monitored and adjusted regularly. The company should emphasize the use of currency risk transfer strategies through hedging, insurance and diversification of foreign currency. Some of commonly used hedging techniques include use of currency future markets, forward markets and currency swaps.

The study further recommends that firms dealing with motor vehicles in Kenya should explore avenues to enhance capacities for managing foreign currency risk through organizing regular trainings on currency risk management. This can be done through short term training to senior finance managers on ways of identifying, measuring and handling of foreign exchange risk. The training should not only cover exchange risk management but should also handle practical challenges facing multinational corporations and firms with international undertakings.

The study further recommends that the government through its policy makers like C.B.K should come up with measures and policies that will help to control and stabilize foreign exchange rate fluctuations. The government fiscal and monetary policies have a significant impact on demand and supply of foreign currency which in turn affect exchange fluctuation hence the government can use its policies to regulate foreign exchange movements.

5.5 Limitations of the Study

The study encountered various limitations that may affect its finding. For instance, the study relied on secondary data source which may be unreliable and limited to the

degree of precision. This is because the data may have been intended for other purposes which could include convincing other stake holders that the firm is performing well. To curb this, the study used audited financial statements. The study was also limited by the availability of data relating to foreign exchange exposure. These data is not reported as a line item in the financial statements of motor vehicle firms and was thus difficult to get the data.

The study was also limited to 12 firms in motor vehicle industry which are either assemblers or retailers dealing with first hand vehicles. This left out second hand vehicle dealers which hold a sizeable share of market in Kenya motor vehicle industry. The study was based on 10 years period from year 2003 to 2012 years. A longer duration of the study would have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

The study was limited to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya. This is because the financial performance of motor vehicle firms in Kenya is also influenced by other factors other than exchange rate fluctuation. Thus, establishing the relationship between the variables under this study and financial performance may be erroneous. To mitigate against this, the study tested the significance of the relationship established.

5.6 Suggestions for Further Research

The study sought to determine the effect of foreign exchange rate fluctuation on the financial performance of motor vehicle firms in Kenya and focused on major retailers and assemblers. There is need for a study to be conducted to establish the effect of foreign exchange exposure on financial performance of second hand motor vehicle dealers in Kenya as they command a sizeable market share of Kenya motor vehicle industry.

The study opens a way for an in-depth study on the area of foreign exchange risk management for other sectors of Kenyan economy like agriculture, tourism and energy sectors. This is because a particular study in one sector may not directly apply to other sectors of the economy. In addition, instead of researchers focusing on effect of exchange rate on financial performance, they can attempt to determine the effectiveness of the already established hedging techniques in mitigating exchange exposure.

This study used dollar fluctuation as measure for foreign exchange exposure. Similar studies can be done using other currencies like the Euro, Sterling pound, Japanese yen among other currencies vis a vis the Kenya shilling. This will allow a comparison with other currency markets enabling one to make a general statement concerning foreign currency fluctuation. This is because fluctuations of this other currencies also contribute to exchange exposure as they are also used by these firms in their daily operations.

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APPENDICES

Appendix I: Motor Vehicle Firms in Kenya

1. Toyota (East Africa)/ Toyota Kenya Ltd (TKL)
2. Cooper Motor Corporation,
3. General Motors East Africa (GMEA)
4. Simba Colt
5. DT Dobie.
6. RMA Motors (Kenya) Limited
7. Kenya Vehicle Manufacturers (KVM) - Also Assembles for Hyundai Motor Corp
8. General Motors East Africa (GMEA)
9. Honda Motorcycle Kenya Ltd
10. Associated Vehicle Assemblers Ltd (AVA).
11. TVS Motors Kenya
12. Tata Motors

Appendix II: Data Collection Variables

1. Transaction Exposure using Sales
2. Translation Exposure using Raw Material Cost
3. Transaction Exposure using Accounts Receivable
4. Transaction Exposure using Accounts Payable
5. Economic Exposure
6. Marketable Security Exposure
7. Machinery and Equipment Exposure

