

**THE EFFECTS OF EXCHANGE RATE FLUCTUATIONS ON FINANCIAL
PERFORMANCE OF FOREX BUREAUS IN NAIROBI.**

BY

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DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

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D63/18875/2019

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

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DEDICATION

I dedicate this study to my late grandmother, my mother and wife for their role in shaping my life and career. I also dedicate my work to my family members and friends who were by my side throughout this journey. I will always appreciate for all they have done.

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ABSTRACT

Forex bureaus operate in an environment with frequent fluctuations in the rate at which one currency is exchanged for the other. These exchanges of one currency for the other at fluctuating rates may provide opportunities of arbitration when shifts in exchange rate are favourable to forex bureaus. On the other hand, it is believed that exchange rate fluctuation increases risks to these entities and therefore incidental costs arising as a result means that financial performance is affected. This study focused on fluctuations of exchange rate and its effect on financial performance of forex bureaus in Nairobi. Secondary data was collected from the forex bureaus where necessary data was obtained from 48 forex bureaus from a target of 74 licensed bureaus. Descriptive research design was adopted by the study as it was found appropriate to answer the research question. The analysis of data was undertaken by the use of multiple regression analysis. Secondary data collected involved exchange rate fluctuations data for the period 2017-2019. Similarly data on financial performance (ROA) was collected for the study period, the year of licensing of the bureau, the total directors and the component that composed female directors and total assets of the forex bureau. The regression analysis undertaken indicated that the regression model was significant as the correlation between actual financial performance and financial performance as predicted by the model was 36.2%. The coefficient of determination was however low at 13.1% which suggest that the model could only predict changes of financial performance to the tune of only 13.1%. The F test statistics had a p value of less than 0.05 that led to a conclusion that there was statistically significant effect of foreign exchange rate fluctuations on financial performance of forex bureaus in Nairobi. The foreign exchange rate fluctuation had a negative correlation with financial performance.

LIST OF ABBREVIATIONS

AERM	Accounting Exposure Risk Management
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GLS	Generalized Least Squares
Ksh	Kenyan Shilling
NIM	Net Interest Margin
NPV	Net Present Value
NSE	Nairobi Securities Exchange
OLS	Ordinal Least Squares
ROA	Return on Assets
ROE	Return on Equity
US	United States
USD	United States Dollar
VIF	Variation Inflation Factors

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Foreign exchange is explained as the trading of one currency for another. Foreign exchange is necessitated by the need to trade with foreign companies or governments. It is also very crucial for multinational corporations who maintain operations in foreign countries and therefore required to transfer funds from one country to the other. International investors and foreigners have also found foreign exchange crucial in their day to day transactions. It has enhanced international trade as it has provided a platform to settle international payments, as well as enhanced store of value for international wealth (Pugel, 2007). It is in the nature of all foreign currencies to fluctuate against the home currency. The fluctuations in the exchange rates are brought by differentials in interest rates between the countries, economic growth differentials, and differentials in prevailing economic and non-economic conditions in the two countries, differential in inflation rates between the two countries among many other factors. In order to deal in foreign exchange transactions, it requires an acceptance of high risk in the form of exchange rate transactions. If for example, a trader who deals in foreign exchange transactions, obtains US dollars (US\$) today at a rate of Ksh 95 for 1 USD (United States Dollar), he then exchanges the dollar for Ksh 102, then he makes a margin of Ksh 7 for every dollar he exchanges. However, the exchange rate may drop significantly to Ksh 98 for every dollar or to Ksh. 90 for every dollar. In this case, the trader would make a loss if he exchanges the dollars he obtained for Ksh 95 at Ksh 90. The fluctuations in the exchange rate is what makes dealing with foreign exchange transactions a risky venture. It needs different strategies that ensures adequate profitability of the venture.

The higher the difference between the price at which a trader obtained the foreign currency and the final price at which he exchanges the foreign currency makes up the total margins which would translate to profits made. Fluctuations in exchange rate can go either way and as such traders in the exchange of foreign currencies must ensure that they effect measures that will maximize their returns and reduce possible losses. Different traders adopt different strategies that help them deal with fluctuations in exchange rate of which these strategies are executed differently by each individual trader and results in different financial performance for each trader. According to Sadoulet and Janvry (1995) the banking sector as well as the entire financial sector is adversely affected by adverse activities in the foreign market, solely due to the crucial role they play in financial mediation. However, the unique nature of the Kenyan economy where even the basic industries rely more on imports indicates the need to for exchange rate management in the country (Lagat & Nyadema, 2016). Exchange rate is very crucial in any economy as it shows rate of exchange with another currency. It therefore has a direct impact on the affordability of the foreign goods as well as the pricing of domestic goods in the foreign markets. Clark et al. (2004) defines the various exchange rate systems: Fixed and floating systems. Fixed exchange rate systems refer to the exchange rates that are determined and set by the relevant authority in an economy and may only be changed in order to suit a certain predetermined policy. These rates are set for a certain period of time from which new rates are identified to control various economic factors. Floating exchange rate system on the other hand changes from time to time as it is determined the supply and demand.

There are various theories and models that have been proposed in regard to foreign exchange fluctuations on economic growth or on performance of firms that contribute to the GDP of the home country. The anchor theory for this study is the rational expectations theory that was

developed by Muth (1961). It is a theory that underlies interest rates and postulates that expectations are formulated on the basis of all information available in the market. The theory therefore suggests that future trends in exchange rates are normally predicted on the basis of today's spot rate. Information available today is a key basis of future changes in price due to various expectations and predictions. The purchasing power parity theory that is also called inflation theory of exchange rate determination is also key to this study. The theory was developed by Cassel (1918) who suggested that similar goods have same price in different markets if the prices are expressed in the same currency. The theory suggests that the differences in prices of one good between countries is brought by the percentage change in exchange rate. The rate change between two countries (fluctuations in exchange rate) brings difference in prices of commodities between the two countries (Lyke & Odhiambo, 2017). The other theory is the International Fisher Effect Theory that was developed by Irving Fisher (1930) where he explained that market interest rates are responsible of fluctuations in exchange rate rather than inflation rates. The real interest rate are equal according to Fisher in different countries as arbitrage opportunities would arise if the interest rates were not the same. The difference in interest rates between countries is therefore the exchange rate risks that also contains the inflation element. The higher the fluctuations in exchange rate increases the risk of involvement in foreign exchange and therefore increases cost of operations.

1.1.1 Exchange Rate Fluctuations

(Nydahl, 1999) defines exchange rate as the price where one unit of a foreign currency is exchanged with the domestic currency. Bradley and Moles (2002) defined exchange rate fluctuations in almost a similar manner as the price at which a single unit of currency in a foreign

nation is exchanged against the domestic currency. Omagwa (2005) on the other hand brings out a different definition as she brings out the aspect of demand and supply. She suggests that just like other commodities exchange rate is expressed in form of the pressure of demand and supply. The supply of the said foreign currency is therefore affected through fiscal policies, while changes in demand are affected by various factors such as inflation rates, interest rates, among other factors. The factors that affect supply as well as the factors that influence demand vary from time to time. The variation in these factors therefore force variations in equilibriums brought by the forces of demand and the forces of supply which brings out fluctuations in exchange rates between the foreign countries (Manyok, 2016). Flexible and fixed exchange rates comprise the two available types of exchange rates. Governments control and set fixed exchange rate by making decisions on devaluation or revaluation of the exchange rate after a considerable time period. On the other hand, floating exchange rate depends on the forces of demand and supply which means that there are frequent fluctuations in exchange rate depending on the existing market conditions.

Fluctuations in exchange rate aggravates inflationary pressures and brings uncertainty on future prices. It directly affects domestic prices of imports and exports and affects foreign investments and therefore foreign trade. An agreement by countries across the world agreed that their central banks would avoid fluctuations in their exchange rates between their currencies and the dollar. In return, USA would redeem US dollars in exchange of gold on demand. This arrangement was called Bretton Woods Agreement and from which the dollar was officially declared as the world's reserve currency, which was backed by world's largest gold reserves (Best, 2020). This study will therefore measure exchange rate fluctuations on the exchange rate of Ksh to USD for the study period.

1.1.2 Financial Performance

According to Murthy and Sree (2003) the ability of a firm or an organization to leverage operational as well as investment decisions and strategies in order to achieve financial goal is financial performance. Bradley and Moles (2002) on the other hand define financial performance as the ultimate achievement of an organization in terms of profit maximization and the financial benchmarks it hopes to achieve in order to meet the financial needs of all the stakeholders. Financial performance is measured by a set of various measures that range from profitability measures, liquidity measures as well as debt measures (Reid and Joshua, 2004).

Manyok (2016), Omagwa (2005) and Nydahl (1999) used profitability measures to measure financial performance in their studies. These measures comprise of return on equity (ROE) which is the measure of how much returns are generated per every unit of equity investment made in the organization. It is the ability of an organization to generate return for the equity shareholders. The other measure comprise of NIM that measures the difference between the interest charged on loans acquired by the firm and the interest the firm charges on resources loaned out to clients. The other measure comprise of ROA which measures the amount of return that is generated by the firm based on the assets available to the firm for investment. Khrawish (2011) explains that ROA is a significant measure of financial performance as it provides the efficiency with which management is able to convert assets at its disposal to generate returns. This study will also use ROA as a measure of financial performance as it provide a candid measure of profitability of forex bureaus.

1.1.3 Relationship between Exchange Rate Fluctuations and Financial Performance

Fluctuations in exchange rate increases uncertainty in firms. It increases the risk of loss that means that operational costs are affected. Firms that transact with foreign entities or they invest in foreign countries are always faced with the risk of fluctuations in exchange rate. This results from the uncertainty that embraces foreign investment. When a firm transacts in foreign currency, the transaction is affected by uncertainty of exchange rate fluctuation as the exchange rate between the two countries can either increase or decrease. This therefore warrants that firms that deal with foreign currencies have to factor exchange rate risks in their pricings, so that they ensure that they meet their financial performance goals. Prediction models, economic models, and other assessment models should be well used and interpreted to ensure that the firm sets competitive prices as well as avoids running on losses from increased exchange rate fluctuations (Bradley & Moles, 2002).

Foreign Exchange Bureaus trade in enhancing foreign exchange transactions. They make profit depending on the margin from the price at which they obtained the foreign currency and the price at which they will sell this foreign currency. Increased exchange rate fluctuations therefore means that there is increased fluctuations in the margins they obtain from transactions they make which affect their profitability. Khan (2015) was found that increase in exchange rate fluctuations led to gains and losses while Jamal and Khalil (2011) were able to establish that all firms that were engaged in international trade were exposed to exchange rate risks and the more the firm was able to hedge against these risks, the more it was able to enhance its financial gain from international transactions. It therefore follows that increase in foreign exchange rate

fluctuations has a theoretical tendency of decreasing financial performance of Foreign Exchange Bureaus.

1.1.4 Forex Bureaus in Nairobi County

The regulation of the Forex Bureaus in Kenya is pegged in CBK Act (CAP 491). The CBK is also responsible in issuing licenses to those bureaus that meet the required standards. The purpose for the establishment of the Forex Bureaus was to narrow the exchange rate spread in the market. Increased demand in foreign exchange and money transfer business, necessitated introduction of Forex Bureaus in Kenya and increased the number of licensed bureaus in Kenya. The guidelines that had been established to streamline the sector and address the existing challenges required further review to incorporate emerging opportunities and address further challenges. The new guidelines were therefore established to streamline operations of the bureaus to be compliant with the law and enhance competition in the foreign exchange market (CBK, 2011).

There are 74 licensed Forex Bureaus in Kenya by December 2018 as per attached appendix 1. These forex bureaus have different financial performance records as per regions of operations. According to a study conducted by Kapanat (2008), the performance of forex bureaus in Kenya was found to vary depending on the region. Forex Bureaus in Nairobi had the highest volume of forex transactions followed by Mombasa. These firms were characterized by large capitalization and leverage. The profit margins were however lower in Nairobi and Mombasa, as compared to their counterparts in Nakuru, Eldoret, Kisumu and other major towns. This study therefore would focus on Forex Bureaus in Nairobi County as they are very competitive, and most of them are

large in size. The margin spread for these firms are low and very sensitive to macro-economic factors such as fluctuations in exchange rates, inflation, and economic growth among others.

1.2 Research Problem

Kenya transitioned to a floating exchange rate after a recommendation was undertaken in Bretton Woods' agreement to all member states. The transition from fixed exchange rate system was undertaken in early 1990s. The system was expected to enhance changes of the exchange rate to be in tandem with the direction of demand and the supply of the foreign exchange (Ndung'u & Mwege, 1999). However, this is affected by macroeconomic policies of economic growth, inflation, political stability in the region, and the availability and prices of raw materials in foreign countries. The fluctuations of exchange rate that results from changes in demand and supply of foreign exchange brings uncertainty for businesses that engage in the business of exchange of foreign currency. This is brought by the erratic movement in the price of acquiring and sale of foreign currency that affects the margin spread.

Kenya adopted flexible system of exchange rate that is perceived to increase fluctuations with changes in economic policies. The main currency that determine movement in exchange rate is the US dollar that is internationally endorsed in undertaking international transactions. The exchange rate has in the recent past fallen as low as Ksh. 108 for one US dollar. The fluctuations in exchange rate has therefore adversely affected the operations of commercial banks as well as Forex Bureaus, as profit margins from which they obtain the foreign currency and rate at which they sell the foreign currency is greatly affected. This has great adverse effects on the performance of these forex bureaus as they seek to provide forex hence advance international trade.

The studies that focus on exchange rate fluctuations and financial performance include the works of Jamal and Khalil (2011) who sought to investigate the exposure of certain risks for firms in Jordan. Emphasis was basically on transactional exposure as a result of fluctuations in exchange rate. They therefore checked the effect on receivables and payables which were foreign denominated. They based their study on accounting exposure theories in the context of Jordanian firms, in order to understand the level of hedging that was used by the firms. The study indicated that the firms in Jordan were less committed in using AERM instruments. The study also found that the firms that had significant foreign debt, relied on risk management strategies to cushion against exchange rate fluctuations. Elhussein and Osman (2019) sought to determine how fluctuations that were occasioned by different exchange rates position influenced financial performance of banks in Sudan. They targeted a total of 37 Sudanese banks and secondary data was analyzed by use of ordinary least square (OLS) method, generalized least square (GLS). The study found a weak and insignificant effect of exchange rate fluctuations on financial performance of Sudanese banks. Augustine and Olusegun (2019) on the other hand examined similar variables but for multinational companies in Nigeria. Secondary data collected was tested by the use of OLS method where the findings showed significant effect on study variables for multinational firms in Nigeria. The results in these studies are contradictory and therefore it would be accurate to state that unless a study is undertaken to investigate the effect of exchange rate transactions on financial performance of Forex Bureaus in Kenya, then one would not rely on the result findings on any of these international studies.

Locally, Lagat and Nyadema (2016) investigated the study variables for commercial banks listed at NSE. Time series was undertaken where the best design adopted was correlational exploratory design. The study findings indicated positive significant relationship for the study variables.

This study did not relate exchange rate fluctuations and financial performance of Forex Bureaus, which is the study gap that our study will focus to address. On the other hand Musa (2014) undertook a study similar to this study, however the variables were tested for oil marketing companies that had operations in Kenya for the study period. He used primary data collection tools to collect data from 55 oil marketing companies in Kenya. He used Microsoft Excel and SPSS software for data analysis. The analysis did not find significant relationship between these variables. This study found insignificant relationships between the variables, contrary to most other studies that found significant effect between these variables. Contradictory findings from major findings by previous studies widens the study gap as more studies are preferred in the same area. Another study that was undertaken that was almost similar to our study was by Oduor (2014) where they focused on foreign exchange risk management strategies instead of fluctuations as undertaken in this study. They also focused on Forex Bureaus in Nairobi County where they collected primary data by use of questionnaires. Secondary data was also collected and SPSS used to undertake multiple linear regression analysis. The study found significant relationships between after tax earnings and hedging strategies against foreign exchange risk exposure. The main difference that our study brings is on definition of exchange rate fluctuations, where our study will rely on the changes experienced in foreign exchange rate (Exchange of Ksh to USD). This study used the methods used to hedge against exchange rate exposure as the independent variable.

Analysis of previous studies on the study variables had been undertaken on commercial banks, manufacturing firms, as well as on forex bureaus in Kenya. However, there still remains a study gap from each study that provides justification for undertaking of this study. This seeks to

respond to the question: what are the effects of exchange rate fluctuations on financial performance of forex bureaus in Nairobi County-Kenya?

1.3 Research Objective

The research objective of this study is to determine the effects of exchange rate fluctuations on financial performance of forex bureaus in Nairobi County.

1.4 Value of the Study

This study will be of great help to Foreign Exchange Bureaus as it will help them identify the extent to which exchange rate fluctuations affect their financial performance. They may therefore be in good position to develop policies in regard to pricings and margin spread during anticipated periods of pronounced fluctuations in exchange rates. It would therefore be crucial in determining the pricing system that would enhance their financial performance.

The government will also find the study useful. This is because the government has a certain level of control of exchange rate fluctuations, by the use of foreign exchange reserves. In the period of high foreign exchange demand, the government is able to release more foreign exchange in the reserves to meet the extra demand of foreign currency and therefore ensure there is minimal exchange rate fluctuations. The vice versa is also applicable when there is high supply of foreign currency. The government will therefore develop policies that would ensure that exchange rate fluctuations is addressed accordingly.

Future researchers and academicians will also find the study useful. Proponents of power parity theory, rational expectation theory and International Fisher Effect Theory will find the study supporting their propositions or critiquing them. This goes a long way in developing existing

knowledge in the area of exchange rate fluctuations and financial performance. The study will also be useful to future researchers and academicians as they may quote the study in developing their literature review and identifying their respective research gaps.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review acknowledges the existing contributions and empirical research that has already been previously undertaken in our research area. This chapter therefore reviews theoretical framework, empirical research and identifies the study gap that will be addressed by this study. Conceptual framework is then discussed accordingly.

2.2 Theoretical Framework

The study will be founded on the contributions made by the following theories: Rational expectations theory, purchasing power parity theory, and international fisher effect theory. The theories will be explained and their relevance to the study explained.

2.2.1 Rational Expectations Theory

John F. Muth (1961) proposed this theory in his paper “Rational Expectations and the theory of price movements.” The theory states that an outcome partly depends on expectations of people about the outcome. The theory has more often than not been used to explain future macroeconomic states such as future inflation rate. When people expect that inflation rate has been on the rise on the previous period, they might then use this information to expect higher inflation rates in the future. Rational expectations theory would also hold for future exchange rate, where certain expectations of changes in exchange rate would partly contribute to the future exchange rate.

This theory is relevant to the study as it explains that people expectations of future changes in exchange rate plays a considerable role in moving the exchange rate towards the expectations. It therefore informs that changes in future expectations of exchange rate would therefore influence Forex bureaus to adopt certain policies that would help it maximize on the returns as a result of exchange rate fluctuations while at the same time minimize their losses in case the future changes in exchange rate would result in expected future losses of their investment in exchange rate business. The policies adopted by the Forex Bureaus would therefore impact their financial performance (Oduor, 2014).

Criticism of rational expectations theory is mostly based on ineffectiveness of systematic fiscal and monetary policies in reducing unemployment. It suggests that attempts to stimulate economy and reduce unemployment would already be known in advance and as such would be ineffective in boosting the economy. Further Lucas critique suggested that the replacement of traditional expectations by the rational expectations would lead to the alteration of result which would be counter reactive (Lucas, 1976).

2.2.2 Purchasing Power Parity Theory

According to Rogoff (1996) purchasing power theory states that only when two different countries have equal purchasing power are they said to have their exchange rate in their currencies in equilibrium. This implies that the exchange rate between the two countries should be equal to the ratio of the total prices of a fixed basket of goods and services. This follows that when the price level of a certain country increases, then their exchange rate should be depreciated in order to retain the equilibrium in the ratio of the price of fixed basket of goods.

The theory is relevant to the study as the theory relates the possible causes that would affect exchange rates between countries would be fluctuations in general prices of goods and services in one country more or less than the fluctuations in general prices of goods and services in the other country. It therefore follows that investors are on the lookout for policies and occurrences that would affect the general level of prices of goods and services in one country as that would have significant implication on the exchange rate between the countries. The theory is however criticized due to the assumptions made by the theory. Assumptions in regard to there are no transaction costs and no restrictive taxes between the two countries. This is not practical as most countries have tariffs and embargoes that eventually affect the purchasing power parity position (Shapiro, 2006).

2.2.3 International Fischer Effect Theory

The theory was proposed by Fisher (1930) where he differentiated nominal and real interest rates. When price changes are added to the real interest rates, then we get nominal interest rates. The international fisher effect is premised on the understanding of differential interest rates between two countries. Such a difference would only be caused by the change in exchange rate between the two countries, otherwise a chance of arbitrage would exist, where borrowers would borrow from the country with low nominal interest rates and lend in the country with the higher interest rates. The international fisher effect theory is based on current and future nominal interest rates which is used to predict spot and future currency movements.

The theory is relevant to the study as it provides for a linear relationship between nominal interest rates and changes in future currency exchange rates. It provides a way in which investors may adopt to predict changes and fluctuations in exchange rates. Interest rates affect the cost at

which investors may access credit in a certain country. It therefore means that interest rates differentials between two countries would create arbitrage position for investors to borrow credit at low interest rates in one country and lend at higher interest rates in the other country. The exchange rates risks therefore ensures that it increases the cost of access to this credit to ensure that there is no arbitrage position (Hill, 2004).

2.3 Factors that Affect Financial Performance

Financial performance of Forex Bureaus may be affected by various factors. Exchange rate fluctuations increases operational risks which may therefore adversely affect financial performance. Other factors that may affect financial performance of Forex Bureaus include their corporate governance structure, the experience of Forex Bureaus which may be determined by the number of years in operations, Size of the Forex Bureaus and the ownership structure.

2.3.1 Exchange Rate Fluctuations

Fluctuations in exchange rate increases uncertainty in Forex Bureaus. Foreign exchange risks creates the possibility of loss as a result of increase or decrease in exchange rate of one country to another, and therefore the profit margins by the Forex Bureaus is affected (David, 1997). In a floating exchange rate system, Forex Bureaus are in most cases forced to absorb extra exchange rate fluctuations costs, instead of passing them down to the clients as and when they occur. This would be due to the reason that consistency and predictability helps to maintain customers and therefore increases revenue (Osho & Efuntade, 2019).

2.3.2 Corporate Governance Structure

Corporate governance structure details the manner in which responsibilities and rights are distributed among board members, managers as well as shareholders in making corporate affairs decisions. The quality of decisions made in the governance of a Forex Bureau and the ability to implement those decisions influences its financial performance (Oduor, 2014). The corporate governance structure depends on skills, competence and years of experience of board members, and managers. The composition of the board in form of representation of different age groups, gender as well as skills level help to balance between the needs of the bureau together with market needs that enhances financial performance (Jamal & Khalil, 2011).

2.3.3 Size of Forex Bureaus

Size is determined by the total assets invested in business. The accounting equation equates total assets of a business to owner's equity and debt. This follows the logic that owner's equity invested in business together with debt borrowed from bond holders are all invested in the assets of the business (Mulili & Wong, 2011). There is no precision in regard to determination of the size of the firm. This is because there are different ways in which one may argue to define the size of a firm, which they may give different results depending on the factor under consideration. The total capital invested in the business, the value of the products or revenue obtained from the product, the number of employees, raw materials used among others. In this study however, the size of the bureaus will be determined by the total assets invested which in extension refers the total investment made by the bureau. The size of the Bureau may affect its financial performance as large Bureaus are able to obtain foreign currencies at better rates as they transact in bulk as compared to small firms. They are therefore able to attract a higher margin as much as they are

also able to exhume confidence from customers and they are therefore also likely to have larger market share than their counterparts (Mulili & Wong, 2011).

2.3.4 Age

The age of the Forex Bureau is important in determining its financial performance. This is mainly due to the reason that the older the Bureau, the higher the experience and the stronger is its brand. New Bureaus face challenges that have been refereed as teething problems (Coad *et al.*, 2015). New businesses, just like new products in the market undergo a product life cycle process, where the initial stages, it encounters hurdles that slow their growth. The level at which the new business is able to blend and meet consumer needs defines whether the business will thrive or not. It therefore influences the financial performance of the firm.

2.4 Empirical Review

Empirical review relates to the studies that have been undertaken previously. It highlights international and local studies and provides a research gap which would be addressed by this study. The findings of these studies are also compared against each other and will be used to identify whether the findings are consistent across the different regions and across the various studies undertaken. The methodologies used by the studies also determines the accuracy and reliability of the findings.

Kurihara (2013) investigated the experience of fluctuations occasioned by exchange rate on international trade, specifically on financial development. The study found descriptive research design more appropriate for the study and secondary data from both developed and developing countries was used in the study. Empirical research between the variables was undertaken and

correlational analysis undertaken. The findings of the study indicated that exchange rate fluctuations brought out adverse effects on international trade. Hagelign and Pramborg (2006) sought to find out the implication of financial hedge in Swedish firms. The sample they investigated showed that more than half of the international firms used financial hedges against exchange rate exposure. They also found that translation exposure was less hedged against than transaction exposure. Brownlee et al. (2008) on the other hand investigated the degree to which US firms hedged against accounting as compared to economic exposure. The study found that US exposure to accounting risks was more prominent in US than the exposure to economic risks.

Elhoussein and Osman (2019) investigated whether changes in exchange rates influenced performance of Sudanese banks. The study sought to consider the direction of the relationship between these study parameters. The study was undertaken for the period 2002-2017 and targeted a total of 37 banks licensed in the study period. A census study was undertaken where secondary data from respective bank's financial reports was obtained. Ordinary least Squares (OLS) as well as Generalized Least Squares (GLS) was undertaken for analysis and therefore answer to research questions. The findings of the study showed negative effect of study variables for these banks. The findings was however contrary to findings by most of the previous studies that were reviewed, and the contradiction was attributed to the fact that there were tight embargoes that had been instigated against Sudan during the study period.

Okika et al. (2018) investigated the manner in which profitability of quoted conglomerates in Nigeria were influenced by macroeconomic policy of exchange rate. Profitability was defined as the return on capital employed. The study adopted descriptive as the research design of choice in order to test two hypothesis as defined in the study. Data collected from financial reports of

selected companies and from Central bank of Nigeria. Multiple regression was used to analyze this data. The findings of the study showed that there was insignificant relationship between the study objectives and therefore the government of Nigeria could go ahead to instigate measures that would protect against dumping and capital flight as it would have insignificant effect on their financial performance.

Agubata and Odubuasi (2018) undertook a study on the same variables as this study but for Nigerian manufacturing firms. The study found ex post facto design appropriate for analyzing data collected for the period 200 to 2014 from 8 companies that were sampled by the study. Multiple regression analysis was undertaken where the findings indicated positive but insignificant effect of the independent variables on the dependent variable.

Manyok (2016) employed descriptive design to answer the research question that focused on effect of fluctuations in exchange rate on the dependent variable specifically for financial institutions in South Sudan. He focused on empirical and theoretical reviews that had been undertaken on these study variables. Secondary data was collected and analyzed through descriptive statistics, correlational analysis as well as regression analysis. The findings of the study indicated that there was a weak negative correlation between study variables. Inflation had a negative effect on the dependent variable.

Lagat and Nyadema (2016) assessed fluctuation in exchange rate and effect on the dependent variable of performance for banks listed at the NSE. The study applied time series correlational research design where a census study was undertaken for all the commercial banks that were listed at the NSE for the study period 2006-2013. Data that was accessed from financial reports

and multivariate linear regression was undertaken to determine the relationships between the study variables. It was established that there was a strong relationship between study variables.

Kairu (2016) investigated volatility of exchange rates and the rate of return for commercial banks in Kenya. Multiple regression and correlational analysis was undertaken to implement the descriptive design adopted by the study. The study found out that there was a weak positive relationship between study variables.

Musa (2014) undertook a similar study but for oil companies with operations in Kenya. He used primary data collection tools to collect data from 55 oil marketing companies in Kenya. He used Microsoft Excel and SPSS software for data analysis. The study found that there was also no significant influence between the study variables for these firms with operations in Kenya. This study found insignificant relationships between the variables. It also ignored the relationship of these variables in Forex Bureaus and only focused on oil marketing firms in Kenya. Our study will therefore focus to address this study gap.

Oduor (2014) investigated risk management strategies on exchange rate on dependent variable for forex bureaus in Nairobi, Kenya. They also focused on Forex Bureaus in Nairobi County where they collected primary data by use of questionnaires. They also used secondary data and SPSS was used to undertake multiple linear regression analysis. The study found significant relationships between after tax earnings and hedging strategies against foreign exchange risk exposure. The main difference that our study brings is on definition of exchange rate fluctuations, where our study will rely on the changes experienced in foreign exchange rate (Exchange of Ksh to USD). This study used the methods used to hedge against exchange rate exposure as the independent variable.

2.5 Summary of Empirical Review and Research Gap

The existing literature on effect of exchange rate and financial performance has been undertaken internationally as well as locally. The international studies have all been undertaken in the context of commercial banks, manufacturing firms, oil producing companies, multinational corporations etc. there is no study that has been undertaken in the context of Forex Bureaus. Similarly the studies in the local context apart from the study undertaken by Oduor (2014) were undertaken in the context of commercial banks as well as multinational companies. These studies collected secondary data while our study will rely on primary data collected through questionnaires which provides current and timely data as it affects the study respondents which is the major research gap that will be relied by our study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

It is the processes and methods that are employed by a study in collecting and analyzing data so as to test research hypothesis and answer the research questions. This section includes the research design used by the study, the population, sampling technique employed, data collection and data analysis.

3.2 Research Design

It refers to the set of methods as well as procedures employed in collecting and analyzing study variables as indicated in the research problem (Burns & Bush, 2010). It refers to the strategy that is employed by the research in order to ensure that the research problem is addressed in a consistent and in a coherent manner. The study employed a descriptive research design. This is because this design is ideal for studies that seek to describe and define relationships that exist between study variables. It therefore becomes an ideal research design as it helps to relate the study variables.

3.3 Study Population

Study population refers to the group of individuals, objects or items that form part of the general population of individuals, objects or items but which have common characteristics in either gender, age, size etc and which may be grouped together in order to be studied (Kothari, 2004). The items, objects or individuals who comprise of a study population have common characteristics or common features that make it possible for them to be grouped together. All the

items therefore with the stated attributes or characteristics therefore comprise the population of the study.

The population of this study is the number of Forex Bureaus licensed to operate in Nairobi as at end of December 2019. According to Central Bank of Kenya (2019) supervisory report, there were 74 licensed Forex Bureaus in Nairobi County distributed across the county that also hosts the capital city of Kenya. The study therefore targeted all the 74 licensed Forex Bureaus in Nairobi County and therefore a census study was undertaken.

3.4 Data Collection

The study used secondary data that were collected from specific bureaus financial records and from the Central Bank. The study was undertaken for the period 2017-2019 and therefore data was sought belonging to this period.

3.5 Data Analysis

Data collected required sorting, editing and data coding. The data was then cleaned and assessed for completeness, consistency and accuracy before correlational and specified regression undertaken to analyze the data. Analysis employed the aid of SPSS Software. Tables and figures were used to present results for analysis undertaken.

Diagnostic tests were undertaken on the data collected to ensure that it complied with the preset conditions for undertaking regression analysis. Normality tests, Multi collinearity tests, Heteroscedasticity and linearity tests were be undertaken by the study.

3.5.1 Analytical Model

The study analysis relied on the regression model that took the form

$$Y = \beta + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon ; \text{ Where}$$

β and ε represents constants

β_1 , β_2 , β_3 and β_4 represent coefficient of X_1 , X_2 , X_3 and X_4 respectively.

Y represents financial performance measured by ROA

X_1 Represents Exchange Rate Fluctuations Represented by the annual changes of Exchange rate of Kenyan Shillings to 1 USD

X_2 Represents Corporate governance structure of Forex Bureaus that will be represented by number and gender of board members

X_3 Represents the Age of Forex Bureaus determined by the number of years the bureau has been in operation since inception

X_4 Represents the Size of the Bureau represented by the total assets invested in the bureau,

3.5.2 Test of Significance

The significance of the study was determined by Analysis of Variance (ANOVA) at 95% confidence level. F test was undertaken to determine whether exchange rate fluctuations had significant effect on financial performance of forex bureaus.

CHAPTER FOUR

DATA ANALYSIS, DISCUSSION AND INTERPRETATION OF FINDINGS

4.1 Introduction

The chapter is keen to undertake analysis of data collected in regard to the study. The analysis involves describing the data collected in regard to various variables, undertaking diagnostic tests, and data analysis thereon. The findings of the study will then be discussed and interpreted accordingly.

4.2 Response Rate

Secondary data was collected from licensed Forex Bureaus in Nairobi County. The Central Bank of Kenya (CBK) licensed a total of 74 Forex Bureaus to operate in Nairobi County. However, out of these 74 licensed Forex Bureaus, only 48 provided access to their financial data. This provides a response rate of 64.9% which is a good response rate in undertaking data analysis and making inferences from the sample (Mugenda & Mugenda, 2003).

4.3 Descriptive Statistics

The data collected in regard to each variable was described by providing for the mean, the standard deviation, the maximum and the minimum value for each variable as indicated in table

4.1

Table 4. 1: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	144	-6.13	7.70	3.209	2.569
Exchange Rate Fluctuation	144	-.056	.129	.03	.0761
Corporate Governance Structure	144	.000	1.00	.296	.225
Age	144	1	24	15.21	5.446
Size	144	8.219	13.056	10.767	1.176
Valid N (listwise)	144				

Source: Author, (2020)

Financial performance of a Forex Bureau was calculated using ROA. The mean return for all Forex Bureaus was 3.209% with a standard deviation of 2.57%. This indicates that the performance of most Forex Bureaus is close to the mean. The Bureau that had the highest performance recorded an ROA of 7.7% while the bureau with the least performance within the study period recorded an ROA of -6.13%.

Exchange rate fluctuations on the other hand were calculated on monthly basis. The percentage change of the monthly US dollar exchange rate was determined by using the beginning of the month Kenya shilling – US dollar exchange rate and the exchange rate at the end of the month. The average rate of change for all the months in an year is then calculated to obtain the average exchange rate fluctuation for a certain year. The mean exchange rate fluctuation was 0.03% with a standard deviation of 0.076%. The highest exchange rate fluctuation within our study period was 0.129% and the lowest was -0.056%. This indicates that in the study period there was not so much exchange rate fluctuations.

Corporate governance structure on the other hand was calculated by determining the number of female directors on the total number of directors in a Bureau. This ratio determined the extent to which the board was represented based on the gender. The mean was 0.3 with a standard deviation of 0.22. The best performing board had all the directors as female and therefore a ratio of 1 while the worst performing did not have any female member and therefore a score of 0.

Age on the other hand was determined by the year in which each bureau was licensed. The experience obtained by each bureau in undertaking forex business was therefore used in the study analysis. The mean age for the bureaus was 15.21 years with a standard deviation of 5.45 years. The bureau that had the most experience had operated for 24 years while the least had only operated for 1 year.

Size was determined by the total assets of the bureau. The natural log was used to standardize the data and therefore the mean was at 10.77 with a standard deviation of 1.18. The minimum was 8.22 and the maximum was 13.06.

4.4 Diagnostic Tests

Diagnostic tests in this study were undertaken in order to ensure that the data that was collected are aligned to the assumptions made by linear regression analysis. Therefore this entailed undertaking of normality test, linearity test, multicollinearity test, and homoscedasticity test.

4.4.1 Normality Test

Normality test was undertaken in order to determine whether the distribution of data forms a normal curve. Shapiro-wilk test is best suited to undertake the test where a p value of 0.05 and

above indicates that the distribution of data for the variable is normal while p value of less than 0.05 indicates that the data for the variable is not normally distributed.

Table 4. 2: Normality Test

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
ROA	.171	144	.000	.916	144	.000
Exchange Rate Fluctuation	.239	144	.000	.780	144	.000
Corporate Governance Structure	.155	144	.000	.916	144	.000
Age	.130	144	.000	.952	144	.000
Size	.090	144	.006	.966	144	.001

a. Lilliefors Significance Correction

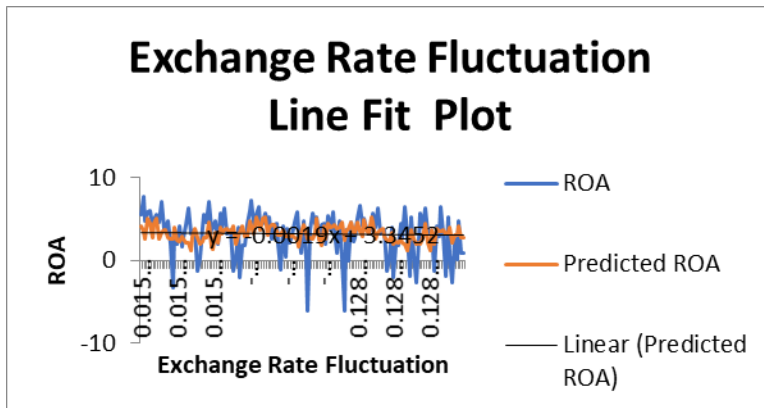
Source: Author (2020)

The table 4.2 indicates that all the variables have p value of less than 0.05. It therefore follows that they are not from a normal distribution. This implies that the data will need transformation in order to use it for data analysis. The study therefore used parametric instead of non-parametric tests as non-parametric tests do not necessarily require data to be normally distributed. This study therefore standardized data before undertaking regression analysis.

4.4.2 Linearity Test

Linearity test is undertaken in order to determine that the variables are able to be expressed in a linear manner. This is because regression analysis assumes that a line of best fit can be drawn to and therefore variables must be expressed in a linear format. The linearity test is undertaken by observing the linear plot and provide a judgement on whether a there is any linear tendency.

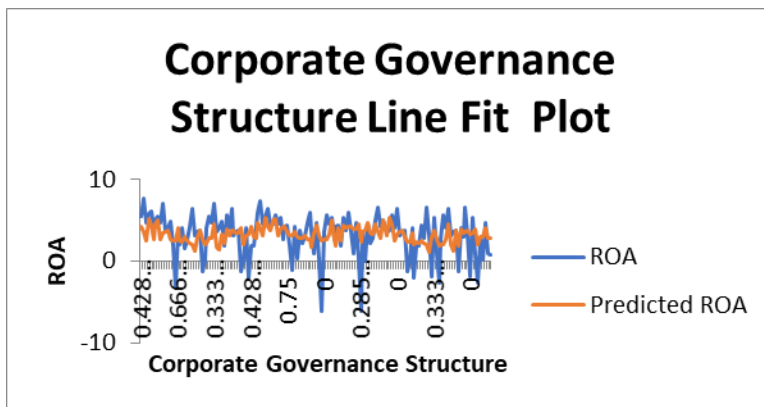
Figure 4. 1: Exchange rate Fluctuation Plot



Source: Author, (2020)

The figure 4.1 indicates that exchange rate fluctuations can be expressed in a linear format and therefore the variable expresses linearity tendency.

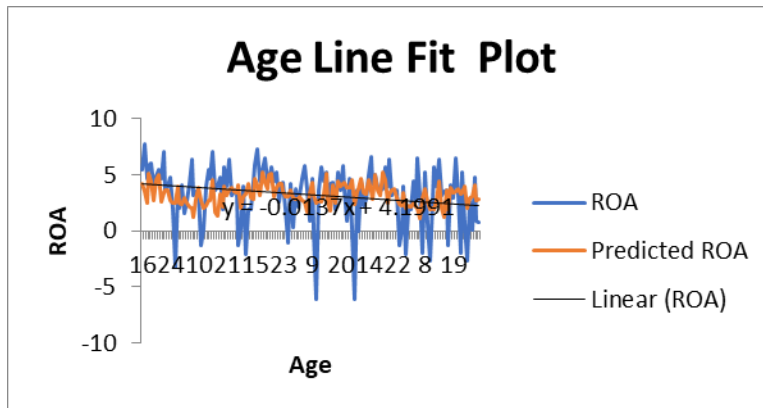
Figure 4. 2: Corporate Governance Structure Line Fit



Source: Author (2020)

Similarly the corporate governance structure variable also indicates linear tendency as shown in figure 4.2. Size and Age variables could also be expressed in linear format as indicated in figure 4.3.

Figure 4. 3: Age Line Fit Plot



Source: Author, (2020)

4.4.3 Multi collinearity Test

Multi-collinearity test is undertaken in order to ensure that the independent variables are not correlated with each other. The independent variables should remain independent and therefore not correlated with one another but should be correlated with dependent variable. This test is undertaken by the use of variation inflation factor (VIF) where a score of 10 and above indicates that there is multi collinearity. It may also be determined by the use of tolerance score where a score of 1 and above indicates that there is multi collinearity.

Table 4. 3: Multi-Collinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Exchange Rate Fluctuation	.986	1.015
	Corporate Governance Structure	.776	1.288
	Age	.806	1.241
	Size	.949	1.054

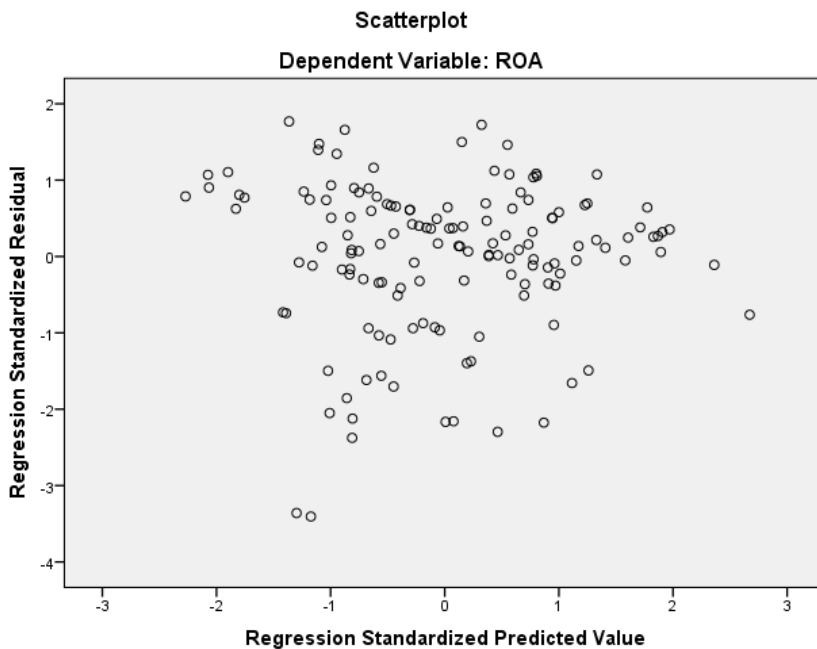
Source: Author (2020)

The table 4.3 above indicates VIF scores are below 10 while Tolerance scores are below 1 in all the variables. There is therefore no multi-collinearity problem in our data.

4.4.4 Homoscedasticity Test

This test is used to determine whether there are equal variances in data distribution for each variable. If the variances for each data point from the mean is not equal to the variances for other data points, then there is heteroscedasticity problem. This test is undertaken by the use of Levene's Homoscedasticity test is also undertaken by a scatterplot for residuals where if the residual plots tend to move away from each other it indicates absence of homoscedasticity and where they tend to move closer to one another it indicates presence of homoscedasticity.

Figure 4. 4: Scatterplot of Residuals



User: Author, (2020)

Figure 4.4 indicates that the residuals plots are moving away from each other that indicates that there is no homoscedasticity. It follows that the study has to use non-parametric test or undertake transformation of data by using standardized variable.

4.5 Correlation Analysis

A correlation analysis is undertaken to determine the correlation between the study variables. In this study the non-parametric Spearman's correlation in place of Pearson's correlation will be undertaken.

Table 4. 4: Correlations Analysis

		Correlations				
		ROA	Exchange Rate Fluctuation	Corporate Governance Structure	Age	Size
Spearman's rho	ROA	1.000				
	Exchange Rate Fluctuation	-.103	1.000			
	Corporate Governance Structure	.103	.026	1.000		
	Age	-.194*	-.109	.404**	1.000	
	Size	.255**	.036	.183*	-.013	1.000
N		144	144	144	144	144

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

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

This study is basically interested with the correlation between the dependent variable and each of the independent variables. The correlation between financial performance and exchange rate fluctuations is -0.103. This is a weak negative correlations. It is negative to indicate that increase in exchange rate fluctuation leads to decrease in financial performance. The correlation between

corporate governance structure and financial performance is also weak but positive at 0.103. Age has a weak but significant negative correlation with financial performance. Size of the bureau has a significant positive correlation of 0.255.

4.6 Regression Analysis

Regression analysis is undertaken in order to determine whether exchange rate fluctuation affects financial performance of Forex Bureaus in Nairobi County. The study identified a regression model as below:

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

The model relates financial performance to the independent variables through coefficients β_1 , to β_4 and constants β and ε

4.6.1 Regression Model Summary

The regression test undertaken produced a model summary that indicates the scores for R, R square, Adjusted R square and the standard error of the estimate, as indicated in table 4.5 below.

Table 4. 5: Regression Model Summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.362 ^a	.131	.106	2.42898

R square indicates the strength of the regression model in explaining changes of the dependent variable. The model is weak and can only explain 13.1% of the changes in financial performance of Forex Bureaus. It therefore shows that there are other factors that are not included in the

model that explains 86.9% of the changes in financial performance. R on the other hand measures the correlation between the actual values of the dependent variable and the actual values of independent variable as predicted by the model. A correlation of 36.2% is quite significant.

4.6.2 Analysis of Variance

ANOVA is used to empirically analyze the relationship between variables by the use of F test statistic. It indicates whether to reject or not reject the null hypothesis depending on whether p value is greater than 0.05 or not. A significance of greater than 0.05 indicates that we fail to reject the null hypothesis and conclude that there is no significant effect between the variables. If the p value is less than 0.05 we reject the null hypothesis and conclude that there is statistically significant effect of study variables.

Table 4. 6: ANOVA TABLE

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	123.698	4	30.925	5.242	.001 ^b
	Residual	820.090	139	5.900		
	Total	943.789	143			

Source: Author, (2020)

Table 4.6 indicates that the significance is below 0.05 and therefore the study rejected the null hypothesis. It therefore concludes that there is statistically significant effect of exchange rate fluctuations on financial performance of Forex Bureaus in Nairobi County Kenya.

4.6.3 Regression Coefficients

Table 4. 7: Regression Coefficients

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.876	1.973		.444	.658
	Exchange Rate Fluctuation	-4.110	2.687	-.122	-1.530	.128
	Corporate Governance Structure	2.195	1.023	.193	2.146	.034
	Age	-.150	.042	-.318	-3.613	.000
	Size	.380	.177	.174	2.142	.034

Source: Author, (2020)

The table 4.7 indicates that the regression model expressed as $Y = \beta + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Changes into $Y = 0.876 - 4.11 X_1 + 2.195 X_2 - 0.15 X_3 + 0.38 X_4 + 1.973$

The coefficient indicates that increasing exchange rate fluctuations by one unit while holding other factors constant, then financial performance decreases by 4.11%. If other factors are held constant and corporate governance structure is increased by a unit, then financial performance increases by 2.195%. On the other hand, increasing the experience in matter of age by one unit, financial performance decreases marginally by 0.15%. Increasing the size of a Forex Bureau increases financial performance by 0.38%.

4.7 Discussion and Interpretation of Study Findings

The sought to collect data relating to exchange rate fluctuations for three years 2017-2019. Similarly data on financial performance together with other independent variables was sought from forex bureaus for the study period. The analysis was undertaken in two parts relating to

correlation coefficient and regression analysis. Spearman's correlation was undertaken to determine the level of correlation between the independent variables and dependent variable. Exchange rate fluctuations and age had negative correlation while corporate governance structure and size had positive correlations. The major findings of the study indicated that there was significant but negative effect of exchange rate fluctuations on financial performance of forex bureaus in Nairobi.

The study further established that increasing exchange rate fluctuations by one unit while holding other factors constant, then financial performance decreased by 4.11%. If other factors are held constant and corporate governance structure increased by a unit, then financial performance increased by 2.195%. On the other hand, increasing the experience in matter of age by one unit, financial performance decreased marginally by 0.15%. Increasing the size of a Forex Bureau increases financial performance by 0.38%.

The findings are consistent as of those found by Kurihara (2013) who found that exchange rate fluctuations had negative effect on international trade. Similarly Elhussein & Osmari (2019) found that there was a weak and negative relationship of variables for Sudanese banks, after using both OLS and GLS methods of data analysis. Kairu (2016) in their study found that there was negative and weak correlation between the study variables.

The findings of this study are however contrary to the findings in a study undertaken by Brownlee et al. (2008) who found that US firms were more exposed to accounting risks than they were exposed to economic risks such as exchange rate fluctuations. Okika & Okoye (2018) found that there was insignificant effect of the study variables. Agubata & Odubuas (2018) in their study undertaken on Nigerian firms found that there was positive but insignificant effect on

financial performance. Lagat & Nyadema (2016) found positive and significant effect of the fluctuations on performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND STUDY RECOMMENDATIONS

5.1 Introduction

This chapter expresses the summarized view of the study and the findings as indicated through the analysis. It also makes the conclusion of the study after taking into account the study findings. The chapter highlights the limitations of the study and makes various recommendations in relation to the conclusions of the study. Areas recommended for future research and future studies are also highlighted.

5.2 Summary of the Study

The study set out to establish the effect of exchange rate fluctuations on financial performance of forex bureaus in Nairobi. The study therefore sought to collect data relating to exchange rate fluctuations for three years 2017-2019. Similarly data on financial performance total assets, the number of directors and female directors, and the date of licensing the bureau was collected for the same period. The analysis was undertaken in two parts relating to correlation coefficient and regression analysis. Spearman's correlation was undertaken to determine the level of correlation between the independent variables and dependent variable. Exchange rate fluctuations and age had negative correlation while corporate governance structure and size had positive correlations. The major findings of the study indicated that there was significant but negative effect of exchange rate fluctuations on financial performance of forex bureaus in Nairobi.

The specific findings indicated that exchange rate fluctuations had a negative and significant effect on financial performance of forex bureaus. This could be explained by the fact exchange

rate fluctuations increases macroeconomic risks that tend to push costs for operations in forex bureaus. The increased costs therefore resulted to reduce profit margins and therefore reduced financial performance. The corporate governance structure on the other hand had positive effect on financial performance. This means that including more female in corporate governance helped the forex bureaus to improve their financial performance. The age of the forex bureau had negative effect on financial performance. This means that the more experienced a forex bureau was, the less the financial performance. This could be explained by the fact that experienced forex bureaus may prefer to use old strategies, tactics and methods in solving current problems. Some forex bureaus would find it difficult to conform to changing trends innovations and technological capacities and therefore they may not be able to deal with emerging challenges effectively. Size of the forex bureau indicated a positive effect on financial performance. This indicates that increasing investment in forex bureaus improved financial performance.

5.3 Conclusion of the Study

The study therefore concludes that forex bureaus should be cognizant of the fact that exchange rate fluctuations adversely affect their financial performance. They should therefore devise ways to hedge against this risk and therefore prevent them from incurring huge losses. The central bank should continue undertaking measures that safeguard against high exchange rate fluctuations as it would incur heavy losses to the entire economy. The forex bureaus should ensure that they maintain a balance in their corporate governance structure by appointing more female in the directorship of these entities. This is because increasing female composition in the governance structure increases diversity that helps in improving governance. The forex bureaus should also be ready to embrace new technological advancement, embrace emerging trends in undertaking foreign exchange business as well as observe changing trends in order to maintain

competitiveness in the sector. The study also concludes that the forex bureaus should not fear in engaging in more investment projects as long as those projects promises positive NPV. This is because forex bureaus that have more investments in assets have better financial performance.

5.4 Recommendations of the Study

From the study findings and conclusions of the study, there are various recommendations that may be suggested. In the first place the forex bureaus should ensure that they hedge against future exchange rate fluctuations. This is because exchange rate fluctuations may render their investments worthless since they adversely affect financial performance. This would mean that it would be in order for forex bureaus to take insurance against exchange rate fluctuations in order to enhance their businesses.

The study also recommends that forex bureaus would improve their financial performance if they were able to appoint more female directors, this is because increase in female gender representation in the board increases board diversity that helps it to consider business operational issues from different points of view. The approach to management issues also need board diversity and therefore increase in female gender representation would help to improve the performance and the quality of decisions in the board.

The study also recommends that forex bureaus should also learn to adopt new technology and new trends of undertaking business. This is because the study found that experienced forex bureaus performed worse than new forex bureaus that embraced new technology and new emerging ways of dealing with emerging challenges. Investing in new technology therefore helps the bureau manage their entities in a more effective manner. The study also recommends that the

bureaus undertake more investments in projects with positive NPV as forex bureau improved financial performance with increased investment in assets.

5.5 Study Limitations

The study has various limitations, the first limitations is that secondary data was collected from the forex bureaus since central bank could not share financial reports for these entities. The forex bureaus are not under obligation to publish their financial statements like public and listed companies. Therefore, collecting data from most of these forex bureaus was not well perceived as most of these bureaus associated the gesture as an attempt to vet them for compliance with tax guidelines among others. The introduction letter from the university therefore was significant in arguing the case that data sought was for academic purpose and was to be treated with utmost confidentiality.

The study was also limited by the target of the study where only licensed forex bureaus operating in Nairobi County were considered by the study. This limited the number of observations that were obtained. However, the study ensured that data was obtained from most forex bureaus and a response rate of 64.9% was achieved. A target of perhaps all the forex bureaus in Kenya would have provided a higher response rate though this would have taken more time to visit all these forex bureaus.

The data was also limited by the study period chosen. Data was collected for the years 2017 to 2019. This period may not be conclusive enough and might have been biased as a result of being in only a single economic cycle where different results would be possible if another economic cycle is chosen. The policies implemented by the government in form of management of

exchange rate may change in future periods. Therefore different results may be obtained by identifying a different study period.

5.6 Suggestions for Future Research

The study recommends a future research to be undertaken which shall use exclusively primary data. This will address the inaccuracies that come with use of secondary data. The response rate on primary data would be expected to be higher. The findings of such a study should be compared to the findings of this study in order to establish common issues and points of departure.

Another study should be undertaken in future in which case it should target a wider population such as licensed forex bureaus in Kenya. However, such a study may be undertaken in another region in Kenya such as in Mombasa, Kisumu, Nakuru, Eldoret among other major areas and such findings should be compared to the findings of this study.

A future study may also focus on a larger study period that would cover different economic cycles. This would therefore imply that fluctuations in exchange rate would be significant and therefore its effect on financial performance would be clearly understood. A study covering a study period of 10-20 years would be ideal in order to ensure that such a study cover all economic cycles as well as different government regimes and different government policies in regard to management of exchange rate fluctuations by the central bank.

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APPENDICES

Appendix I: List Licensed Forex Bureaus in Nairobi County

1. Alpha Forex Bureau Ltd
2. Arcade Forex Bureau Ltd
3. Aristocrats Forex Bureau Ltd
4. Avenue Forex Bureau Ltd
5. Bamburi Forex Bureau Ltd
6. Bay Forex Bureau (Nairobi) Ltd
7. Boston Forex Bureau Ltd
8. CBD Forex Bureau Limited
9. Central Forex Bureau Ltd
10. Classic Forex Bureau Limited
11. Commercial Forex Bureau Limited
12. Conference Forex Bureau Company Limited
13. Continental Forex Bureau Ltd
14. Cosmos Forex Bureau Ltd
15. Crown Bureau De Change Ltd
16. Dalmar Exchange Bureau Ltd
17. Downtown Cambio Forex Bureau Ltd
18. Forex Bureau Afro Ltd
19. Gala Forex Bureau Ltd
20. Gateway Forex Bureau Ltd
21. Giant Forex Bureau de Change Ltd
22. Give and Take Forex Bureau Ltd
23. Glory Foreign Exchange Bureau Ltd
24. GNK Forex Bureau Ltd
25. Green Exchange Forex Bureau Ltd
26. Industrial Area Forex Bureau Ltd
27. Island Forex Bureau Ltd
28. Junction Forex Bureau Limited
29. Kenza Exchange Bureau Ltd
30. La'che Forex Bureau Ltd
31. Legacy Forex Bureau Ltd
32. Leo Forex Bureau Ltd
33. Link Forex Bureau Ltd
34. Magnum Forex Bureau De Change Ltd
35. Maritime Forex Bureau Change Ltd
36. Metropolitan Bureau De Change Ltd
37. Middletown Forex Bureau Ltd
38. Mona Bureau De Change Ltd
39. Moneypoint Forex Bureau Ltd
40. Morgan Forex Bureau De Change Ltd
41. Mustaqbal Fofrex Bureau Ltd
42. Muthaiga-ABC Forex Bureau Ltd
43. Nairobi Bureau De Change Ltd
44. Namanga Forex Bureau Ltd
45. Nawal Forex Bureau Ltd
46. Offshore Forex Bureau Limited
47. Pacific Forex Bureau Ltd
48. Peaktop Bureau De Change Ltd
49. Pearl Forex Bureau Ltd
50. Pel Forex Bureau Ltd
51. Penguin Forex Bureau Ltd
52. Pwani Forex Bureau Ltd
53. Regional Forex Bureau Limited
54. Rand Forex Bureau Limited

55. Rift Valley Forex Bureau Ltd
56. Safari Forex Bureau Ltd
57. Satelite Forex Bureau Ltd
58. Simba Forex Bureau Limited
59. Sisi Forex Bureau Limited
60. Sky Forex Bureau Limited
61. Solid Exchange Bureau Ltd
62. Southend Forex Bureau Limited
63. Sterling Forex Bureau Ltd
64. Sunny Forex Bureau Limited

65. Taipan Forex Bureau Ltd
66. Tower Forex Bureau Limited
67. Trade Bureau De Change Ltd
68. Travellers Forex Bureau Ltd
69. Travel Point Forex Bureau Limited
70. Union Forex Bureau Limited
71. Victoria Flex Bureau De Change
72. Wallstreet Bureau De Change Ltd
73. Westlands Forex Bureau Ltd
74. Yaya Centre Exchange Bureau Ltd

Appendix II: Analysis Data

ROA	Exchange Rate Fluctuation	Corporate Governance Structure	Age	Size
5.50	0.02	0.43	16	12.69
7.70	0.02	0.20	16	12.38
4.70	0.02	0.29	24	12.34
5.80	0.02	0.57	11	12.24
6.00	0.02	0.60	16	12.30
4.10	0.02	0.40	24	12.05
4.90	0.02	0.00	5	11.65
5.50	0.02	0.57	10	11.61
4.60	0.02	0.43	24	11.63
7.00	0.02	0.00	11	11.17
3.60	0.02	0.00	11	11.74
4.00	0.02	0.20	11	10.68
4.80	0.02	0.60	24	10.86
1.90	0.02	0.43	24	11.43
-3.30	0.02	0.60	24	10.52
3.80	0.02	0.67	16	10.81
2.00	0.02	0.50	24	10.87
4.10	0.02	0.33	21	10.33
1.60	0.02	0.29	16	10.15
2.70	0.02	0.20	16	9.68
4.20	0.02	0.40	21	9.49
6.33	0.02	0.00	16	9.52
3.14	0.02	0.00	21	9.31
3.55	0.02	0.50	16	8.86
3.65	0.02	0.33	10	9.89
-1.34	0.02	0.40	16	8.85
0.18	0.02	0.00	16	9.46
3.99	0.02	0.00	14	9.18
5.50	0.02	0.29	16	9.65
4.60	0.02	0.29	15	9.33
7.00	0.02	0.33	3	8.99
3.60	0.02	0.20	20	8.90
4.00	0.02	0.40	24	8.66
4.80	0.02	0.40	10	8.22
1.90	0.02	0.00	16	9.73
5.66	0.02	1.00	24	11.90
3.99	0.02	0.43	21	11.96

6.33	0.02	0.29	14	11.39
3.14	0.02	0.00	11	12.20
3.55	0.02	0.00	11	11.30
3.65	0.02	0.20	14	11.13
-1.34	0.02	0.20	11	11.74
0.18	0.02	0.29	24	10.87
3.99	0.02	0.20	16	11.08
-2.07	0.02	0.29	16	11.15
1.86	0.02	0.43	11	10.65
1.86	0.02	0.00	12	10.29
4.42	0.02	0.20	15	10.12
5.93	-0.06	0.43	15	12.84
7.26	-0.06	0.20	15	12.53
4.43	-0.06	0.33	23	12.55
5.44	-0.06	0.43	10	12.33
6.42	-0.06	0.33	15	12.31
4.31	-0.06	0.67	23	12.05
4.47	-0.06	0.00	4	11.86
5.64	-0.06	0.40	9	11.83
4.44	-0.06	0.43	23	11.83
5.22	-0.06	0.00	10	11.28
2.57	-0.06	0.00	10	12.08
4.24	-0.06	0.20	10	11.03
4.35	-0.06	0.75	23	11.03
1.90	-0.06	0.43	23	11.72
-1.09	-0.06	0.60	23	10.73
4.18	-0.06	0.29	15	10.91
0.33	-0.06	0.50	23	11.04
3.74	-0.06	0.33	20	10.44
2.08	-0.06	0.00	15	10.40
3.11	-0.06	0.20	15	9.89
4.61	-0.06	0.40	20	9.67
5.84	-0.06	0.00	15	9.76
3.60	-0.06	0.00	20	9.40
0.91	-0.06	0.43	15	9.48
4.67	-0.06	0.33	9	9.97
0.14	-0.06	0.40	15	8.97
-6.13	-0.06	0.00	15	9.59
3.57	-0.06	0.00	13	9.23
5.64	-0.06	0.00	15	9.74
4.44	-0.06	0.29	14	9.63

5.22	-0.06	0.33	2	9.25
2.57	-0.06	0.40	19	9.09
4.24	-0.06	0.40	23	8.69
4.35	-0.06	0.50	9	8.47
1.90	-0.06	0.00	15	9.62
5.27	-0.06	1.00	23	12.01
3.66	-0.06	0.60	20	11.99
5.84	-0.06	0.29	13	11.55
3.60	-0.06	0.00	10	12.26
0.91	-0.06	0.00	10	11.15
4.67	-0.06	0.20	13	11.33
0.14	-0.06	0.25	10	11.65
-6.13	-0.06	0.29	23	10.76
3.57	-0.06	0.20	15	11.09
-0.03	-0.06	0.33	15	10.93
4.57	-0.06	0.43	10	10.78
2.23	-0.06	0.00	11	10.30
2.78	-0.06	0.20	14	10.21
5.01	0.13	0.60	14	13.06
6.56	0.13	0.20	14	12.74
4.14	0.13	0.43	22	12.74
5.01	0.13	0.57	9	12.39
3.83	0.13	0.33	14	12.36
3.56	0.13	0.67	22	12.20
3.69	0.13	0.33	3	12.16
5.66	0.13	0.40	8	11.90
3.99	0.13	0.43	22	11.96
6.33	0.13	0.00	9	11.39
3.14	0.13	0.00	9	12.20
3.55	0.13	0.20	9	11.30
3.65	0.13	0.75	22	11.13
-1.34	0.13	0.40	22	11.74
0.18	0.13	0.50	22	10.87
3.99	0.13	0.43	14	11.08
-2.07	0.13	0.33	22	11.15
1.86	0.13	0.33	19	10.65
1.86	0.13	0.00	14	10.29
4.42	0.13	0.20	14	10.12
2.72	0.13	0.40	19	9.86
6.49	0.13	0.00	14	9.90
3.13	0.13	0.00	19	9.58

-1.99	0.13	0.43	14	9.73
5.26	0.13	0.33	8	10.00
0.67	0.13	0.40	14	9.05
-2.68	0.13	0.00	14	9.59
2.59	0.13	0.00	12	9.26
5.66	0.13	0.00	14	9.74
3.99	0.13	0.29	13	9.59
6.33	0.13	0.33	1	9.26
3.14	0.13	0.40	18	9.24
3.55	0.13	0.40	22	8.64
3.65	0.13	0.50	8	8.96
-1.34	0.13	0.00	14	9.56
4.09	0.13	1.00	22	12.12
2.94	0.13	0.60	19	12.17
6.49	0.13	0.29	12	11.50
3.13	0.13	0.00	9	12.34
-1.99	0.13	0.00	9	11.14
5.26	0.13	0.20	12	11.47
0.67	0.13	0.25	9	11.61
-2.68	0.13	0.40	22	10.89
2.59	0.13	0.20	14	11.24
0.06	0.13	0.29	14	10.90
4.72	0.13	0.43	9	10.94
0.87	0.13	0.00	10	10.23
0.81	0.13	0.20	13	10.35