THE RELATIONSHIP BETWEEN EXCHANGE RATE VOLATILITY AND BALANCE OF PAYMENTS IN KENYA

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DECLARATION

This research project is my original work and has not been presented for award of a degree or diploma in any other university, college and institution or for any other purpose.

Signed: ……. Date ……...

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

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DEDICATION

This research project is dedicated to my parents and my lovely friend Catherine Kerubo. You tirelessly took upon yourselves to encourage and support me spiritually, emotionally and materially. All these have been put together with your greatest support and presence.

ABSTRACT

Exchange rate policy is considered as one of the powerful tools of economic regulation. The BOP is a record of all the transactions between the residents of the economy and the rest of the world over a period of time. The objective of this study was to determine the relationship between exchange rate volatility and BOP in Kenya. The study adopted a quantitative comparative design to determine the relationship between the two variables. The study used data from financial market players and regulators, that is CBK, CMA, NSE, banks, insurance companies, mutual and pension funds and importers/exporters.

From the analysis, the exchange rate affects the prices at which a country trades with the rest of the world and is important for economic analysis and policy formulation. The study concludes that apart from the exchange rates herein discussed, there are other factors having greater influence on the levels of BOP. The study recommends that in Kenya, BOP is an important component of development because the country is a net importer. The country requires capital equipment which consumes a considerable amount of foreign currency compared to her exports. This study recommends proper policies to maintain stable exchange rates as they play an important role in determining the demand for and supply of both imports and exports. It is through exports that the country earns foreign exchange. The study further recommends that the government to promote the export which earns the country foreign exchange which can then be used to pay off imports which affects the BOP. The study also recommends that the government provides relevant structures and environment for the smooth operation of import export market in the country.

ABBREVIATIONS

ARDL: Autoregressive Distributed Lag

BOP: Balance of Payments

CMA : Capital Markets Authority

EU: European Union

KIPPRA: Kenya Institute for Public Policy Research and Analysis

KNBS: Kenya National Bureau of Statistics

NSE: Nairobi Securities Exchange

PPP: Purchasing Power Parity

SDR: Special Drawing Rate

U.S: United States

USD: United Sates Dollars

VEC: Vector Error Correction

VECM: Vector Error Correction Model

CBK: Central Bank of Kenya

KES: Kenya Shilling

SPSS: Statistical Package for the Social Sciences.

TABLES AND FIGURES

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Exchange rate policy is considered as one of the powerful tools of economic regulation and the regulation of the external sector in an economy Ndung'u, (2000). Exchange rates affect the prices at which a country trades with the rest of the world making it an integral part of an open economy analysis and policy formulation. One of the aims of the exchange rate policy is to affect the trade balance in a certain direction. Exchange rate and monetary policies are key tools in economic management and in the stabilization and adjustment process in developing countries, where low inflation and international competitiveness have become major policy targets. External trade can be stimulated through several channels including: preferences, subsidies, quotas, taxes and other limitation which could be used to push the trade balance in the desired direction Cavallo (2004). However, these tools have to be used cautiously to promote economic development of an economy. For this reason, exchange rate policy stays almost only possible tool for controlling the BOP

The balance of payments is a record of all the transactions between the residents of the economy and the rest of the world over a period of time. It records all the money flows between the economy and the rest of the world and it is made up of the current account, the capital and financial account. The current account records flows of goods, services, incomes and current transfers and it is the sum of four balances which include: the goods balance, the services balance, the income balance and net current transfers Baharumshah,

(2001). The goods balance, also known as the balance on goods, the balance on trade in goods, the balance of visible trade, the balance of merchandise trade or the visible balance, is computed by subtracting imports of goods from exports of goods. The goods balance is positive when exports of goods exceed imports of goods Arize (1994). The services balance, also known as the balance on services or the balance on trade in services, is computed by subtracting imports of services from exports of services. The services balance is positive when exports of services exceed imports of services. The income balance, also known as the balance on income, is computed by subtracting outward income remittances from inward income remittances where income refers to wages, rent, interest and profits. The income balance is positive when inward income remittances exceed outward income remittances Arize (1994). Net current transfers, also known as net unilateral transfers or net unilateral current transfers, are computed by subtracting outward current transfers from inward current transfers. Currents transfers are government contributions to and receipts from other economies and international transfers of money by private individuals and firms. In the balance of payments, money inflows are recorded as credits and are entered with a positive sign, and money outflows are recorded as debits and are entered with a negative sign. The sum of the goods balance and the services balance is commonly referred to as the balance on goods or services, the balance of trade or simply the trade balance. The sum of the services balance, the income balance and net current transfers is commonly referred to as the invisible balance Baharumshah (2001).

1.1.1 Exchange Rate Volatility

The exchange rate is the price of a unit of foreign currency in terms of the domestic currency Cavallo (2004). Exchange rate serves as the basic link between the local and the overseas market for various goods, services and financial assets. Using the exchange rate, one is able to compare prices of goods, services, and assets quoted in different currencies. Exchange rate volatility can affect actual inflation as well as expectations about future price volatility Baharumshah (2001). Changes in the exchange rate tend to directly affect domestic prices of imported goods and services. Exchange rate volatility can affect the country's external sector through its impact on foreign trade. The exchange rate affects the cost of servicing on the country's foreign debt.

Under the system of freely floating exchange rates, the value of the foreign currency in terms of the local currency, like any commodity or service being sold in the market, is determined by the forces of supply and demand Huchet-Bourdon and Korinek (2011). Under a fixed exchange rate system, a par value rate is set between the local currency and the foreign currency by the central bank. The par value may be adjusted from time to time Arize (1994).

1.1.2 Relationship between Balance of Payments and Exchange Rates

A balance of payments surplus occurs when money inflows exceed money outflows. In other words, the total currency flow is positive. When this happens, the demand for domestic currency will exceed the supply which will lead to an upward pressure on the exchange rate, Arize (1994). Under the flexible exchange rate system, the resultant

appreciation of domestic currency will lead to a decrease in net exports which will correct the balance of payments surplus. Since the total currency flow is equal to zero and these is no change in the reserve assets held by the central bank, the sum of the current account balance, the capital and financial account balance and net errors and omissions is equal to zero.

Theoretically, a current account deficit should cause the value of the local currency to fall. In this case, the value of imports into the importing country is higher than the value of exports sold to foreigners Baharumshah (2001). Hence, the demand for foreign currencies to buy these imports is higher than the demand for the local currency to by our exports. Simple supply and demand analysis, therefore, suggests that the value of the local currency should fall. For a current account surplus, the value of the local currency to goes up. In this case, the value of imports into the importing country is lower than the value of exports sold to foreigners. Hence, the demand for foreign currencies to buy these imports is lower than the demand for the local currency to by exports Cavallo (2004). In the case of a deficit, the subsequent lower value of the local currency makes export relatively cheaper and imports relatively more expensive. The value of exports sold should rise and the value of imports bought should fall. The deficit should be eliminated automatically Cavallo (2004).

1.1.3 Exchange Rate Regimes in Kenya

Until 1974, the exchange rate for the Kenya shilling was pegged to the US dollar, but after discrete devaluations the peg was changed to the special drawing rate (sDR). Between 1974 and 1981 the volatility of the nominal exchange rate relative to the dollar

was erratic. In general the rate depreciated by about 14% and this depreciation accelerated in 1981/82 with further devaluations. The exchange rate regime was changed to a crawling peg in real terms at the end of 1982. This regime was in place until 1990; a dual exchange rate system was then adopted that lasted until October 1993, when, after further devaluations, the official exchange rate was abolished. That is, the official exchange rate was merged with the market rate and the shilling was allowed to float Ndung'u (2000).

Exchange controls were maintained until the 1990s, initially in response to the balance of payments crisis in 1971 /72. In order to conserve foreign exchange and control pressures on the balance of payments, the government chose controls instead of liberalization. The controls were an easy response to contain balance of payments and inflationary pressures, but they created major distortions in the economy that were not evident until the early 1980s. The major instruments of monetary policy in Kenya have been open market operations, cash and liquidity ratios, credit ceilings, and reserve requirements. In the 1990s, the authorities relied more on the indirect instruments, the most active being open market operations Ndung'u (2000).

The recurring policy objectives were to maintain an exchange rate that would ensure international competitiveness while at the same time keeping the domestic rate of inflation at low levels, conducting a strict monetary stance and maintaining positive real interest rates. The floating exchange rate system adopted in the 1990s was expected to have several advantages for Kenya. First, it would allow a more continuous adjustment of the exchange rate to shifts in the demand for and supply of foreign exchange Ndung'u (2000). Second, it would equilibrate the demand for and supply of foreign exchange by

changing the nominal exchange rate rather than the levels of reserves. Third, it would give Kenya the freedom to pursue its monetary policy without having to be concerned about balance of payments effects. Thus the country would have an independent monetary policy, but one that was consistent with the exchange rate volatility. Under the floating system external imbalances would be reflected in exchange rate volatility rather than reserve volatility Ndung'u (2000).

1.1.4 Balance of Payments in Kenya

Balance of payments deficits have been a common phenomenon in the Kenyan economy from the 1960s. The government has over the years enacted various policy measures aimed at remedying the situation; however the balance of payments situation does not seem to have improved despite these policy measures Mambo (2012). Kenya's overall balance of payments position improved by Ksh.26.8 billion, from a surplus of Ksh.11.2 billion in the first quarter of 2011, to a surplus of Ksh 37.0 million in first quarter of 2012 KNBS (2012). The volatility followed growth in the capital and financial account, from a surplus of Ksh 57.8 billion in the first quarter of 2011, to a surplus of Ksh 65.7 billion in the first quarter of 2012. The deficit in the current account widened from a deficit of Ksh 76.4 billion in the first quarter of 2011 to a deficit Ksh 81.1 billion in the first quarter of 2012. The deterioration in the current account was mainly as a result of a 20.8 per cent widening of the merchandise account deficit.

Kenya's overall balance of payments position declined by US$ 220.7 million from a surplus of US$ 360 million in May 2011 to a surplus of US$ 139 million in May 2012 Stratlink, (2012). The deterioration was largely due to narrowing of the current account.

The current account deficit nearly doubled to 13.1 % of GDP. Imports grew by almost 20 %, while exports only increased by 10 %, thus representing a net export of -10%. Import growth was mainly driven by oil imports, which accounted for 27.6% of the total import bill in 2011, jumping from US$ 2.7 billion (8.9% of GDP) in 2010, to USD 4.1 billion (11.6% of GDP) in 2011 Stratlink (2012).

Kenya's competitiveness in some sectors declined as domestic prices, including food, energy and transport, remain elevated and this put pressure on exporters' margins as well as on overall competitiveness. As a result, non-tradable sectors, especially services and construction, were driving growth while the share of tradable sectors, especially manufacturing, was declining Stratlink (2012). Kenya's growth is mainly driven by consumption. Domestic savings have been declining and the excess of investments over savings is increasing the current account deficit.

1.2 Statement of the Problem

Yuen-Ling, Wai-Mun and Geoi-Mei (2008) examined real exchange rate and trade balance relationship through an empirical study on Malaysia. This study showed that exchange rate depreciation in Serbia improved trade balance in the long run, while giving rise to a J-curve effect in the short run. Sekantsi (2009) used ARCH and GARCH models to examine the effect of real exchange rate volatility on South African exports to the U.S. for the period 1990:1- 2000:4.The findings are that Rand's real exchange rate variability exerts a significant and negative impact of exports both in the long and short-run. Mungami (2012) examined the effects of exchange rate liberalization on the balance of payments of a developing country using a case of Kenya. He noted that exchange rate is

one of the macroeconomic fundamentals that play a key role in ensuring that the economy of a country remains competitive in the international market.

Several scholars and researcher have reviewed the subject of exchange rate volatility and the levels of macroeconomics in Kenya. Ambunya (2012) studied the relationship between exchange rate movement and stock market returns volatility at the Nairobi Securities Exchange and concluded that that there is a strong relationship between exchange rate movement and stock market returns volatility. Mwanza (2012) reviewed the relationship between monetary policy and the performance of the NSE and established that the monetary policies including exchange rates greatly affected the stock returns at the NSE following the high level of foreign investors and the high fluctuations in the change rates.

Mungami (2012) examined the effects of exchange rate liberalization on the balance of payments of a developing country using a case of Kenya. Mungami (2012) recommends development of forward, futures and options markets to enable the companies to certainly forecast the expected exchange rates in the future hence facilitate planning. From the above discussion, it is evident that limited research has been conducted on the relationship between exchange rate movement and balance of payments in Kenya. This study therefore aimed at filling this research gap by answering one question: What is the relationship between exchange rate volatility and balance of payments in Kenya?

1.3 Objectives of the Study

The objective of this study was to determine the relationship between exchange rate volatility and balance of payments in Kenya

1.4 Significance of the Study

The study would be important to various stakeholders, chief among them being: To contribute to the existing body of knowledge on the relationship between exchange rate volatility and balance of payments in Kenya and thus serve as a source of reference for further research. The recommendations for future research would also help researchers to carry out more studies to extend the understanding of how exchange rate volatility influences the balance of payments in Kenya.

The study would help government policy makers in understanding the behavior of the exchange rate volatility on balance of payments and the entire economic development of the country. Through the findings of this study, the policy makers would be able to device what strategies need to be done to ensure stable exchange rates and balance of payments.

The study would help commercial banks to hedge foreign exchange risk. Foreign exchange risk arises when a bank holds assets or liabilities in foreign currencies and impacts the earnings and capital of bank due to the fluctuations in the exchange rates. In free market economy, no one can predict what the exchange rate would be in the next period; it can move in either upward or downward direction regardless of what the estimates and predictions were. This uncertain volatility poses a threat to the earnings and capital of bank. Foreign exchange risk of a commercial bank comes from its very trade and non trade- services.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on the economic and financial impact of the relationship between exchange rate volatility and BOP. From this review, broad categories will be derived which will help to identify the economic and financial impact of the relation between the two variables in Kenya. As the economic interdependence of countries around the world increases, it becomes increasingly important to understand the nature and significance of their international exchanges and volatility. The balance of payments accounts provide a detailed record of any economy's international economic transactions, and these accounts are central to understanding of the degree of economy's integration with the rest of the world. Specifically, the chapter addresses the theoretical framework guiding the study, reviews empirical studies, concept of balance of payments, exchange rate and finally gives a conclusion.

2.2 Theoretical Review

This section reviews theories that will guide the study. It consists of the theories governing international trade and balance of payments. In particular, the section looks at the Purchasing Power Parity (PPP) which involves a relationship between a country's foreign exchange rate and the level or volatility of its national price level relative to that of a foreign country; Adam Smith's theory of absolute advantage which holds that for two nations to trade with each other voluntarily, both nations must gain; and the

Comparative Advantage Theory which show that the potential gains from trade are far greater than Smith envisioned in the concept of absolute advantage.

2.2.1 Purchasing Power Parity (PPP)

Purchasing power parity (PPP) involves a relationship between a country's foreign exchange rate and the level or volatility of its national price level relative to that of a foreign country. Absolute PPP states that the purchasing power of a unit of domestic currency is exactly the same in the foreign economy, once it is converted into foreign currency at the absolute PPP exchange rate Coakley, Flood, Fuertes, and Taylor, (2005). Purchasing power parity (PPP) is a disarmingly simple theory that holds that the nominal exchange rate between two currencies should be equal to the ratio of aggregate price levels between the two countries, so that a unit of currency of one country will have the same purchasing power in a foreign country Taylor and Taylor (2004). The general idea behind purchasing power parity is that a unit of currency should be able to buy the same basket of goods in one country as the equivalent amount of foreign currency, at the going exchange rate, can buy in a foreign country, so that there is parity in the purchasing power of the unit of currency across the two economies. One very simple way of gauging whether there may be discrepancies from PPP is to compare the prices of similar or identical goods from the basket in the two countries.

Relative PPP implies that changes in national price levels are set by commensurate changes in the nominal exchange rates between the relevant currencies. The voluminous research literature on PPP published in recent decades has been driven by econometric problems relating to univariate and panel unit root tests of necessary conditions for long-

run absolute PPP to hold, in particular whether the real exchange rate has any tendency to settle down to a long-run equilibrium level Coakley, Flood, Fuertes, and Taylor (2005). These include issues such as low power, possible structural breaks, the mixture of stationary and non-stationary error terms in the relevant regressions, and neglected cross-sectional dependence when real exchange rate panel data are used Taylor and Taylor (2004).

2.2.2 Adam Smith's Theory of Absolute Advantage

Smith (1776) is recognized as the founder of modern economics and as one of the first and most famous thinkers who argued in favour of free international trade. Smith (1776) held that for two nations to trade with each other voluntarily, both nations must gain. If one nation gained nothing or lost, it would refuse it. According to Smith, mutually beneficial trade takes place based on absolute advantage. When one nation is more efficient or has an absolute advantage than the other nation is producing a second commodity, then both nations gain by each specializing in the production of the commodity of its absolute advantage and exchanging part of its output with the other nation for the commodity of its absolute disadvantage.

Through free trade, resources are mostly efficiently utilized and output of both commodities will rise. Smith thus argued that all nations would gain from free trade and strongly advocated a policy of laissez-faire. Under free trade, world resources would be utilized mostly efficiently and world welfare would be maximized. This theory promoted international trade which leads to exchanging goods and services which in turn leads the usage of exchange rates to convert one currency into another. This theory is important to

this study because it deals with international trade, exchange rates and balance of payments for the economies involved.

2.2.3 The Comparative Advantage Theory

The trade theory was the first to indicate the importance of specialization in production and division of labor based on the idea of theory of absolute advantage. Smith (1776) in his famous book: "The Wealth of Nations'' published the ideas about absolute advantage were crucial for the early development of classical thought for international trade. It is generally agreed that David Ricardo is the creator of the classical theory of international trade, even though many concrete ideas about trade existed before his principles.

Ricardo showed that the potential gains from trade are far greater than Smith envisioned in the concept of absolute advantage. In this theory the crucial variable used to explain international trade patterns is technology. The theory holds that a difference in comparative costs of production is the necessary condition for the existence of international trade. But this difference reflects a difference in techniques of production. According to this theory, technological differences between countries determine international division of labor and consumption and trade patterns. It holds that trade is beneficial to all participating countries. This conclusion is against the viewpoint about trade held by the doctrine of mercantilism where it is argued that the regulation and planning of economic activity are efficient means of fostering the goals of nation. David Ricardo theory demonstrates that countries can gain from trade even if one of them is less productive then another to all goods that it produce

2.3 Balance of Payments

The balance of payments (BOP) is a bookkeeping system for recording all payments that have a direct bearing on the movement of funds between a nation (private sector and government) and foreign countries Danby (2009). All transactions involving payments from foreigners to a country are entered in the “Receipts” column with a plus sign (+) to reflect that they are credits; that is, they result in a flow of funds to a country. Receipts include foreign purchases of local products known as exports, purchases from foreign tourists (services), income earned from local country investment abroad which constitutes investment income, foreign gifts and pensions paid to local citizens commonly called unilateral transfers, and foreign payments for local assets (capital inflows).

All payments to foreigners are entered in the “Payments” column with a minus sign (-) to reflect that they are debits because they result in flows of funds to other countries. Payments include Kenyan purchases of foreign products such as French wine and Japanese cars (imports), Kenyan travel abroad (services), income earned by foreigners from investments in Kenya (investment income), foreign aid and gifts and pensions paid to foreigners (unilateral transfers), and Kenyan payments for foreign assets (capital outflows) Tsoukalas (2003).

Balance of payments (BOP) accounts are an accounting record of all monetary transactions between a country and the rest of the world. These transactions include payments for the country's exports and imports of goods, services, financial capital, and financial transfers. The BOP accounts summarize international transactions for a specific period, usually a year, and are prepared in a single currency, typically the domestic

currency for the country concerned. Sources of funds for a nation, such as exports or the receipts of loans and investments, are recorded as positive or surplus items. Uses of funds, such as for imports or to invest in foreign countries, are recorded as negative or deficit items Tsoukalas (2003).

When all components of the BOP accounts are included they must sum to zero with no overall surplus or deficit. For example, if a country is importing more than it exports, its trade balance will be in deficit, but the shortfall will have to be counterbalanced in other ways such as by funds earned from its foreign investments, by running down central bank reserves or by receiving loans from other countries Aziza (2010).

While the overall BOP accounts will always balance when all types of payments are included, imbalances are possible on individual elements of the BOP, such as the current account, the capital account excluding the central bank's reserve account, or the sum of the two. Imbalances in the latter sum can result in surplus countries accumulating wealth, while deficit nations become increasingly indebted. The term "balance of payments" often refers to this sum: a country's balance of payments is said to be in surplus (equivalently, the balance of payments is positive) by a certain amount if sources of funds (such as export goods sold and bonds sold) exceed uses of funds (such as paying for imported goods and paying for foreign bonds purchased) by that amount. There is said to be a balance of payments deficit (the balance of payments is said to be negative) if the former are less than the latter Aziza (2010).

2.4 Exchange Rate Volatility

Exchange rates, like any other commodity, are based on supply and demand for particular forms of currency. Domestic currency supply changes as a result of a country's fiscal and monetary policies. Demand for currency can be influenced by a large number of factors, including interest rates, inflation, and views on impending government regulation. The continuing increases in the world trade and capital volatility have made the exchange rates as one of the main determinants of business profitability and the country's balance of payments, Kim (2003).

Exchange rate changes directly influence the international competitiveness of firms, given their impact on input and output price Joseph (2002). Basically, foreign exchange rate volatility influences the value of the global competitiveness of a nation since the future cash flows of the national change with the fluctuations in the foreign exchange rates. When the Exchange rate appreciates, since exporters will lose their competitiveness in international market, the sales and profits of exporters will shrink hence worsening the balance of payments. On the other hand, importers will increase their competitiveness in domestic markets Nieh and Nieh (2006) which leads to too many imports that worsen the country's balance of payments. The depreciation of exchange rate will make adverse effects on exporters and importers. Exporters will have advantage against other countries' exporters and increase their sales Yau and Nieh (2006). That is, currency appreciation has both a negative and a positive effect on the country's BOP Ma and Kao, (1990).

2.5 Review of Empirical Studies

Several empirical studies have been conducted on the subject of exchange rate volatility and international trade. Huchet-Bourdon and Korinek (2011) studied the extent to which exchange rates and their volatility affected trade flows in China, the Euro area and the United States in two broadly defined sectors, agriculture on the one hand and manufacturing and mining on the other. This study found out that exchange volatility impacted trade flows only slightly. Exchange rate levels, on the other hand, affected trade in both agriculture and manufacturing and mining sectors but did not explain in their entirety the trade imbalances in the three countries examined.

Yuen-Ling, Wai-Mun and Geoi-Mei (2008) examined real exchange rate and trade balance relationship through an empirical study on Malaysia. They attempted to identify the relationship between the real exchange rate and trade balance in Malaysia from year 1955 to 2006. This study used Unit Root Tests, Cointegartion techniques, Engle-Granger test, Vector Error Correction Model (VECM), and impulse response analyses. The main findings of this paper were that long run relationship existed between trade balance and exchange rate. Other important variables that determined trade balance such as domestic income showed a long run positive relationship between trade balances, and foreign income showed a long run negative relationship. Secondly, the real exchange rate was an important variable to the trade balance, and devaluation improved trade balance in the long run, thus consistent with Marshall-Lerner condition. Thirdly, the results indicated no J-curve effect in Malaysia case.

Gligorić (2010) examined exchange rate and trade balance checking out for the j-curve effect in Serbia. This study showed that exchange rate depreciation in Serbia improved trade balance in the long run, while giving rise to a J-curve effect in the short run. These results added to the already existent empirical evidence for a diverse set of other economies. Both Johansen's and autoregressive distributed lag approach were respectively used giving similar long-run estimates showing that real depreciation improved trade balance. Corresponding error correction models as well as impulse response functions indicated that, following currency depreciation, trade balance first deteriorates before it later improves, thereby exhibiting the J-curve pattern. These results were relevant for policy making both in Serbia and in a number of other emerging Europe countries as they faced major current account adjustments after BOP crises of 2009.

Nuroglu and Kunst (2012) examined the effects of exchange rate volatility on international trade flows using the evidence from panel data analysis and fuzzy approach. The study used the gravity model to analyze bilateral trade flows among EU-15 countries. Firstly, statistical methods were used to identify the determinants of international trade flows and to quantify their effects. The interest focused especially on the effects of exchange rate volatility on bilateral trade flows. After finding the individual effect of exchange rates on trade flows, Nuroglu and Kunst (2012) used the fuzzy approach to see the effect of exchange rate volatility on trade flows between EU-15 countries.

Sekantsi (2009) used ARCH and GARCH models to examine the effect of real exchange rate volatility on South African exports to the U.S. for the period 1990:1- 2000. The findings are that Rand's real exchange rate variability exerts a significant and negative impact of exports both in the long and short-run. Another study by Todani and Munyama

(2005) employed ARDL bounds testing procedure on quarterly data for the period 1984-2004 to examine the impact of exchange rate variability on aggregate South African exports to the rest of the world as well as on goods, services and gold exports. Todani and Munyama (2005) employed the moving average standard deviation and GARCH (1, 1) as measures of variability. The results showed that depending on the measure of variability employed either there existed no statistically significant relationship between South African exports and exchange rate volatility or when such significant relationship exists it is positive.

Mungami (2012) examined the effects of exchange rate liberalization on the BOP of a developing country using a case of Kenya. He noted that exchange rate is one of the macroeconomic fundamentals that play a key role in ensuring that the economy of a country remains competitive in the international market. It plays an important role of efficiently allocating and use of economic resources hence ensuring a country remains competitive externally. The exchange rates are important in improvement of the balance of payments. The results showed that the exchange rate liberalization had improved the overall BOP but it had not improved the current account or reduced the balance of trade deficit. The study found out that the exchange rate liberalization had a negative effect on the companies export sales due to wide fluctuations that made planning hard and losses that were incurred as a result of fluctuation. Most companies did not employ any hedging mechanism hence bore the brunt of the upswing and downswing of the shilling. The firms factored in their prices the adverse effect of the exchange rate fluctuation. The study recommended that the Central Bank of Kenya use target zones to reduce wide fluctuation of the shilling against other currencies.

Ambunya (2012) examined the relationship between exchange rate movement and stock market returns volatility at the Nairobi Securities Exchange in Kenya. The study concludes that there is a strong relationship between exchange rate movement and stock market returns volatility. This was especially carried through the information content of exchange rate movement on the security's business. Further, the study concluded that exchange rate volatility also affected the stock market performance greatly through its spiral effects. Through macroeconomic variables, exchange rate volatility indicates the state of the economy hence the likely future state of the economy. These variables would include things like the interest rate and the money supply in the economy which has great impact on the activity level of the security's performance.

Mambo (2012) did an analysis of the relevance of the monetary approach to Kenya's balance of payments for the period (1969-2002). This study examines the relevance of the monetary approach to the balance of payments in Kenya using annual data covering the period 1969 to 2002. The study used the monetary approach which is one of five approaches to the balance of payments and holds that the balance of payments is essentially a monetary phenomenon. The others are the Keynesian, elasticity, absorption and the portfolio balance approaches. The data was tested for unit root tests and co integration, among the variables established and thus a vector error correction (VEC) model was estimated. The results of the VEC estimation indicated that BOP is significantly affected by its own second and third lags, the first and second lags of exchange rate and the first lag of prices. Granger causality tests showed no causality between balance of payments and the other five variables. However, impulse response analysis indicated five years as the period within which balance of payments responded

to innovations. Domestic credit and interest rate were the two important variables affecting Kenya's balance of payments. Exchange rate and prices were also significant. The study found the monetary approach relevant in managing Kenya's BOP

Kipngetich (2002) looked at the relationship between fiscal deficits and the current account balance in Kenya between the years 1964-2000. This study examined the effect of budget deficit on the current account balance in Kenya between, covering the period from 1964 to 2000. This was motivated by the fact that the magnitude of government had increased with amazing rapidity since the early 1980s. Simultaneously, the current account balance recorded deficits, to the extent that there was a high correspondence between these variables. A macro econometric model that captures the salient interrelationships between government budgetary developments, credit creation and the current account balance was constructed. Quantitative evidence suggested that budget policy affected the current account balance in Kenya. In particular, simulation experiments showed that budget deficit, engendered by increased expenditure, led to a deterioration of the current account, whether it was financed through bank credit or external borrowing. It was argued that budget discipline was necessary for the achievement of external balance in Kenya.

Kariuki (2008) studied the determinants of current account balance in Kenya using the inter-temporal approach. Kariuki noted that large and persistent current account deficits constitute a cause for concern, particularly when sustainability issues are raised and thus the economic prospects of a country are put at risk. This study considered the major determinants of the current account in Kenya. It examined the long-run and short-run impact of the exchange rate and private and public savings on the current account

balance. The bounds testing autoregressive distributed lag (ARDL) approach to co-integration was used and the results indicated that there was strong support for co-integration relationship between current account balance and the selected variables. The exchange rate had the strongest impact on the current account, but the signs varied in the long-run and in the short-run.

2.6 Conclusion

Several studies have been conducted on the relationship between balance of payments and exchange rates in different countries. Huchet-Bourdon and Korinek (2011) studied the extent to which exchange rates and their volatility affected trade flows in China, the Euro area and the United States in two broadly defined sectors, agriculture on the one hand and manufacturing and mining on the other. Nuroglu and Kunst (2012) examined the effects of exchange rate volatility on international trade flows using the evidence from panel data analysis and fuzzy approach. The study used the gravity model to analyze bilateral trade flows among EU-15 countries. Munyama (2005) employed the moving average standard deviation and GARCH (1, 1) as measures of variability.

Mungami (2012) examined the effects of exchange rate liberalization on the BOP of a developing country using a case of Kenya. Ambunya (2012) examined the relationship between exchange rate movement and stock market returns volatility at the NSE in Kenya. Mambo (2012) did an analysis of the relevance of the monetary approach to Kenya's balance of payments for the period (1969-2002). This study examined the relevance of the monetary approach to the BOP in Kenya using annual data covering the period 1969 to 2002. Kipngetich (2002) looked at the relationship between fiscal deficits

and the current account balance in Kenya between the years 1964-2000. This study examined the effect of budget deficit on the current account balance in Kenya covering the period from 1964 to 2000. Kariuki (2008) studied the determinants of current account balance in Kenya using the inter-temporal approach. From the review of empirical studies and wide reading, there has been no study dealing with the relationship between exchange rate volatility and BOP in Kenya, and hence this study therefore seeks to fill this research by establishing existing relationship if any.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out various stages and phases that were followed in completing this study. The chapter is concerned with how the research was executed and how respondents were approached, as well as when, where and how the research was completed. The following subsections are included; research design, target population, data collection instruments, data collection procedures and data analysis.

3.2 Research Design

The study adopted a quantitative comparative design which is all about quantifying relationships between variables. The aim of quantitative research was to determine the relationship between an independent and a dependent variables outcome in a population. In particular, the study used descriptive research design because it sought to establish how exchange rate volatilities related with BOP in Kenya.

3.3 Population and Sampling Design

According to Ngechu (2004), a study population is a well defined or specified set of people, group of things, households, firms, services, elements or events being investigated. Thus the population should fit a certain specification which the researcher is studying and should be homogenous. The population of interest in this study comprised of the entire financial market players including CBK, CMA, NSE, commercial banks, insurance companies, mutual and pension funds, importers/exporters in Kenya. The study

has used secondary data readily available and certified by the CBK accumulated over the period of this study.

3.4 Data Collection Methods

The study used secondary data collected from the CBK, KNBS, KIPPRA, Ministry of Finance, public libraries, national budget and other government records. The use of secondary data is justified on the basis that these sources have information that was very vital to this study and had been vetted and accepted by the general public.

3.5 Data Analysis Methods

The researcher collected monthly data on the exchange rates and BOP for the period between the years 2001 and 2012. The researcher then conducted a regression analysis using the data collected to establish the extent of the relationship between exchange rate volatility and BOP.

3.5.1 Conceptual model

The relationship among the variables was estimated using a function:

BOP = f (ER) …….. (1)

BOP = Balance of Payments

ER= Exchange Rate Volatility

3.5.2 Empirical Model

The study used a regression model to predict the extent to which the identified independent variables affected the dependent variable. In this case, SPSS version 18 was used in regression analysis and computation of coefficients. The regression line is represented by the following equation:

$Y= \beta 0+\beta 1X1+Є$

Where Y=Balance of Payments (in USD currency)

X1= Exchange Rate Volatility (in Ksh currency)

$\beta 0$= Constant

$\beta 1$= Rate of change in exchange rate volatility as a result of a unit change in the BOP.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

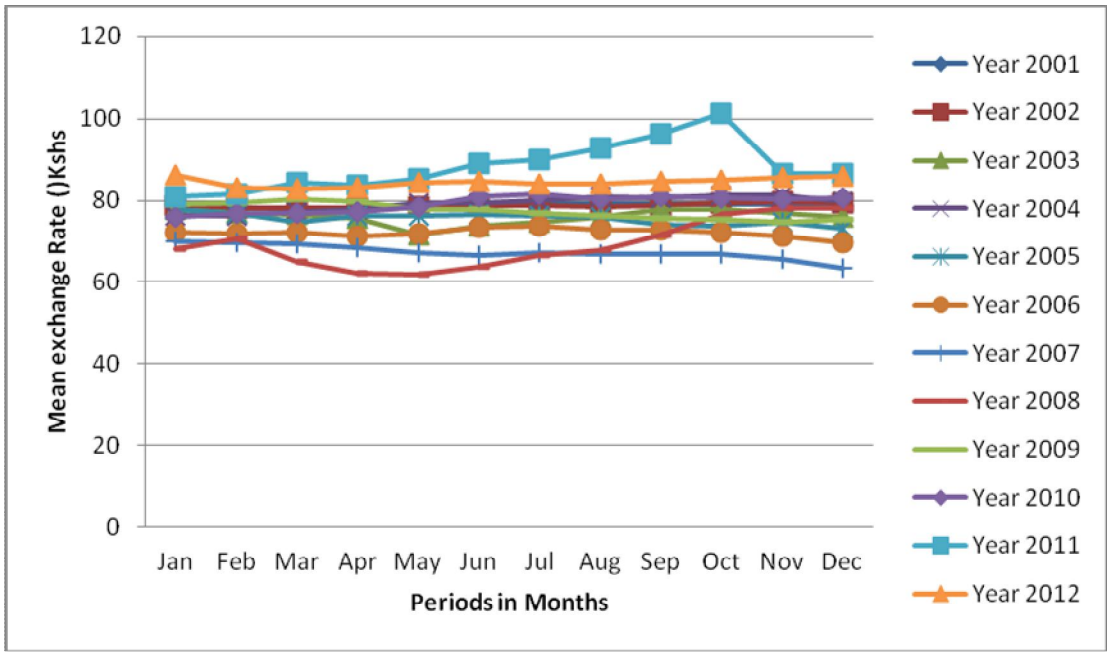
4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research objective and research methodology. The study findings present the relationship between exchange rate volatility and balance of payments in Kenya. The data was gathered exclusively from secondary source which is the Central Bank of Kenya and the Kenya National Bureau of Statistics.

4.2 Exchange Rate Volatility

The study sought to establish the trend in the volatility of exchange rates in Kenya with reference to the mostly used foreign currency which was United States Dollar. The findings were as shown in the figure 4.1 below using appendix I data.

Figure 4.1Exchange Rate Volatility Analysis



From the findings presented above, during the year 2001, Kenya shilling exchanged at a stable rate to the United States Dollar of averagely Ksh.78 with a few cents on top or below. The highest for the year was Ksh.79.02 in July while the lowest was Ksh.77.50 in April. On average, the exchange rates remained stable during the year 2001 indicating little variability.

In the year 2003, the exchange rates against the USD started at Ksh.77.72 in January then the local currency appreciated to Ksh.71.61 by May before depreciating to an annual low of Ksh.77.90 in September. However, the Kenya shilling gained ground slightly to close the year at Ksh.76.02. For the year 2004, the exchange rate against USD opened at Ksh. 76.29 then started depreciating to an annual low of Ksh. 81.20 for the months of October and November before appreciating slighly to close the year at Ksh. 79.77. In general there was minimal variability in exchange rate.

For the year 2005, the exchange rates started at Ksh.77.93 before the local currency appreciated to a high of Ksh.74.80 in March after which it again started depreciating to reach Ksh.76.23 in July the same year. It then appreciated slightly for the remainder of the year to close at Ksh.73.11. For the year 2006, the exchange rate opened at Ksh.72.21 then fluctuated slightly throughout the year to close at an appreciated level of Ksh.69.6 in December. During this year, it can be seen that there was variability more than the previous two years.

For the year 2007, the exchange rate opened at Ksh.69.88 then remained stable for two months with negligible changes before the local currency appreciated to exchange at an annual high of Ksh.63.30 in December. This year saw great appreciations in the local currency as it opened the year at Ksh.69.88 and then closed at Ksh.63.30.

The year 2008 started at Ksh.68.08 in January which then depreciated to exchange at Ksh.70.62 in February before appreciating from March to an annual high of Ksh.61.90 in May. However, for the remainder of the year, the local currency depreciated continuously to close the year at Ksh.78.04. In year 2009, the exchange rate opened at Ksh.78.95 then depreciated slightly for February and March to record Ksh.79.53 and Ksh.80.26 consecutively. Starting April till the end of the year, Kenya Shilling appriciated marginally top close the year at Ksh.75.43.

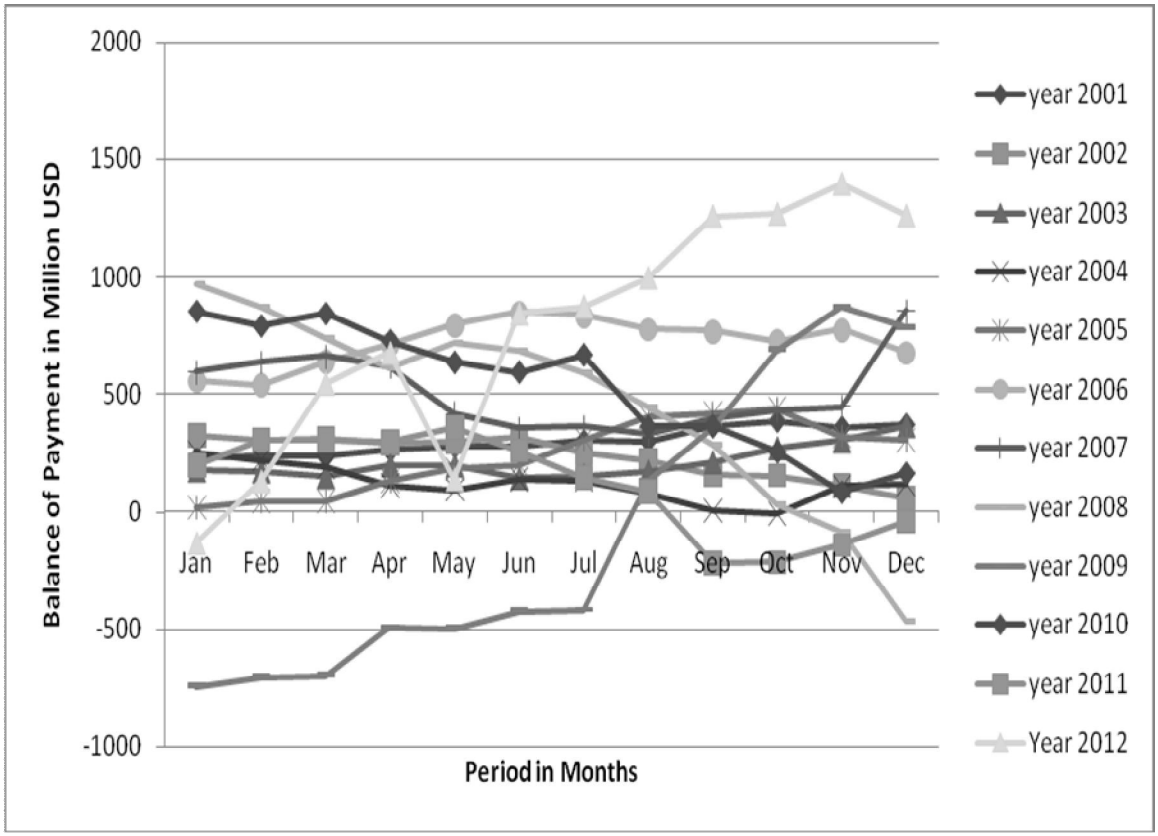
In year 2010, the exchange rate opened at Ksh.75.79 then depreciated to a high of Ksh.81.43 in July and closed the year at Ksh.80.57. The year 2011 started at Ksh.81.03, with high depreciation recoreded over this year as Kenya shilling hit an all time low of Ksh.101.27 in October before the government intervened to bring the rate back to

Ksh.86.66. The year 2012 opened at Ksh.86.34 in January, before the local currency appreciated to Ksh.82.90 in March. It then depreciated in the month of May and June to reach Ksh.84.38 and Ksh.84.79 respectively before strenthening in July and August to reach Ksh.84.1 and Ksh.84.04 respectively. It then depreciated again to reach Ksh.85.99 in December 2012. These findings are well illustrated in the appendix I.

4.3 Balance of Payments

The study also sought to establish the distribution of the overall balance of paymenst for the study period. The findings were as presented below in millions of US dollars in Figure 4.2 and appendix II:

Figure 4.2: Balance of Payments Analysis



From the findings of the study shown in Figure 4.2 above and appendix II, the balance of payments started at a positive USD.231 million dollars in the year 2001 after which it grew steadily month after month to reach an annual high of USD.372 million by December. In the year 2002, the BOP started on a low of USD.323 million then reduced to USD.302 million after which it increased to USD.313 million in March before dropping to USD.294 million. The fluactuations continued through out the year to close at USD.59 million in December.

In the year 2003, BOP opened at USD.178 million then reduced to USD.174 million and USD.149 million for the months of February and March respectively. For the months of April and May, BOP increased to USD.200 million each. In June, BOP went down to USD.146 million then started increasing continuously for the remainder of the year to close at USD.365 million by December.

During the year 2004, BOP started at a high of USD.250 million then dropped continuously for the first five months of the year to a low of USD 97 million. In June, the BOP increased slightly to USD.135 million before dropping significantly by August, September and October to USD.73 million, USD.3 million, and USD -10 million respectively. It however increased for the last two months of the year to close at USD.107 million and USD.117 million for the months of November and December respectively.

In the year 2005, BOP started on a low of USD 18.million then increased to USD.46 million in February. Starting the month of March to the end of the year, BOP increased continuously for the remainder of the year from USD.131 million in April to a high of

USD.441 million by October before reducing to USD.322 million and USD.306 million for the months of November and December.

For the year 2006, BOP started at USD.557 million then dropped slightly in the month of February to USD.539 million. Starting March, BOP started increasing at an increasing rate to USD.834 million by July. It slight dropped to USD.777 million in August then fluactuated slightly downwards to close the year at USD 675 million

For the year 2007, BOP started at USD.593 million which grew steadily for two months consectively to USD.661 million by March then USD.617 million in April. Starting May, it dropped to USD.419 million then continuously dropped to a low of USD.332 million in August, after which it started to increase to reach an annual high by December at USD 854 milllion.

In the year 2008, BOP started at USD.973 million after which it reduced subsequently for the first four .months to USD.614 million in April. It shot up in the month of May to USD.716 million after which it again started reducing continuously for the remainder of the year to close at USD -469 million. The negative trend was maintained in the year 2009 starting at USD -743 million in January then increased continuously throughout the first eleven months to USD 868 million. It then decreased slightly to USD 781 million in December.

In the year 2010, BOP started at USD.849 million then dropped to USD.787 million in February. It increased to USD 840 millions in March then dropped for the next two months to USD.633 million and USD.592 million for the months of May and June consecutively. It went up in the month of July to USD.665 million before reducing

thereafter to reach a low of USD.83 million by November. However the BOP closed the year at USD.163 million.

During the year 2011, BOP started at USD.199 million then fluactuated to USD.309 million, USD.307 million and USD.297 million in the next three months consecutively. It increased in May to a high of USD.360 million after which it dropped for the remainder of the year to a low of USD.220 million and closed the year at USD- 43 million.

In the year 2012, BOP started at a low of USD.137 million. It then increased continuously for the next three months to USD.674 million in April after which it dropped to USD.13 million. The upward trend then got out of hand as the BOP hit positive USD.1,261 million by the end of the year.

4.4 Regression Analysis

In order to establish the relationship between exchange rate volatility and balance of payments in Kenya, the study conducted a regression analysis. The findings were as shown in the table 4.2 below:

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.003[a]	.000	-.007	377.43361
a. Predictors: (Constant), Foreign Exchange Rate				

Coefficient of determination explains the extent to which changes in the dependent variable (balance of payments) can be explained by the change in the independent variables (foreign exchange rates), or the percentage of variation in the dependent variable

that is explained by the independent variable. From the analysis, the independent variable studied here had a weak negligible inverse relationship with balance of payments as explained by a low negative adjusted R^2 of -0.007. This shows that although foreign exchange rates have a relationship with balance of payments, the relationship is weak. The study further conducted an analysis of variance to check on the strength of the model. The findings were as shown below:

Table 4.2: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	224.484	1	224.484	.002	.968[b]
	Residual	20228770.454	142	142456.130		
	Total	20228994.938	143			
a. Dependent Variable: Balance of Payments						
b. Predictors: (Constant), Foreign Exchange Rate						

The probability value of 0.968 indicates that the regression was significant in predicting the relationship between exchange rate volatility and balance of payments in Kenya. The F critical at 5% level of significance was 0.002, and since F calculated is less than the F critical (value = 2.371), this shows that the overall model was significant.

Table 4.3: Coefficients of Determination

Model		Unstandardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	356.934	411.514		.867	.387
	Foreign Exchange Rate	-.213	5.366	-.003	-.040	.968
a. Dependent Variable: Balance of Payments						

The researcher conducted a regression analysis so as to determine the relationship between exchange rate volatility and balance of payments in Kenya. The regression equation ($Y = \beta 0 + \beta_1 X_1 + €$) was:

$Y = 356.934\text{-}0.213X_1$

Whereby Y = Balance of payments (USD); X_1= Foreign exchange rate (that is USD against Kenya shilling).

As per the regression equation established, there is an inverse relationship between balance of payments and foreign exchange rates in Kenya. However, the constant was 356.934 which indicated that in normal circumstances, balance of payments in Kenya would be USD.356.934 million at stable foreign exchange rates. However, a unit increases in foreign exchange rates influence the balance of payments by USD -0.213 million.

4.5. Summary and Interpretation of Findings

As the economic interdependence of countries around the world increases, it becomes important to understand the nature and significance of their international exchanges. The BOP accounts provide a detailed record of an economy's international economic transactions, and these accounts are central to the understanding of the degree of an economy's integration with the rest of the world. BOP accounts record monetary settlements between residents of an economy and foreigners, and are often referred to as the external accounts. However, in addition to monetary settlements, they also record transactions where goods only may be transferred, as is the case with some forms of foreign aid. From the findings of the study, the BOP grew steadily since the year of inception for this study to reach high positive figures towards the end of the study period.

Exchange rates play an important role in international trade and investment as they affect the price of internationally traded goods and services. An exchange rate is a price; the price of one currency in terms of another International Monetary Fund (1993). Exchange

rate volatility reflect the economy-wide effects of changes in trade flows, world commodity prices, and capital flows between economies that are highly integrated, both with each other and with global goods, services, and financial markets. Exchange rate fluctuations therefore affect consumers and producers of internationally traded goods and services and firms with assets and liabilities denominated in foreign currencies. Since exchange rates are shared macroeconomic variables, such fluctuations for any internationally integrated economy have counterpart effects in its trading partners.

An economy's supply of foreign exchange arises from export and asset sales to foreigners, as well as income received from abroad, whereas its demand for foreign currency stems from import and foreign asset demand and income payable abroad. The exchange rate equilibrates the supply and demand of foreign currency and for this reason is considered the single most important relative price in highly internationalized economies. If an economy adopts a pegged or a heavily managed exchange rate system, its central bank assumes responsibility for controlling its exchange rate.

Exchange rates deal with the value of one currency in terms of another. Devaluation in the currency lowers one currency's value in terms of the other. For this study, it was established that the prevailing exchange rates fluctuated significantly during the study period. In the inception year 2000, the amount of Kenya shillings exchanged for one United States Dollar was Ksh.70.68 as at January. In the year 2001, Kenya shilling exchanged at a stable rate to the USD averaging Ksh.78 with a few cents on top or below. The highest for the year was Ksh.79.02 in July while the lowest was Ksh.77.50 in April. On average, the exchange rates remained stable during the year 2001. In the year 2003, the exchange rates against the dollar started at Ksh.77.72 in January then the local

currency appreciated to Ksh.71.61 by May before depreciating to an annual low of Ksh.77.90 in September. However, the Kenya shilling gained ground.

For the year 2005, the exchange rates started at Ksh.77.93 before the local currency appreciated to a high of Ksh.74.80 in March after which it again started depreciating to reach Ksh.76.23 in July the same year. For the year 2007, the exchange rate opened at Ksh.69.88 then remained stable for two months with negligible changes before the local currency appreciated to exchange at an annual high of Ksh.63.30 in December.

For the year 2009, the exchange rate opened at Ksh.78.95 then depreciated slightly for February and March to record Ksh.79.53 and Ksh.80.26 consecutively. In 2010, the exchange rate against the USD opened at Ksh.75.79 but depreciated continuously to a high of Ksh.81.43 in July and then closed the year at Ksh.80.57. The year 2011 started at Ksh.81.03. However, high fluctuations were recorded over this year as Kenya shilling depreciated to an all time high of Ksh.101.27 in October before the government intervened to bring the rate back to Ksh.86.66.

The balance of payments is a systematic array of all the factors that determine the foreign exchange rate. That array follows long established conventions and is all-inclusive and mutually exclusive among the individual factors. The balance of payments started at a positive USD.231 million in the year 2001 after which it grew steadily month after month to reach an annual high of USD.372 Million by December. In the year 2003, BOP opened at USD.178 million then reduced to USD.174 million and USD.149 million for the months of February and March respectively. For the year 2005, BOP started on a low of USD.18 million then increased to USD.46 million in February. For the year 2007, BOP

started at USD.593 million which grew steadily for two months consecutively to USD.661 million by March then USD.617 million in April. Starting May, it dropped to USD.419 million then continuously dropped to a low of USD.332 million in August after which it started to increase to reach an annual high by December at USD.854 million.

During the year 2008, BOP started at USD.973 million after which it reduced subsequently for the first four months to USD.614 million in April. It shot up in the month of May to USD.716 million after which it again started reducing continuously for the remainder of the year to close at USD-469 million. In the year 2010, BOP started at USD.849 million then dropped to USD.787 million in February. It increased to USD.840 millions in March then dropped for the next two months to USD.633 million and USD.592 million or the months of May and June consecutively. It went up in the month of July to USD.665 million before reducing thereafter to reach a low of USD.83 million by November. The BOP however closed the year at USD 163 million. In the year 2011, BOP started at USD.199 million then fluctuated to USD.309 million, USD.307 million and USD.297 million in the next three months consecutively. It increased in May to a high of USD 360 million after which it dropped for the remainder of the year to a low of USD 220 million and closed the year at USD -43 million. In the year 2012, BOP started at a low of USD -137 million. It then increased continuously for the next three months to USD 674 million in April after which it dropped to USD.139 million. The upward trend then got out of hand as the BOP hit positive USD.1,261 million.

The findings from this study reveal that exchange rate volatility is one of the fundamental factors affecting the BOP in Kenya. This compares positively with the findings established by Mungami (2012) who examined the effects of exchange rate liberalization

on the BOP of a developing country using a case of Kenya. The study revealed that exchange rate is one of the macroeconomic fundamentals that play a key role in ensuring that the economy of a country remains competitive in the international market. The results showed that the exchange rate liberalization had improved the overall BOP but it had not improved the current account or reduced the balance of trade deficit.

From the findings of this research, the exchange rate volatility is one of the other macroeconomic factors influencing BOP in Kenya. This finding is consistent with the empirical study conducted Huchet-Bourdon and Korinek (2011) who studied the extent to which exchange rates and their volatility affected trade flows in China, the Euro area and the United States in two broadly defined sectors, agriculture on the one hand and manufacturing and mining on the other. This study found out that exchange volatility impacted trade flows only slightly.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The main objective of the study was to determine the relationship between exchange rate volatility and BOP in Kenya. To carry out this study, a linear regression model was used consisting of the BOP function as the dependent variable, while the exchange rate volatility as an impendent variable. The study examined secondary data collected from CBK for ten years on BOP and exchange rates volatility and established that, exchange rate volatility has weak inverse relationship with BOP as explained by a low negative adjusted R^2 of -0.007. This shows that although foreign exchange rates have a relationship with BOP, the relationship is weak. These findings are consistent with those established by Mungami (2012) who examined the effects of exchange rate liberalization on the BOP of developing countries using a case of Kenya. The results showed that the exchange rate liberalization had improved the overall BOP but it had not improved the current account or reduced the balance of trade deficit.

The study used a quantitative comparative design method and the data used was secondary from CBK which was analyzed using Statistical Package for the Social Sciences (SPSS), a computer program used for statistical analysis. From the findings of the study, the BOP grew steadily since the year 2000 to reach high positive figures towards the end of the study period and in effect worsening BOP. These findings are consistent with those of Kandil and Ida (2002), who established that exchange rate

fluctuations and aggregate economic activities affect an economy's level of trade with others.

Exchange rates deal with the value of one currency in terms of another. Devaluation in one currency lowers that currency's value in terms of the other thereby lowering imports and consequently encouraging exports to improve BOP. From this study, it was established that the prevailing exchange rates fluctuated significantly during the study period thereby affecting BOP either negatively or positively. The study conducted by Huchet-Bourdon and Korinek (2011) on the extent to which exchange rates volatility affected trade flows in China, the Euro area and the United States of America revealed that exchange rate volatility impacted trade flows only slightly. Exchange rate levels, on the other hand, affected trade in both agriculture and manufacturing and mining sectors but did not explain in their entirety the trade imbalances in the three countries examined.

5.2. Conclusions

From the analysis in chapter four and the summary above, the study concludes that just as the basic determinants behind the supply of and demand for any commodity are critical in fully understanding the behavior of the prices of that commodity, so it is important to understand the relationship between the supply of and demand for foreign exchange to determine the price of a foreign currency. The exchange rate affects the prices at which a country trades with the rest of the world and is integral economic analysis and policy formulation. From the findings discussed in chapter four, the study concludes that there is a direct relationship between foreign exchange rates volatility and balance of payments. As the Kenyan currency depreciates, the balance of payments for Kenya worsens. The

policies makers in Kenya need to encourage export diversification especially on processed products since agricultural exports are not highly competitive in the foreign economies to positively impact on BOP

The study established that apart from the exchange rates discussed above, there are other factors having greater influence on the levels of balance of payments recorded in Kenya. Exchange rates deal with the value of one currency in terms of another. Devaluation in the currency lowers one currency's value in terms of the other. From the regression model summary, the study establishes that exchange rates contribute only to 7% of the changes in the balance of payments. This therefore means that there are other factors influencing the levels of balance of payments in Kenya. These include other macroeconomic factors like the rate of inflation which is fueled by other factors like fuel prices which have a great impact on the prevailing price levels in the country.

The study also concludes that balance of payments status in Kenya grew steadily during the study period despite the increases and decreases registered in the country during the study period. Balance of payments grew from a low of positive USD.231 million by January 2001 to a high of USD.1,397 million by November 2012 and a low of negative 743 million in the month of January 2009. In addition, increases in the balance of payments indicate that the country was importing more than it was exporting.

5.3 Policy Recommendations

The balance of payments accounts provide a detailed record of any economy’s international economic transactions, and these accounts are central to understanding the degree of an economy’s integration with the rest of the world. The balance of payments

recorded in Kenya defines the level of integration with other economies in Business. Balance of payments accounts record monetary settlements between residents of an economy and foreigners, and are often referred to as the external accounts. However, in addition to monetary settlements, they also record transactions where goods only may be transferred, as is the case with some forms of foreign aid. In Kenya, balance of payments is an important component of development because the country is a net importer. The country requires capital equipment which consumes a considerable amount of foreign currency compared to her exports. This in most cases leaves the country with a huge positive balance of payments which means that the country has to acquire more foreign currency using other means in order to fully pay for the imports. This makes foreign exchange rates important because it determines how much the country has to spend to acquire the imports and at the same time determine how much the country has to earn from its exports.

From the above analysis, this study recommends that the policy makers take keen interest in ensuring stable equilibrium for the exchange rates as they play an important role in determining the demand for and supply of both imports and exports. It is through exports that the country earns foreign exchange. If the local currency depreciates, it means that imports become expensive because the country has to spend more local currency to acquire a given commodity. However, appreciation of local currency ensures that the country is able to get more import more cheaply. There is need to establish a balance between the exports and imports. To achieve this, the policy makers need to evaluate the best exchange rate policy for optimal economic development.

The study further recommends 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. The government needs to increase marketing of its exports and encourage local industries producing imports substitutes so as to encourage consumption of locally produced commodities which not only improve the country's balance of payments but also contributes to economic development through provision of employment. The study further recommends that the government should provide relevant structures and environment for the smooth operation of import export market in the country. This may be achieved through proper legislation which regulate the level of import and export trade in the country.

The government should formulate policies that encourage local based private companies to take advantage of emerging foreign investments that includes foreign direct private investments. For this to happen, the government should control and stabilise inflation and exchange rates at its lowest level through various macroeconomic policies viable for BOP improvement that encourages local foreign private investments.

5.4. Limitations of the Study

A limitation for the purpose of this research is regarded as a factor that is present and contributed to the researcher getting either inadequate information or if otherwise the response given would have been totally different from what the researcher expected. The main limitations of this study were:

The data used was secondary data generated for other purposes. The measures used may keep on varying from one year to another subject to the prevailing condition. For

example the balance of payments was deeply affected by the post election violence which slowed down trade with other nations as either the goods to trade in were lacking or the demand for imported goods was low.

The inflation rates have been consistently high in the country forcing the Central Bank of Kenya to raise its CBR rate which is passed on to other sectors in the economy thereby influencing the overall economic development of the country thereby impacting differently on the different sectors of the economy.

The data used is also affected by political stability of the nation which plays an important role in the international trade. For example, during the 2007/2008 post election violence, the level of exports in from Kenya was reduced following the violence which created insecurity hence reduced levels of production. As such, political stability plays an important role in determining exchange rates and balance of payments.

5.5 Suggestions for Further Studies

The study suggests that further research be conducted on the relationship between balance of payments and economic development because through international trade, a country's development is affected in so many ways including provision of employment and foreign currency.

The study further recommends that another study be conducted in Kenya on the relationship between foreign exchange rates and economic development to check whether changes in the foreign exchange affect the income per capita of the citizens. The study also suggests that further studies be carried out on the influence of macroeconomic

policies on balance of payments in Kenya. The existing balance of payments in a country is a function of many macro economic variables. By establishing the influence of each macroeconomic variable on foreign exchange rates will enable policy makers know what tool to use when controlling the foreign exchange rate levels.

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APPENDICES

Appendix I: Data on Exchange Rate of the Kenya Shilling Against the USD

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 2001	78.61	78.25	77.75	77.50	78.54	78.62	79.02	78.91	78.95	78.97	78.96	78.69
Year 2002	78.60	78.25	78.06	78.27	78.31	78.66	78.80	78.57	78.81	79.32	79.57	79.53
Year 2003	77.72	76.84	76.58	75.66	71.61	73.72	74.75	75.96	77.90	77.77	76.74	76.02
Year 2004	76.29	76.39	77.26	77.91	79.24	79.27	79.99	80.83	80.72	81.20	81.20	79.77
Year 2005	77.93	76.94	74.80	76.15	76.40	76.68	76.23	75.81	74.10	73.71	74.74	73.11
Year 2006	72.21	71.80	72.28	71.30	71.76	73.41	73.66	72.87	72.87	72.29	71.13	69.63
Year 2007	69.88	69.62	69.29	68.58	67.19	66.57	67.07	66.95	67.02	66.85	65.49	63.30
Year 2008	68.08	70.62	64.92	62.26	61.90	63.78	66.70	67.68	71.41	76.66	78.18	78.04
Year 2009	78.95	79.53	80.26	79.63	77.86	77.85	76.75	76.37	75.60	75.24	74.74	75.43
Year 2010	75.79	76.73	76.95	77.25	78.54	81.02	81.43	80.44	80.91	80.71	80.46	80.57
Year 2011	81.03	81.47	84.24	83.89	85.43	89.05	89.90	92.79	96.36	101.27	86.66	86.66
Year 2012	86.34	83.18	82.90	83.19	84.38	84.79	84.14	84.04	84.61	85.11	85.63	85.99

Appendix II: Data for Cumulative Balance of Payments in USD in Kenya

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 2001	231	240	235	262	278	277	303	301	363	387	360	372
Year 2002	323	302	313	290	294	315	252	219	157	154	111	59
Year 2003	178	174	149	200	200	146	155	173	212	271	302	365
Year 2004	250	219	188	108	92	135	133	73	3	-10	107	117
Year 2005	18	46	45	131	182	202	308	406	420	441	322	306
Year 2006	557	539	638	711	793	847	834	777	766	725	772	675
Year 2007	593	636	661	617	419	358	362	332	399	432	448	854
Year 2008	973	871	741	614	716	683	594	442	287	30	-89	-469
Year 2009	-743	-706	-698	-493	-497	-422	-420	131	360	685	868	781
Year 2010	849	787	840	724	633	592	665	362	365	254	83	163
Year 2011	199	309	307	297	360	261	147	85	-220	-217	-143	-43
Year 2012	-137	129	543	674	139	841	873	997	1259	1269	1397	1261