THE EFFECT OF FOREIGN EXCHANGE RATE FLUCTUATION ON THE FINANCIAL RISK PROFILE OF THE GOVERNMENT OF KENYA

BY

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DECLARATION

I declare that this research project is my original work and that it has not been previously presented to any other university for examination / academic purposes.

Signature: ……. Date: …….

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

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DEDICATION

This project is dedicated to my children Doris Ogisa Maneno and Fredrick Simiyu Maneno who are the delight of my life.

ABSTRACT

The purpose of this study is to determine the effect of exchange rate fluctuation on the financial risk profile of the government of Kenya. The study was guided by different theoretical literature which included fiscal theory of sovereign risk and default, the theory of sovereign debt and default, the theory of sovereign default risk assessment from the bottom-up and micro-macro relationships. The methodology was both descriptive and inferential. Secondary data was used and was obtained from the debt department of the National Treasury, Central Bank of Kenya and Kenya National Bureau of Statistics. The data was analyzed using Statistical Package for Social Science (SPSS V. 21). Descriptive statistics was presented in mean and standard deviation while inferential statistics was presented using multicolinerality. The findings of the study on different currency on the effect of the exchange rate fluctuation and risk profile indicated that there are some currency that are volatile than others. They include the EUR and USD currencies. There exists a relationship between the variables that is exchange rate fluctuation, interest rate and principal amount issued (0.01) and there exist no relationship between the amount repaid in the Kenya shillings and foreign exchange rate at 0.07. The study recommends that the exchange rate fluctuation faced by the government of Kenya forms a significant component of the risk profile. It is therefore imperative for the state of Kenya with and without international operations to effectively manage its foreign exchange fluctuation.

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LIST OF ABBREVIATIONS

ADB/F	- African Development Bank/Fund
CBK	-Central Bank of Kenya
FX	-Foreign Exchange
GARCH	-Generalized Autoregressive Condition Heteroscedasticity
GDP	-Gross Domestic product
GOK	-Government of Kenya
KPMG	-Klynveld Peat Marwick Goerdeler
IMF	-International Monetary Fund
MTDMS	-Medium Term Debt Management Strategy
NER	-Nominal Exchange Rate
ODA	Official Development Assistance
PPP	-Purchasing Power Parity
RER	-Real Exchange Rates
SDR	-Special Drawing Rights.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Despite the problem facing the developing countries of huge cost of debt brought about by foreign borrowing, few studies have been done to establish the effect exchange rate fluctuation has on cost of foreign borrowing by governments including Kenya.

Since the breakdown of the Bretton Woods regime (1971), floating exchange rates have proved tremendously volatile with aggressive short term fluctuations and devaluation of major currencies such as the US dollar and the English Pound (Copeland 2005). Over the years, the Government of Kenya through Macroeconomic policy analysis has continued to influence exchange rates, from fixed rates regime to pegged and later floating through liberalization in the 1990's, however the exchange rates have been characterized by significant fluctuations with the local currency hitting historical highs in 2015 and lows in 1993.

Kenya experienced a fixed exchange rate regime since 1966 to 1992 when multiparty system and devolved trade came into play. This time the Kenyan currency was devalued and had negative volatility on her economy. In 1993, dual exchange rate was introduced and official interbank rate was observed with the floating of the shilling allowed (Adler and Dumas, 2010).

The volatility in exchange rate have had significant effects to the Government and this has been clearly spelt out in the Medium Term Debt Management Strategy 2015-

(MTDMS-2015), whereby in 2014, the Government of Kenya highlighted the need to minimize the degree of foreign exchange rate risk exposure associated with the external debt portfolio by borrowing more concessional debt, while maintaining a limited window for borrowing on commercial terms to minimize costs and refinancing risks.

Since the year 2010, the Government of Kenya (GoK) for long term borrowing has been relying on financing provided by the international financing institutions such as World Bank, International Monetary Fund (IMF), African Development Fund/Bank (ADF/B) among others. The Government also borrows from the Bilateral Countries on Concessional and Non-Concessional Terms. The borrowing has now extended to the foreign markets in form of sovereign bonds and syndicated loans. These loans are advanced to the Government in foreign currency, hence increased foreign exchange rate fluctuation exposure which may affect the cost of credit on the loans advanced, currency devaluation and repayment issues.

1.1.1 Foreign Exchange Rate Fluctuations

Foreign exchange rate is the rate at which one currency will be exchanged for another. It is the price of a nation's currency in terms of another currency. An exchange rate has two components, the domestic currency and a foreign currency, and can be quoted either directly or indirectly. In a direct quotation, the price of a unit of foreign currency is expressed in terms of the domestic currency. In an indirect quotation, the price of a unit of domestic currency is expressed in terms of the foreign currency. An exchange rate that does not have the domestic currency as one of the two currency components is known as a cross currency, or cross rate, Musalia (2014).

Levich (2001) defines Exchange rates as prices that are determined by supply and demand, he continues to say that, for some countries the exchange rate is the Single most important price in the economy because it determines the international balance of payments. Musyoki et al (2012) states that exchange rate is the price at which one currency may be converted into another. Exchange rate is referred to as the nominal exchange rate (NER) when inflation effects are embodied in the rate and as the real exchange rate (RER) when inflation influences have not been factored in the rate. Danjuma (2013) on the other hand describes exchange rate as one of the most important determinants of a country's relative level of economic health.

Various theories have been studied explaining effect of exchange rate fluctuations, these among others are:-Purchasing Power Parity Theory (PPP), Balance of Payment Theory of Exchange Rate & Interest Rate Parity Theory.

Purchasing Power Parity (PPP) is a theory which states that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. This means that the exchange rate between two countries should equal the ratio of the two countries price level of a fixed basket of goods and services. When a country’s domestic price level is increasing (i.e. country experiences inflation), that country’s exchange rate must be depreciated in order to return to PPP (Madura, 2006)

The balance of payments theory of exchange rates holds that the price of foreign money in terms of domestic money as determined by the free forces of demand and

supply on the foreign exchange market follows the external value of a country's currency and depend upon the demand for and supply of the currency. According to the theory, a deficit in the balance of payments leads to fall or depreciation in the rate of exchange, while a surplus in the balance of payments strengthens the foreign exchange reserves, causing an appreciation in the price of home currency in terms of foreign currency, (Van Horne, 2005).

Interest rate parity theory is whereby interest rate differential between two countries is equal to the differential between the forward exchange rate and the spot exchange rate. Interest rate parity plays an essential role in foreign exchange markets, connecting interest rates, spot exchange rates and foreign exchange rates (Madura, 2006).

Exchange rate risk as explained by a number of researchers such as Allayannis and Klapper (2001), Wong, Wong and Leung (2008) and Ngan (2015) is simply the risk to which the Government of Kenya is exposed to because of changes in exchange rates that may have an effect on investments that the government has made and the loans the government has borrowed in foreign currencies. The most obvious exchange rate risks are those that result from buying foreign currency denominated investments. The commonest of these are shares listed in another country or foreign currency bonds.

Allayannis and Klapper (2001) analyzed the exchange rate risk management practices for the large sample of East Asian. The difference in using currency derivatives depends on the differences in size, domestic and foreign debt exposure, and financial characteristics resulting in difference between domestic and foreign interest rate

which exist with the company not wanting to abandon maximum profit goals (Ngan, 2015).

Wong, Wong and Leung (2008) analyzed data of 14 commercial banks in China and there was a positive relationship between foreign exchange rate risk and size of the banks which were represented by their equity. The results indicated that the decrease in equity values therefore would increase the default risk. Another study by Nga, Hien and Chien (2013) on foreign exchange rate indicated that inflation rate had an indirect relationship. The impact on the inflation was because of the aggregated demand, effect on money supply and also because of imported prices. High inflation rate leads to depreciation of local currency resulting into high Foreign Exchange Fluctuation since more local currency is required for a unit of foreign currency'.

Ngan (2015) found out that foreign exchange business is not simple; this is because there is always foreign exchange risk. It is based on analyzing the impact of inflation rate, interest rate, trade balance on foreign exchange as a model to evaluate fluctuation in foreign exchange rate. The model shows that the higher the increase in interest rate, the more fluctuation in foreign exchange rate occurs.

The fluctuation of foreign exchange rate is the source of foreign exchange rate fluctuation risk. The derivative instruments employed by the commercial banks for hedging foreign exchange rate risk are forward, option, future and swap. The limitations of derivatives include having rigid conditions or contract size, its applicable to few currencies, very speculative which may lead to severe loss in case of change in government policy hence making it a challenge to apply.

Kenya borrows from both multilateral and bilateral institutions and from foreign markets in foreign currencies. This subjects it to Foreign Exchange risk when the Kenyan shilling depreciates against the major currencies.

1.1.2 Financial Risk Profile

Risk encompasses both possible threats and opportunities and the potential impact these may have on the ability of the government to meet its objectives. That is, risk relates to both challenges to, and opportunities for the government. Risk is an ever present element of public policy and government service delivery. Fone and Young (2000) argue that the limited ability of government organizations' to avoid public risks is one of the features that serves to differentiate public sector risk management because the problem faced is similar, but not identical, to the compliance or regulatory risks faced by private sector bodies. Regulatory risk defines the externally imposed rules under which specific activities must be managed, but the option to discontinue certain activities is still present within the private sector whilst it is lost in the public sector.

Risk profile is an evaluation of a government, individual or organization's willingness to take risks, as well as the threats to which the government or organization is exposed. A risk profile identifies the acceptable level of risk an entity is prepared to accept. A government's risk profile attempts to determine how the government's willingness to take risk (or aversion to risk) will affect its overall decision-making strategy. The risk profile may include the probability of resulting negative effects, and an outline of the potential costs and level of disruption for each risk .The Kenyan

Government is faced with a number of risks that is currency risk, sovereign risk and economic risks (KPMG-Kenya Country Profile 2012).

Kenya as a government like any other entity faces a number of financial risks; these risks include Sovereign risk, economic risks and currency risks. According to the rating by KPMG of 2012, Kenya scored CCC for sovereign risk, CCC for currency risk and CC for economic risk. Sovereign risk has been broadly defined as the probability that a country may not pay its debts (IMF, 2011).The CCC rating reflects a high fiscal deficit and heavy borrowing, which will push up public debt and servicing costs.

For the Economic structure risk the rating of CC is constrained by Kenya's reliance on rain-fed agriculture and its commodity-dependent export base, as well as by the country's poor investment environment, high public debt burden and inefficient state-run utilities. (KPMG-Kenya Country Profile, 2012).

1.1.3 Exchange Rate Risk and the Government Financial Risk Profile

Yenin and Borde (1998) in their study using a sample of 52 countries over the period from 1991 through 1995, indicate that those countries with relatively high level of country risk experience relatively high level of currency risk. This finding support the argument that those underlying factors that drive country risk seem also to have an influence on currency exchange rate risk. Results of this analysis also indicate that industrialized countries typically experience higher currency risk as do countries located in the western hemisphere of the world.

In 2001, the United States' net debt to the rest of the world jumped to $2.3 trillion, a level double that recorded in 1999. Much of the increase reflects the new borrowing undertaken by the country to finance its mounting current account deficit. A third of the change, however, can be traced to a simple accounting effect—the impact of a rising dollar on the value of U.S. assets held abroad (Cédric, 2003).

In Kenya according to Wamukhoma (2014) a high exchange rate level lowers the receipts that exporters receive thereby decreasing export earnings. A low exchange rate level raises receipts that exporters receive thereby improving export earnings. A fluctuation in exchange rate impacts directly either positively or negatively on export earnings. Exchange rate fluctuation might impact negatively on exporters and trend economic growth by discouraging firms from undertaking investments, innovation and trade.

On the other hand Kiptui (2008) noted that large fluctuations in foreign exchange rate impose adjustment cost on the economy as resources keep shifting between the tradable and non-tradable sectors. This could permanently shift resources to non-tradable sectors if firms are put off from export markers due to high foreign exchange rate fluctuation. This means that the risk profile is high.

1.2 Research Problem

There is growing agreement in literature that substantial exchange rate fluctuation create severe macroeconomic disequilibria. An increase in exchange rate fluctuations leads also to uncertainty which might result to high risk profile, Wamukhoma (2014).

On the other hand exchange-rate fluctuation affects operating cash flows and values through translations, transaction and economic effect of exchange rate risk exposure.

Exchange rate fluctuations have become a day to day phenomenon for example if exchange rate fluctuates either upwards or downwards, it will disorient the government's budget by increasing or decreasing the cost of borrowing. This is because the government will have to borrow from either the domestic or international market to fill the cost of borrowing gap created by fluctuation in the national budget.

There has been an ongoing debate on the appropriate exchange rate policy in developing countries. What most developing countries face is the high degree of foreign exchange risk exposure and this contributes to the huge public debt that they are facing. High fluctuation of exchange rate in short horizon is obviously making economic activity more risky as uncertainty rises. As it is not good for the economy, then there should be a systematic and measured policy to mitigate the foreign exchange fluctuations and to minimize the fluctuations, as well as to drive it to its fundamental value. Numerous studies have been done on the effect of exchange rate fluctuation on economic activities, profitability, GDP and the impact on inflation.

Ngari (2011) carried out a study on the effect of foreign exchange exposure on a firm's financial performance for listed companies in Kenya. He found out that the net income of the companies is affected by all the transactions that are denominated in foreign currency. This study looked at overall impact of foreign denominated transactions on oil firms in Kenya and the different types of exposures facing firms.

According to Chiira (2009) managing foreign exchange risk is fundamental component in the safe and sound management of all institutions exposed to foreign currencies. He continues noting that prudent management of foreign currency is important in order to control the impact of exchange rates on financial position of a country. Thus the direction of the exchange rate, changes the foreign exposure and ability of counterparts to honour obligations are significant factors in foreign exchange rate management.

Kiptui and Kipyegon (2008) in their study which investigated the effect of external shocks on the real exchange rate in Kenya showed that oil prices and openness have significant effects on the real exchange rate. The study also found that though external shocks have major effects on the real exchange rate, domestic shocks also play a part .The results show that the interest rate differential has significant negative (appreciating) effects in the short and long run.

Kiptoo (2007) focused on RER volatility and misalignment on international trade and investment. The study used Generalized Autoregressive Condition Heteroscedaticity (GARCH) and unconditional standard deviation. The study found out that RER volatility has a negative and significant impact on trade and investment during the study period 1993 to 2003.

Asseery and Peel (1991) in their study on “the effects of exchange rate volatility on exports” they found that higher risk because of exchange rate uncertainty could have a positive effect on trade/profitability. Chowdhury (1993), in his article “Does

Exchange Rate Volatility depress trade flows", concluded that increasing risk caused by exchange rate volatility has a negative effect on exports hence profitability.

Oyejide (1989) in his study on the stability of the Nigerian exchange rate found that exchange rate depreciation often lead to increased local currency cost of imported inputs and final goods through the cost-push inflation channel. He further noted that since non-tradable goods cannot be imported, the excess demand for them is translated into high prices since in the short run, domestic supply is fixed.

Despite the problem facing the developing countries of huge cost of debt brought about by foreign borrowing, few studies have been done to establish the effect exchange rate fluctuation has on cost of foreign borrowing by governments. The aim of this research is to fill this gap by providing empirical evidence through data analysis to show the impact of exchange rate fluctuation to the government of Kenya in terms of cost of foreign borrowing, which contributes to the government's financial risk profile.

1.3 Research Objective.

The objective of the study is to determine the effect of exchange rate fluctuation on the financial risk profile of the government of Kenya.

1.3 Value of the Study

The results of this study are expected to benefit both government and the general public to gain insight on the how exchange rate fluctuation affects cost of external borrowing. The study is going to establish the key variables that need to be taken into

account by policy makers while negotiating for prices of the loans and other forms of credits and the repayment patterns. The results of this study may also be used as reference point by scholars wishing to have in-depth understanding on debt financial management criteria in the public sector.

The study also is likely to establish the factors to be considered when fixing borrowing foreign exchange rate (during negotiations) movement of actual disbursement rate and loan repayment rates all measured against the risk profile.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature related to the study variables. Section 2.2 presents the theoretical literature and the theories are contained in subsection 2.2.1 fiscal theory of sovereign risk and default, subsection 2.2.2 the theory of sovereign debt and default, subsection 2.2.3 sovereign default risk assessment from bottom up and sub section 2.2.4 theory on micro-macro relationship . Section 2.3 is the empirical literature review which has two parts that is 2.3.1 international and 2.3.2 local studies. There is also a 2.4 summary of literature review.

2.2 Theoretical Literature

Transaction of any nature is predicted on the assumption that the parties to a transaction have equal information. The irregularity of information in a transaction is interpreted as risk. This increases the probability that the borrower will fail to meet their obligation as and when they fall due, the concept is known as credit risk (Mandi, 2014).

Risk is assessed through credit risk associated with operation involving credit for state (Canuto, Santos and Porto, 2004). According to Mandi (2014) risk is determined by the willingness and capacity for the state to meet its obligation. This can be through the willingness to repay a debt of a nature reflecting macroeconomic variables such as stock of foreign exchange reserves and balance of payment flows, economic growth

prospects and capacity to generate tax receipts a variety of political factors to name but a few of the drivers.

2.2.1 Fiscal Theory of Sovereign Risk and Default

Money and fiscal arrangement are incompatible with price stability and the state Mandi (2014). The central bank policy should be to manage foreign exchange prices with a predetermined band. For negative fiscal shocks price levels are adjusted as shock absorbers. Uribe (2006) noted that sticking to a specific price level target a government gives up the option to inflate away some of the real value of public debt in response to deteriorating fiscal budget and under such circumstances, default on public debt which is inevitable. Argentina debt crisis of 1999-2002 is cited as a case in point. Prior to the debt crisis, Argentina had adopted a peso-dollar parity policy which had been in place for almost 10 years and had been instituted by the 1991 Convertibility law. A prolonged recession starting 1999 saw real GDP decrease markedly, national deficit increased and debt surpassed 50% of GDP.

The deterioration in macroeconomic fundamentals raised doubt on the ability of the Argentine government to manage the fiscal imbalances which was reflected in a significant increase in the country risk premium (difference between the interest rate on Argentine and US dollar-denominated government bonds of similar maturities). The Argentine government eventually defaulted. Katel (2011) noted 3 factors present at the time as being factors that resulted in the default. The fixed exchange rate between Argentine peso and the US dollar created at the start of the 1990s by the Economy Minister at the time, the large amounts of borrowing by former Argentine president, Carlos Menem and an increase in debt due to reduced tax revenues.

Uribe (2006) cites as potentially increasing pressure for default under certain fiscal scenarios include aggressive inflation targeting by setting the nominal interest rate as an increasing function of inflation with a reaction coefficient larger than unity. This type of policy rule is often referred to as a Taylor rule after John Taylor's (1993) seminal paper. Brazil's inflation targeting policy is a case in point, were interest rates adjustments were used to control inflation but has resulted in rapid growth in public debt (Mandi, 2014).

2.2.2 The Theory of Sovereign Debt and Default

Wright (2011) noted that private defaults on domestic contracts are subject to legal process and institutions governing bankruptcy. However in instance of sovereign defaults, creditors have limited legal remedies on account of the doctrine of sovereign immunity and even though over time the doctrine is no longer absoluteness, it remains difficult to enforce judgement for recovery. However, Sovereigns are motivated to meet their obligations on account of costs associated with default which include restricted access to financial markets or access granted at a prohibitive cost that reflects the high probability of default associated with the Sovereign. In addition, the domestic cost of default is viewed through the impact on the domestic economy and political system of the country. The economy would be impacted through diminished international trade, weakening of the financial system causing a domestic banking crisis.

2.2.3 Sovereign Default Risk Assessment from the Bottom-Up

Altam and Rijken (2010) assess sovereign risk by analyzing the health and aggregate default risk of a nation's private corporate sector, terming this assessment "bottom-

up” analysis. The Bottom-up approach measures sovereign risk by focuses on the underlying profitability and financial condition of a nation’s private corporate sector. Building on the Altman Z-score methodology (1968), the Bottom-up approach measures the cumulative median probability of default of the non-financial sector for the next five years, both as an absolute measure of corporate vulnerability and a relative measure that can be compared to the risk of other sovereigns and to the market's assessment as reflected in the prices of credit default swaps.

In testing their approach, Altam and Rijken measured the default probabilities of listed corporate entities in nine European countries, as well as the U.S., at two different points in time; the start of 2009 (and thus prior to the recognition of the Euro crisis by markets and most credit professionals) and for the first four months in 2010 (essentially, the beginning of the recognition of the crisis). Based on these two observations, Altam and Rijken (2011) suggest that the corporate health index of the private sector would not only have served as an effective early warning indicator, but provided a (mostly) useful hierarchy of relative sovereign risks. The approach utilizes measures of probability of default to determine corporate vulnerability and draw conclusion on the vulnerability of the Sovereign.

2.2.4 Micro – Macro relationship

According to Belev and DiBartolo (2013) a sovereign entity can be viewed as a collective enterprise of tax payers, who assign a management body (the Government) the authority to manage and allocate the funds/resources. The assets of the enterprise (stream of taxes, fees, and all government receipts), net of government expenditure, is what stands as a guarantee of the debt obligations of the Government (Mandi, 2014).

The contingent claims analysis (CCA) as articulated in the work of Gapen, Gray, Lim and Xiao (2008) articulate the linkage between the private (micro) and Sovereign (macro). Gapen, Gray, Lim and Xiao (2008) noted that economies have become increasingly reliant on private capital flows and by extension are exposed to the volatility of these capital flows. Gapen, Gray, Lim and Xiao (2008) highlight that following the Asian crisis, an approach of analysing state risk by assessing the instability of the sector balance sheets (corporate, financial and public sector) was effective. Shocks to interest rates, exchange rates, or market sentiment bring about deterioration in the value of a sector's assets compared to its liabilities lead to a reduction of its net worth leading to insolvency in extreme circumstances. In these extreme conditions, risk is transferred across sectors causing a widespread distress.

Gapen, Gray, Lim and Xiao (2008) state 'Risk transfer can be "bottom-up" from the corporate sector to the banking system and ultimately to the sovereign balance sheet, as was the case during the Asian crisis, or it can be "top-down," as was seen more recently in Latin America.' The Contingent Claims Approach (CCA) highlights this relationship; it uses the basic structure of the balance sheet, incorporating market information to derive a forward looking assessment of sovereign risk. Under CCA Sovereign distress is a function of sovereign assets, asset volatility, and leverage (contractual obligations).

Though the government assets comprise claims on foreign exchange reserves, public sector assets, the present value of future cash flows (taxes and such similar revenues which flow from the private sector). Asset volatility relates to uncertainty of the value of future assets. (Note that the value of assets is determined at the micro level). The

liabilities comprise of Government obligation, generally incurred to cover government expenditure (note, debt is increasingly sourced from the private sector).

The observation from this is the link between the private sector and the government. Gray, Merton and Bodie (2007) noted that the sectors of a national economy can be viewed as interconnected portfolios of assets, liabilities, and guarantees. Their approach measures the sensitivity of the market value of these portfolio to 'shocks' and using contingent claims analysis, quantifies sovereign credit risk and risks that are transferred from private sector to the public sector.

On the other hand Allen, Rosenberg, Keller, Setser and Roubini (2002) note that a deterioration of the assets at a sector level could result in loss of confidence of the ability the economy to generate output and revenues (including foreign exchange) to meet its obligations. The impact of poor performance in the private sector leads to increased capital outflows and depleting reserves which impacts on the exchange rates, current accounts and ultimately results in a deep recession.

Krugman (1999), IMF (1998), Corsetti, Pesenti and Roubini (1999a, 1999b) highlight that balance sheet vulnerabilities of economies are driven by microeconomic distortions. These include weakly supervised and regulated financial systems, connected and directed lending, moral hazard driven by implicit and explicit government guarantees leading to over borrowing, over lending and excessive current account deficits, and finally, fixed exchange rates that may distort external borrowing in the direction of short-term foreign currency debt.

2.3 Other Determinants of Financial Risk Profile

2.3.1 Interest Rate

According to Nduri (2013) interest rate is described as the price a borrower pays for the use of money he does not own and have to return to the lender who receives for deferring his consumption by lending to the borrower. Interest rate on other hand can be expressed as a percentage of money taken over the period of one year (Devereux and Yetman, 2002).

Interest rates can have both negative and positive effects on the world business markets. It also influences the economy through stock and bond interest rates, consumers and business spending, inflation and recessions. It is important to understand that there is generally 12 months lag in the economy meaning it takes 12 months for the effects of any increase or decrease in interest rate to be felt. According to Petursson (2008) adjusting the federal funds rate to help keep the economy in balance over the long term.

2.3.2 Inflation

Inflation is defined as a sustained increase in the aggregate or general price level in an economy. Inflation means there is an increase in the cost of living (Nduri, 2013). Inflation is one of the major factors that affect exchange rate. Theoretically a low inflation rate scenario will exhibit a rising currency rate, as the purchasing power of the currency will increase as compared to other currencies (Duarte and Stockman 2002). Inflation rate is used to measure the price stability in the economy. According to Nduri (2013) the conceptually of inflation can be divided into two sides. These are

demand side inflation and supply side inflation. Inflation may result from domestic factors and also oversees factors (Edwards, 2002).

The system of floating exchange rates, exchange rate fluctuations can have a strong impact on the level of prices through the aggregate demand (AD) and aggregate supply (AS). On the aggregate supply, depreciation (devaluation) of domestic currency can affect the price level directly through imported goods that domestic consumers pay. However, this condition occurs if the country is the recipient countries of international prices (international price taker). Non direct influence from the depreciation (devaluation) of currency against the price level of a country can be seen from the price of capital goods (intermediate goods) imported by the manufacturer as an input (Nduri, 2013).

The weakening of exchange rate will cause the price of inputs more expensive, thus contributing to a higher cost of production. Inflation is the term used to describe a rise of average prices through the economy. It means that money is losing its value. The underlying cause is usually that too much money is available to purchase too few goods and services, or that demand in the economy is outpacing supply. In general, this situation occurs when an economy is so buoyant that there are widespread shortages of labour and materials. People can charge higher prices for the same goods or services. Inflation can also be caused by a rise in the prices of imported commodities, such as oil. However, this sort of inflation is usually transient, and less crucial than the structural inflation caused by an over-supply of money (Fraga, Goldfajn and Minella, 2003).

Generally, the inflation rate is used to measure the price stability in the economy. Conceptually, the inflation can be divided into two sides, namely: demand side inflation (demand pull inflation) and supply side inflation (cost push inflation).For open-economy countries, inflation come from domestic factors (internal pressure) and also overseas factors (external pressure). The sources of external factors are the increase in the world commodity prices or exchange rate fluctuation. The influence of exchange rate towards inflation itself depends on the choice of exchange rate regime in the country. Exchange rate system has an important role in reducing or minimizing the risk of fluctuations in exchange rates, which will have an impact on the economy. Any changes in exchange rates will have a great impact on the economy (Fung, 2002).

The relationship between inflation targeting regime and exchange rate regime has led some analysts to conclude that one of the costs of inflation targeting adoption is the increase in exchange rate volatility. Yet, some studies show that the adoption of a free-floating exchange rate does not necessarily implies more effective of nominal and real exchange rate floating argue that inflation targeting would lead to higher exchange rate volatility find that the lack of credibility of monetary authority may lead to exchange rate volatility problem (Levy-Yeyati and Sturzenegger, 2002). Understanding the sources of fluctuations in output and inflation is an important challenge to empirical macroeconomists.

2.4 Empirical Literature

2.4.1 International Literature

Dennis Bonam and Jasper Lukkezen (2013), in their paper have examined the implications of sovereign risk for fiscal policy effectiveness under different monetary

regimes. They have shown, both empirically and theoretically, that in the presence of sovereign risk, a government spending shock can generate higher output responses under flexible than under fixed exchange rates, which stands in contrast to both the traditional Mundell- Fleming paradigm and conventional New Keynesian wisdom.

Nduri (2013) notes that the source of external factors are the increase in world commodity prices or exchange rate fluctuation. The influence of exchange rate towards inflation itself depend on the choice of exchange rate regime in the country. Exchange rate system has an important role in reducing or minimizing the risk of fluctuations in exchange rates, which will have an impact on the economy. Any changes in exchange rates will have a great impact on the economy (Eichengreen, 2004).

When a country's economic conditions become unstable, country risk may increase. De Grauwe (2012) for example, compares substantial increases in government debt in the UK and Spain and finds that the economic consequences of these events have been very different across the two countries. In the UK, the rise in public debt was met by a depreciation of the nominal exchange rate, which supported exports and thus facilitated economic growth; in Spain, however, no such depreciation was able to take place and the rise in government debt was associated with a decline in output growth.

The risk can be viewed as state risk since the government may default on its debt obligations. The government could have bonds due to mature and they don’t have sufficient tax receipts at hand to repay all the debt, they may re-enter the market and raise more money through bonds issuance Wright (2011). The underlying risk is that

the bond buyers may not have appetite for the specific government paper or may demand higher yields thus jeopardizing the ability of the country to raise the required funding to settle the maturing debt. This may result in a country's risk and may impose regulations, restricting the ability of the country to meet its obligations. The restriction of foreign currency transaction, regulatory restriction baring rising of funds such as imposing debt ceilings. This may be viewed as an assessment of both the ability and willingness of a country to service debt service.

Arellano and Ramanarayanan (2010) state that during market crisis, interest rates spreads rise, debt maturity shortens and the spread on the short term bonds is higher than the long-term bonds. In their paper titled "Default and the Maturity Structure in Sovereign Bonds" they note that debt crises in emerging markets is normally blamed on governments borrowing large amounts of short term debts in international capital markets which requires the government to roll-over large amounts of debt more frequently and at higher prices during periods of crisis and when external credit is restricted.

Rodrik and Velasco (2003) show, using evidence from a broad set of countries, that a high level of short-term foreign debt increases the likelihood of a crisis. Broner, Lorenzoni, and Schmukler (2013), stated that emerging market governments actively shift to shorter-maturity debt in a crisis and issue long-term debt in normal times.

A study by Siregar and Pontines (2005) on external debt and exchange rate overshooting in East Asian countries found that the accumulation of external debts in these economies have indeed been partly responsible for the increasing incidence and

severity of exchange rate overshooting of the local currency. Franke (1991), Sercu and Vanhulle(1992) have shown that exchange rate volatility may have a positive or ambiguous impact on the volume of international trade flows depending on aggregate exposure to currency risk (Viaene and de Vries ,1992)) and the types of shocks to which the firms are exposed (Barkoulas et al. 2002).

Yadav and Jain (2004) studied the risk management practices relating to international operations of public sector companies in India. The study included political risk, interest rate risk and exchange risk. With reference to exchange risk, study found that significant transaction that causes exchange risk is import activity. Majority of public sector companies were not found to use forward to cover foreign exchange risk.

Magda Kandil (2004) exchange rate fluctuations generate adverse effects on economic performance in a variety of developing countries. These effects are evident by output contraction and price inflation in the face of currency depreciation. Higher variability of exchange rate fluctuations, around its anticipated value, exacerbates adverse effects on economic performance in developing countries. Given this evidence, exchange rate policies should aim at minimizing unanticipated currency fluctuations to insulate economic performance from the adverse effects of this variability in developing countries.

Jamus, Jerome and Lim (2003) in their paper have demonstrated that political risk plays a real & arguable important role in the determination of regime switches for the nominal exchange rate. In addition it has been argued that such risk plays a contemporaneous role in developed countries with mature foreign exchange markets,

while markets participants in emerging economies consider not just the current political climate but also condition this on the previous period's risk profile. The study has also shown evidence that, after the Asian financial crisis of 1997, currency traders in emerging markets have learnt to better incorporate political risk into their buy & sell decisions.

Martinez and Werner (2002) conclude that the exposure of Mexican firms to devaluation risk lessened after Mexico switched to a flexible regime. Henckel (2004) investigated how government debt affects exchange rate behaviour using a two-country general equilibrium and found that the exchange rate was directly related to the effective price of public debt.

A previous study of Oetzel, Bettis and Zenner (2000) points out that there are several economic factors potentially influencing a company such as national macroeconomic policies, political risk, inflation, exchange rate variability and sensitivity to global economic events.

Another study by Yenin and Borde (1998) using a sample of 52 countries over the period from 1991 through 1995, indicate that those countries with relatively high level of country risk experience relatively high level of currency risk. This finding support the argument that those underlying factors that drive country risk seem also to have an influence on currency exchange rate risk. Results of this analysis also indicate that industrialized countries typically experience higher currency risk as do countries located in the western hemisphere of the world.

Chowdhury (1993) in his article “Does Exchange Rate Volatility depress trade flows”, concluded that increasing risk caused by exchange rate volatility has a negative effect on exports hence profitability. Asseery and Peel (1991) in their study on “The effects of exchange rate volatility on exports” they found that higher risk because of exchange rate uncertainty could have a positive effect on trade/profitability.

Casset and Rianderie (1985) in their study argue that surveys of managerial assessment of the political environment have revealed that managers rate political risk as a major factor in the foreign investment decision. Furthermore, these surveys have indicated that foreign investor’s typical response to political risk is avoidance. If political risk news has a non-trivial information content this could lead its currency‘s exchange rate to appreciate or depreciate.

2.4.2 Local Studies

Mwangi (2015) established that oil firms in Kenya are faced with exchange risk since they are exposed to all three exposures which also affect the firm’s performance. The exchange risk is one of the risks that oil firms have identified and thus controls it as any other risk. Other risks include price risk, supply risk, together with currency risk which affects the industry players to a high degree (Okinyi, 2013).

Mwangi (2015) also found that transaction exposure affects the firm’s profitability, cash flow and revenue. It moderately affects the firms competitiveness and to a lower extent the firm’s investment strategies. Transaction exposure had a high impact especially to cash flow. Chiira (2009) also found that oil companies were prone to transactions foreign exchange risk and that transaction was highly quantified and hedged.

The government not being able to repay an upcoming bond maturing is a financing risk. According to Mandi (2014) this type of risk could be considered an element of sovereign risk. Sovereign risk can also be viewed from the premise that the government of a country may impose regulations, restricting the ability of the country to meet its obligations. Such regulations include a restriction on foreign currency transaction, regulatory restrictions barring rising of funds such as imposing debt ceilings. In this case sovereign risk may be viewed as an assessment of both the ability and the willingness of a country to service the debt.

Ouma et al (2013) studied the trend of foreign exchange rates fluctuation of Kenya's main trading currencies, the US Dollar, the Euro and the UK Pound. The study used secondary data collected between the periods January, 2006 to December, 2010 from the Central Bank of Kenya website in establishing the existing trend of foreign exchange rates fluctuation in Kenya. The findings established the existence of a positive trend in US dollar and the Euro exchange rates and a negative trend in UK pound exchange rates.

Otuori (2013), this study sought to investigate the determinant factors of exchange rates and their effects on the performance of commercial banks in Kenya. The results showed that interest rate and external debt had positive and significant effects on performance while inflation rate and external debt had negative and significant effects on performance. The study concluded that higher levels of interest rate lead to higher profitability in commercial banks in Kenya. The study further concluded that higher levels of inflation rate result in lower bank profitability in Kenya. The study also

concluded that higher levels of external debt result in lower bank profitability in Kenya.

This means that profitability and revenue are highly affected by translation exposure of the firms. Another effect was on the firm's competitiveness which is not affected by the cash flow of the firm nor the translation exposure. Wang (2009) notes that translation exposure does not directly affect cash flows and is mainly concerned with the potential impact of consolidated financial accounts arising from the transaction of account items of the firms and this in return causes lower priority among all foreign exchange risk management activities.

Barasa (2009) studied causal relationship between inflation and exchange rates in Kenya, which looked at the two variables for a period of eleven years between January, 1998 and December, 2008. The study also looked at whether the inflation rate can be used to determine future exchange rates and hence prove pivotal in the government decision making on the stability of the economy and the sustainability of the balance of payment. The study found out that there is a causal relationship between inflation and exchange rates in Kenya for only the US dollar and the GBP only for the short run, however, all the currencies depicted a causal relationship with the inflation rates in the long run except the Ugandan shillings.

On the other hand, Koutmos, Martin and Dolan (2008), stated that the exchange rate translation exposure measurement was important to all businesses because it affected them directly or indirectly. They argued that translation exposure is related to firm size, multinational status, foreign sales, international assets, and competitiveness and

trade at the industry level hence the firms must vigorously adjust their behavior in response to exchange rate risk.

2.5 Summary of Literature Review

The review of literature on exchange rate fluctuation and financial risk profile above demonstrates that each theory/empirical study holds in a particular setting and explains some economic fundamental such as inflation, interest rate, government policy and future expectations. Moreover, Results of the different studies are difficult to compare since the sample period, model specification, countries and the economic variable of study vary widely.

Fiscal Theory of sovereign risk and default, Micro and Macro theory, the theory of sovereign debt and default and sovereign default risk assessment from the bottom up are covered in the initial part of this literature review as a starting point for understanding how exchange rates risks, currency risk and sovereign risk are related.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the research procedure to be used to carry out the study. Section 3.2 is the research design establishing the method adopted. Section 3.3 is the Data collection methods and section 3.4 is the data analysis procedures.

3.2 Research Design

The study adopted a descriptive design to establish the effect of foreign exchange rate fluctuation on the financial risk profile of the Government of Kenya. Descriptive design is preferred since it sought to establish factors associated with certain occurrence, conditions or terms of relationship concerning a problem. According to Mugenda and Mugenda (2003) descriptive design is used when the problem has been well designed and where the researcher can engage in a field survey by going to the population of interest in order for the respondents to explain certain features about the problem under study.

Further, a descriptive study is concerned with determining the frequency with which something occurs or the relationship between variables Churchill (1991). According to Cooper (1996), a descriptive study finds out the who, what, where, and how of a phenomenon which is the aim of this study.Thus, this approach was appropriate for this study, since the researcher intended to collect detailed information through descriptions and is useful for identifying variables and hypothetical constructs. According to Donald (2006) research design is the structure of the research, it is the ‘‘glue ’’ that holds all the elements in a research project together.

3.3 Data Collection Methods

The study used secondary data collected from the reviews of both empirical and theoretical literatures which address the role of end users in streamlining foreign borrowing and repayment. This was sourced from the books, journals, internet and other valid sources within the department of debt of the National Treasury and the Central Bank of Kenya (C.B.K). According to Ngechu (2004) the choice of a tool and instrument depends mainly on the attributes of the subjects, research topic, problem question, objectives, design, expected data and results. This is because each instrument collects specific data.

Trend Analysis and time series method will be used to analyze the fluctuation and cost of borrowing data. Trend analysis is the process of comparing business data over time to identify any consistent results or trends, (Econometrics). In trend analysis a loan will be analyzed from the period it was given to the government, the rate that was prevailing at that time and the repayment pattern and the exchange rate at the time of repayment, the repayments of loans by the government is done semi-annually. The study was a case study and it was from 1984 to 2015.

3.4. Data Analysis

This study used a regression model to determine the relationship between the dependent and the independent variables.

3.4.1 Conceptual Model

The conceptual model shows the relationship between the independent and the dependent variable.

$$\mathbf{Y= f (x_1,x_2,x_3)}$$

Y is the dependent variable –the cost of foreign borrowing which is the difference between the principal and the amount repaid by the government

$\mathbf{X_1}$ is the independent variable – change in exchange rates volatility

$\mathbf{X_2}$ is the interest rate

3.4.2 Analytical Model

The analytical model was the multiple linear regression model.

$Y=\alpha+\beta_1 x_1+\beta_2 x_2+\varepsilon$

3.5 Diagnostic Test

3.5.1 Stationarity

The variables in the model were first to be tested for stationarity because time series was used and also to avoid spurious results. Stationarity tests take the null hypothesis that yt is trend stationary. If yt is then first differenced it becomes

$\Delta yt = \delta + \Delta zt$

$\Delta zt = \varphi \Delta zt-1 + \varepsilon t - \varepsilon t-1$

3.5.2 Co-integration

Co-integration is the simple case of 2 time series xt and yt, that are both integrated of order one (this is abbreviated I(1), and means that the process contains a unit root), xt and yt are said to be co-integrated if there exists a parameter α such that

$$ut = yt - \alpha xt$$

3.5.3 Autocorrelation

Testing for autocorrelation involves investigating whether any relationship exists between the current value and any of its previous values. The Durbin Watson d tested

used. A test that the residuals from a linear regression or multiple regression are independent.

Method:

Because most regression problems involving time series data exhibit positive autocorrelation, the hypothesis usually considered in the Durbin-Watson test are

H_0 : ½ = 0

H_1 : ½ > 0

The test statistic is

d =

Pn

i=2(ei − ei−1)2

Pn

i=1 e2i where ei = yi − ˆyi and yi and ˆyi are, respectively, the observed and predicted values of the response variable for individual i. d becomes smaller as the serial correlations increase. Upper and lower critical values, dU and dL have been tabulated for different values of k (the number of explanatory variables) and n.

If d < dL reject H0 : ½ = 0

If d > dU do not reject H0 : ½ = 0

If dL < d < dU test is inconclusive.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter reports the finding from the selected data under study. Section 4.2 is descriptive analysis. Section 4.3 is goodness of fit statistics. Section 4.4 contains Analysis of Variance. Section 4.5 is the Regression model while Section 4.6 is the Interpretation of the Findings.

4.2 Descriptive analysis

The purpose of this research was to investigate the effect of foreign exchange rate fluctuation, on the financial risk profile of the government of Kenya. The focus was on the loans given between the year 1984 and 2012. The data for this study was gathered exclusively from the published reports obtained from the Debt Department of National Treasury, National bureau of statistics and Central Bank of Kenya. The data was fed into SPSS version 21.0 and used to compute the findings and draw conclusions. Descriptive analysis and regression analysis were conducted to ascertain the effect of exchange rate fluctuation on the financial risk profile of the government of Kenya. Descriptive statistics presents the mean and standard deviation values of variables used in the study together with their standard deviations.

Table 4.1: Mean and standard deviation on currency and rates

Rate			
Currency	Mean	N	Std. Deviation
EUR	14.78	9	5.142
USD	6.00	4	6.000
DKK	26.00	1	.
JPY	27.75	4	1.500
CHF	32.50	2	.707
KD	31.00	1	.
SEK	34.00	1	.
SDR	3.00	6	.000
GBP	1.50	2	.707
Total	14.83	30	11.567

Table 4.1 gives the descriptive statistics for the currency used in this study. The results show that highest mean was 34.0 while standard deviation was zero for SEK while CHF had a mean of 31.0 and standard deviation of 0.707. KD had 31.0 mean had a standard deviation of zero while Japanese Yen had 27.75 mean and a standard deviation of 1.500 while DKK had a mean of 26.00 and a standard deviation of zero. The best currency according to the analysis was GBP with a mean of 1.50 while the standard deviation was at 0.707 and the most preferred would be SDR which had a mean of 3.00 and a standard deviation of zero.

4.3 Goodness of fit statistics

Table 4.2 indicates the strength of the relationship between rate, principal amount in Kenya shillings, amount repaid in Kenya shillings, interest rate and interest in Kenya shillings. The results from this model show a coefficient of determination (R2) of 97.1% and an adjusted R square of 96.7% which indicates that the model is very reliable.

Table 4.2 Goodness of fit statistics

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.986[a]	.971	.967	2.113

Source: Research Findings

Adjusted R square is the adjusted coefficient of determination which tells us the variation in the dependent variable due to change in the independent variables. From the findings in Table 4.2 the value of adjusted R. Square was 0.967 an indication that 96.7% of the variations of foreign exchange rate on the principal amount is caused by the exchange rates and interest rates in Kenya shillings at an interval of 95% confidence interval. Other factors not stated in the model account for 3.3% of the variation in foreign exchange rate. R is the correlation coefficient which in this case was at 98.6%. This shows that there was a strong relationship between the study variables, the exchange rate, and principal amount in Kenya shillings, interest rate and interest in Kenya shillings on the financial risk profile of the government of Kenya.

4.4 Analysis of Variance

Table 4.3 Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3768.553	4	942.138	211.026	.000[b]
	Residual	111.614	25	4.465		
	Total	3880.167	29			

Source: Research Findings

From the analysis of variance in Table 4.3, the F Test of 211.026 indicated the regression explanatory power on the overall significance. The significance value of 0.00 obtained implies that the regression model was significant in predicting the relationship between the foreign exchange and principal amount in Kenya shillings and the predictor variables as it was less than $\alpha = 0.05$. The significance level means that the changes are almost zero and that the results of the regression model were due to random exogenous events instead of the true relationship existing in the model.

4.5 Regression Model

Regression analysis was used to predict statistical significance between the dependent and independent variables. Regression analysis measures the effect of the relationship of the independent variables on the dependent variable. The researcher conducted a multiple regression analysis to investigate the impact of the given independent variables on the foreign exchange rate and financial risk profile of the government. The model used for the regression analysis was expressed in the form of the equation below.

$Y = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + \varepsilon$

Table 4.4 Regression Coefficients

	Coefficients[a]					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.282	.843		-3.895	.001
	Interest rate	.256	.199	.055	1.284	.211
	Amount repaid in Kenya Shillings	-1.123E-008	.000	-.101	-2.914	.007
	Interest in Kenya shillings	-.510	.086	-.388	-5.911	.000
	Equivalent to Kenya	1.643	.091	1.260	18.037	.000

Table 4.4 interprets the standardized regression coefficient (Beta). In the estimating of the contribution of each of the independent variable to the study it was established that majority of the independent variables had a significance contribution to the variance of the dependent variables at a significance level of 0.05. The relative importance of each of the independent variables was however different as shown in Table 4.4. The regression equation after estimation was given as

$Y = -3.282\ X_1 + 0.256\ X_2 - 1.123\ X_3 - 510X_4 + 1.643X_5 + \varepsilon$

From the regression equation above, it was established that holding the exchange rate (X_1) and interest rate (X_2) (0.211) and amount repaid in Kenya shillings (0.07) as a percentage of principal interest in Kenya shillings (0.01) and equivalent (0.01).

4.6 Interpretation of the Findings

This study established that there was a significant relationship between foreign exchange rate fluctuations and principal amount paid to Kenya. Table 4.2 shows the coefficient of determination as explained by the R squared for the study was 97.1 which means that the independent variables (the principal amount, the interest rate, the amount repaid in Kenya shillings and interest rate in Kenya shillings as a percentage of the foreign exchange rate) accounts for 97.1 of the change in exchange rate at a 95% confidence level. This also means that other factors not stated in the model account for 2.9% of the exchange rate. The significance values of the coefficient in the model are less that 0.05 indicating that the coefficients are significant.

The interest rate increased with the increase in years. The study found that an average exchange rate rose from as little as 79.80 to high as at 110.00 for the GBP in June 2015. The exchange rate fluctuation had a strong impact on the interest rates hence there was a high interest rate that was paid than the principal amount given as ODA. Hence the risk could be viewed as state risk because of the government debt obligation. The government could have higher interest to mature and they don't have sufficient tax receipts at hand to repay all the debt, they may re-enter the market and raise more money through bond issuance. According to Wrights (2011) the underlying risk is that the bond buyers may not have appetite for the specific

government paper or may demand higher yields thus jeopardizing the ability of the country to raise the required funding to settle.

The foreign exchange rate volatility may have a positive impact on loans depending on aggregate exposure to currency risk and the type of shocks to which the state is exposed to by the fluctuation of exchange rates against different currencies. This could explain the impact on the returns that are made against the amount issued to a country. Looking at the study as a whole, the findings were statistically significant since significance values of the coefficients were found to be close to 0.00 and less than 0.05. This is an indication that the error rate on making conclusions using the models derived from the findings was low and therefore the recommendations from these findings reflect the true picture of the effects of this independent variable.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter contains several sections which include; section 5.2 the summary of the study, section 5.3 is the conclusion based on the results of the study. Section 5.4 are the Policy recommendations of the study while section 5.5 are suggestions for further studies and section 5.6 contains the limitations.

5.2 Summary

The objective of this study was to establish the effect the foreign exchange rate fluctuations on the financial risk profile of the government of Kenya. The research methodology involved the use of the secondary data collected from Kenya National Bureau of Statistics and Central Bank of Kenya. The descriptive statistics helped the study to describe the relevant aspects of the phenomena under consideration and it provided detailed relevant aspects of the phenomena under consideration and it provides detailed relevant information about each of the variables under the study. The research findings indicate that there is a positive relationship between the exchange rate fluctuation and financial risk profile of the state.

The finding also established that unit increase in the exchange rate lead to 0.01 and the return rate was at 0.07 indicating the difference between exchange rate on the issue of the loan and the maturity of the loan. The findings of this study are consistent with those of Fone and Young (2000) who argue that the limited ability of government organizations' to avoid public risks is one of the features that serves to differentiate public sector risk management because the problem faced is similar, but

not identical, to the compliance or regulatory risks faced by private sector bodies. Regulatory risk defines the externally imposed rules under which specific activities must be managed, but the option to discontinue certain activities is still present within the private sector whilst it is lost in the public sector.

5.3 Conclusions

This study examined the effect of foreign exchange rate fluctuations on principal amount, interest rates and repaid amount of money. The study concludes that there is no existing significant relationship between foreign exchange rate and principal amount issued. There is also insignificant relationship between interest rates and foreign exchange fluctuation. There are different reasons as to why the macroeconomic environment of state in the repayment of the loan has been affected since if the loan was paid with the initial rate then it means the country would pay at a small amount than they are paying now. This has a negative impact on the economy of the country.

5.4 Policy Recommendations

Under Vision 2030, the country needs to ensure that the government should have few loans that are paid in a shorter period to reduce the amount of money paid back as interest rate. The interest rate grows as well as the fluctuation of foreign exchange rate for the state with a longer period of time. This can be realized if the exchange rates remain stabilized. There is need for the government to ensure political stability, national security by dealing with the current terror threats and ensure a stable and conducive macro-economic stability in the country in order to attract foreign

exchange rates. The government needs to come up with structures that would support the lead of interest rates and the money repaid for the loans.

The exchange rate fluctuation faced by the government of Kenya forms a significant component of the risk profile. It is therefore imperative for the state of Kenya with and without international operations to effectively manage its foreign exchange rate fluctuation.

Policy makers should create an enabling environment to maintain and sustain a stable foreign exchange rate system that is resistant to external shocks. This can help the country achieve the independence of the Central Bank especially monetary policy.

There is need to develop a proper capacity building plan to strengthen the bargaining power of GOK officers participating in negotiations for these funds. These officers need to be aware on how different currencies affect the loan repayment so that when negotiating they negotiate on repayment in an option of currencies. Hence at the time of repayment the government can pay in a currency that is stable.

5.5 Suggestions for Future Studies

A study should be carried out on foreign exchange rate risk management strategies that can be best applied by the government of Kenya to curb foreign exchange fluctuation.

A study on the effect of increase in interest rate on the country's borrowing on the risk profile of the country should be carried out.

A study on the impact of exchange rate fluctuation on foreign exchange should be carried to provide suggestions on how the state could use financial derivatives to hedge exchange rate exposure if necessary.

5.6 Limitations of the Study

The first limitation for the study was time; the study was conducted for duration of three months hence limited the research on the secondary data that was available. The element of confidentiality of given government reports take too long to be availed, hence the results were only from specific period of time that the study could get. Secondary data limits the researcher to what has been availed by the central bank and loans department in the treasury.

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APPENDIX I: ANALYSIS OF LOANS ADVANCED TO THE GOVERNMENT

Loan No	i	YEAR OF START	EXPECTED END DATE OF LOAN	CURRENCY	PRINCIPAL	RATE	EQUIV KSH WHEN ADV.	NO.OF INST	INTEREST RATE	INTEREST KSHS	AMOUNT REPAID IN KSHS AS AT 30-06-2015	TOTAL NO OF INSTALMENTS	REPAYMENT DATES
.1	2001	2006	2018	GBP	18,859,056.84	79.74	1,503,840,051.48	2	0.0775	1,409,339,617.96	1,914,213,403	26	30/06/06-31/12/18
.2	2002	2004	2018	GBP	303,125.00	85.80	26,008,125.00	2	0.0775	22,834,187.74	25,620,407	30	30/06/04-31/12/18
3	1991	2002	2031	XDR	41,300,000.00	100.42	4,147,346,000.00	2	0.0075	121,620,136.50	1,247,386,015	60	1/05/02-1/11/2031
.4	1991	2002	2031	XDR	21,600,000.00	100.42	2,169,072,000.00	2	0.0075	63,812,169.14	654,483,786	60	15/02/02-15/08/2031
5	1992	2002	2032	XDR	31,800,000.00	100.42	3,193,356,000.00	2	0.0075	89.00	951,298,983	62	1/07/02-1/1/32
6	1992	2002	2031	XDR	44,800,000.00	100.42	4,498,816,000.00	2	0.0075	141,999,349.15	1,456,403,581	60	1/04/02-1/10/31
7	1994	2004	2034	XDR	15,700,000.00	100.42	1,576,594,000.00	2	0.0075	16,368,331.49	198,404,018	UPTO 1/03/14 IS 1% LOAN AMT	1/09/04-1/03/34
8	1994	2004	2043	XDR	7,900,000.00	100.42	793,318,000.00	2	0.0075	16,319,518.22	197,812,342	80	15/07/04-15/01/43-INS OF 98750
9	2001	2001	2023	EUR	14,282,938.71	116.12	1,658,534,843.01	2	0.0075	53,568,809.93	492,586,758	62	30/06/01-20/10/23
10	2001	2001	2041	EUR	679,834.88	113.52	77,174,855.58	2	0.0075	1,812,272.70	17,259,740	81	31/12/01-31/12/41
11	1984	2004	2019	USD	79,464,583.33	100.42	7,979,833,458.00	2	0.02	628,412,429.88	3,491,180,166	30INST & DOWN PAYT OF USD 3M ON 15/05/04	15/08/04-15/02/19
12	2002	2004	2018	USD	13,633,902.09	100.42	1,369,116,447.88	2	0.03	185,829,009.45	538,634,810	52 INST	30/06/04-31/12/18
13	1998	2003	2014	USD	5,000,000.00	100.42	502,100,000.00	2	0.02	81,114,966.00	337,979,025	24 IN	27/05/03-27/11/14
14	2012	2014	2014	USD	600,000,000.00	86.02	51,612,000,000.00	1	0.17355	7,884,325,617.05	60,684,325,617.05	1 INS	15.07.14

15	2001	2002	2040	EUR	3,352,762.40	116.12	389,322,769.89	2	0.0075	10,112,052.50	103,713,359	71 INST	30/06/02-30/06/2040
16	2001	2004	2052	EUR	31,346,436.04	113.52	3,558,447,419.26	2	0.0075	46,798,621.07	567,256,013	98	30/12/04-30/12/52
17	2003	2003	2015	EUR	32,520,319.00	105.79	3,440,324,547.01	2	0.015	518,152,687.56	2,878,626,042	21 INST	31/12/03-30/06/15
18	2000	2003	2014	EUR	16,635,156.00	118.10	1,964,611,923.60	2	0.015	334,024,137.54	1,855,689,653	22 INST	30/09/03-31/03/14
19	2000	2004	2018	EUR	10,768,779.00	116.40	1,253,485,875.60	2	0.02	116,176,930.01	505,117,087	30	30/06/2004-31/12/18
20	1999	2005	2019	EUR	41,000,000.00	110.90	4,546,900,000.00	2	0.03	711,052,577.87	2,257,309,771	30	10/6/2005-10/12/19
21	1999	2005	2018	EUR	9,146,941.03	122.30	1,118,670,887.97	2	0.03	136,904,347.50	456,347,825	28	31/10/05-30/04/18
22	1986	1996	2020	DKK	135,000,000.00	11.74	1,585,359,000.00	2	0	-	927,635,240		10/10/1996-01/04/2020
23	1993	2002	2023	JPY	8,249,000,000.00	0.05	401,726,300.00	2	0.035	1,595,153,630.00	3,646,065,440	41 INST	20/10/2002-20/10/2023
24	1993	2003	2023	JPY	2,016,000,000.00	0.05	98,179,200.00	2	0.026	288,917,386.23	888,976,573	42 INST	20/10/03-20/04/2023
25	1993	2003	2023	JPY	572,000,000.00	0.05	27,856,400.00	2	0.035	496,647,699.63	1,135,194,742		20/10/03-20/10/2023
26	2001	2004	2018	JPY	257,248,040.00	0.60	154,348,824.00	2	0.0615	90,631,664.46	128,146,574	30 INST	30/06/04-31/12/2018
27	1997	2002	2018	KD	6,000,000.00	305.91	1,835,460,000.00	2	0.025	73,468,337.50	235,098,680	32 INST	15/07/02-15/01/2018
28	2000	2004	2018	CHF	5,584,725.76	45.71	255,277,814.49	2	0.03	74,881,066.65	217,046,570	30 INST	30/06/04-31/12/2018
29	2001	2004	2018	CHF	2,824,601.62	44.61	126,005,478.27	2	0.03	37,886,211.92	109,815,107	30 INST	30/06/04-31/12/2018
30	2001	2004	2018	SEK	17,042,184.11	8.40	143,154,346.52	2	0.025	26,739,797.99	93,007,993	30 INST	30/06/04-31/12/2018