THE EFFECT OF POLITICAL RISK ON EXCHANGE RATES IN KENYA

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D63/75452/2012

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN
FINANCE, UNIVERSITY OF NAIROBI

OCTOBER 2013

DECLARATION

This research project is my original work and has not been presented for academic purposes in the University of Nairobi or any other University.

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

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DEDICATION

This project is dedicated to my parents who encouraged me to begin the Master program and supported me both morally and financially throughout my period of study.

ACKNOWLEDGEMENTS

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ABBREVIATIONS

AAR	Abnormal Average Returns
AFRV	Average Forex Return Variability
AR	Abnormal Returns
ATM	Automated Teller Machine
B.E.A.P.	British East Africa Protectorate
CAAR	Cumulative Abnormal Average Returns
CAR	Cumulative Abnormal Returns
CDF	Constituency Development Fund
FDI	Foreign Direct Investment
GARCH	Generalized Autoregressive Conditional Heteroskedasticity
GBP	Great Britain Pound
GOK	Government of Kenya
KSH	Kenyan Shilling
S.P.S.S.	Statistical Package for Social Sciences
TSH	Tanzanian Shilling
USD	United States Dollar
USH	Ugandan Shilling

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ABSTRACT

Recently, exchange rate and political risk are highly addressed by international economics literature as the factors playing an important role in the world economy. Political risk is often referred as an indicator of countries' institutions quality. On the other hand exchange rate might be considered as an indicator of the whole economy performance.

Thus, this paper empirically examines the effect of political risk on exchange rates in Kenya with a daily time series data of 3 currencies for the period May 2010 to April 2013. Main results and conclusions are based on the Event Study methodology. The market model utilized interbank rate to calculate Abnormal Returns and Cumulative Abnormal Returns. Test of significance was conducted using t-test with 10% level of significance using a two tailed test.

From the collected data it was observed that politically risky events had a statistically significant effect on exchange rates for USD. The regional currency USH however did not show such a significant relationship. The other currency under study which was the EURO did show very minimal reaction to the political events.

This study recommends that policy makers should therefore come up with methods of mitigating political risk such as establishment of a private independent Central Bank.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Any firm or individual engaged in international business faces exchange rate risk. The exchange rate between the home and host currencies might change in the future, once transactions are contractually finalized (transactions exposure), and the firm's value might change due to its sensitivity to exchange rate movements (economic exposure). How the firm views exchange rate risk is critical (Clare & Ira 2009). With operations under the jurisdiction of a foreign government the firm is also exposed to political risk. It must therefore estimate the potential costs it will face due to unstable governments, regime change and/or changes in policies.

Kenya like many other developing countries can count foreign direct investments as one of the key factors in determining its economic growth. FDI is a significant source of capital inflows with positive effects on the host country's economy through direct technology transfer, technological advances, human capital development, international trade integration, and competitive business environment (Otieno 2012). However the macroeconomic environment in the host country must be favorable to attract foreign investment and one of the main factors of the operational monetary policy regime are exchange rates of its currency against other foreign currencies. Kenya liberalized her exchange rate market in the early 1990s, though this has done little to boost FDI inflows. The exchange rate has been volatile over the free regime with fluctuations pitting the shilling at historical highs and lows against foreign currencies.

This study will examine the effects of recent major political scenarios on exchange rate movements in Kenya. These political events are the general elections and referenda held in Kenya.

1.1.1 Political Risks

Political risks faced by firms can be defined as "the risk of a strategic, financial, or personnel loss for a firm because of such nonmarket factors as macroeconomic and social policies (fiscal, monetary, trade, investment, industrial, income, labour, and developmental), or events related to political instability (terrorism, riots, coups, civil war, and insurrection)." (Kennedy 1988) Portfolio investors may face similar financial losses. Moreover, governments may face complications in their ability to execute diplomatic, military or other initiatives as a result of political risk.

A low level of political risk in a given country does not necessarily correspond to a high degree of political freedom. Indeed, some of the more stable states are also the most authoritarian. Long-term assessments of political risk must account for the danger that a politically oppressive environment is only stable as long as top-down control is maintained and citizens prevented from a free exchange of ideas and goods with the outside world (Bremmer 2007).

Understanding risk partly as probability and partly as impact provides insight into political risk. For a business, the implication for political risk is that there is a measure of likelihood that political events may complicate its pursuit of earnings through direct impacts (such as taxes or fees) or indirect impacts (such as opportunity cost forgone). As a result, political risk is similar to an expected value such that the likelihood of a political event occurring may reduce the

desirability of that investment by reducing its anticipated returns. Unlike economic or financial variables, political risk is more difficult to quantify. While it is possible to calculate political risk scores or other quantitative benchmarks, it is important to remember that these are ultimately based on qualitative judgments.

1.1.2 Exchange Rates

In finance, an exchange rate between two currencies is the rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in terms of another currency. (O'Sullivan & Sheffrin 2003). For example, an interbank exchange rate of 91 Japanese yen (JPY, ¥) to the United States dollar (US$) means that ¥91 will be exchanged for each US$1 or that US$1 will be exchanged for each ¥91

People may need to exchange currencies in a number of situations. For example, people intending to travel to another country may buy foreign currency in a bank in their home country, where they may buy foreign currency cash, traveller's cheques or a travel-card. From a local money changer they can only buy foreign cash. At the destination, the traveller can buy local currency at the airport, either from a dealer or through an ATM. They can also buy local currency at their hotel, a local money changer, through an ATM, or at a bank branch. When they purchase goods in a store and they do not have local currency, they can use a credit card, which will convert to the purchaser's home currency at its prevailing exchange rate. If they have traveller's cheques or a travel card in the local currency, no currency exchange is necessary. Then, if a traveller has any foreign currency left over on their return home, may want to sell it, which they may do at their local bank or money changer. The exchange rate as well as fees and

charges can vary significantly on each of these transactions, and the exchange rate can vary from one day to the next.

There are variations in the quoted buying and selling rates for a currency between foreign exchange dealers and forms of exchange, and these variations can be significant. A currency pair is the quotation of the relative value of a currency unit against the unit of another currency in the foreign exchange market. The quotation EUR/USD 1.2500 means that 1 Euro is exchanged for 1.2500 US dollars.

There is a market convention that determines which is the base currency and which is the term currency. In most parts of the world, the order is: EUR – GBP – AUD – NZD – USD – others. Accordingly, a conversion from EUR to AUD, EUR is the base currency, AUD is the term currency and the exchange rate indicates how many Australian dollars would be paid or received for 1 Euro. Cyprus and Malta which were quoted as the base to the USD and others were recently removed from this list when they joined the Euro.

In some areas of Europe and in the non-professional market in the UK, EUR and GBP are reversed so that GBP is quoted as the base currency to the euro. In order to determine which is the base currency where both currencies are not listed, market convention is to use the base currency which gives an exchange rate greater than 1.000. This avoids rounding issues and exchange rates being quoted to more than 4 decimal places. There are some exceptions to this rule such as the Japanese who often quote their currency as the base to other currencies.

Quotes using a country's home currency as the price currency are known as direct quotation or price quotation and are used by most countries. Quotes using a country's home currency as the unit currency are known as indirect quotation or quantity quotation.

Using direct quotation, if the home currency is strengthening, then the exchange rate number decreases. Conversely if the foreign currency is strengthening, the exchange rate number increases and the home currency is depreciating.

Market convention from the early 1980s to 2006 was that most currency pairs were quoted to 4 decimal places for spot transactions and up to 6 decimal places for forward outrights or swaps. The fourth decimal place is usually referred to as a "pip". An exception to this was exchange rates with a value of less than 1.000 which were usually quoted to 5 or 6 decimal places. Although there is no fixed rule, exchange rates with a value greater than around 20 were usually quoted to 3 decimal places and currencies with a value greater than 80 were quoted to 2 decimal places. Currencies over 5000 were usually quoted with no decimal places such as the former Turkish Lira. In other words, quotes are given with 5 digits. Where rates are below 1, quotes frequently include 5 decimal places.

In 2005 Barclays Capital broke with convention by offering spot exchange rates with 5 or 6 decimal places on their electronic dealing platform.The contraction of spreads (the difference between the bid and offer rates) arguably necessitated finer pricing and gave the banks the ability to try and win transaction on multibank trading platforms where all banks may otherwise have been quoting the same price. A number of other banks have now followed this system.

1.1.3 Effect of Political Risk on Exchange Rates

Increases in political risk should lead to a depreciation of the currency of the country that is experiencing the political risk. This relationship is characteristic of freely floating exchange rate regimes whereby market players are free to respond to political risk by selling currency of the risky country and buying currency of more stable economies.

Recently, foreign exchange rates in Kenya over the last two decades have been characterized by volatility which creates uncertainty in the investment market. Prediction of the future rates is made difficult both in the short and long-run by the constant fluctuations causing uncertainty in the global investment market. This uncertainty implies that potential international businesses are naturally exposed to exchange rate risks if they are to invest in Kenya.

The role of exchange rate in an open economy framework is important in the monetary transmission mechanism. Real exchange rates affect aggregate demand channel of the monetary transmission of monetary policy. It affects the relative prices between domestic and foreign goods and foreign demand for domestic goods. The direct exchange rate channel for monetary policy transmission, affects inflation through domestic price of imported goods and intermediate inputs, which are components of consumer price inflation. (Ncube & Ndou, 2011) Appropriate macroeconomic policies are key to ensuring economic stability and growth.

Among the instruments that are crucial in economic management and stability of basic prices is the exchange rate (Were, Geda, Karingi & Ndung'u, 2001). As a relative price, the exchange rate is important in making spending and foreign direct investment decisions. Liberalization of the foreign exchange market in Kenya was gradual—from a fixed exchange rate regime to crawling peg before a flexible or floating exchange rate regime was adopted in the 1990s. Increases in net external inflows are strongly associated with the appreciation of exchange rates. The exchange rate movements are significantly driven by events such as expectations regarding the outcomes of withholding donor funding and other intermittent changes in the economy. This partly explains the high volatility of the exchange rate in Kenya in the 1990s. (Were, et al, 2001).

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Private capital inflows, on the other hand, are likely to respond to the interest rate differential. The policy of lowering interest rates is, therefore, consistent with a depreciation of the exchange rate. This implies that a demand for low interest rate regime must lead to a relatively weak shilling internationally.

1.1.4 Political Risk and Exchange Rate Volatility in Kenya

The 2005 Kenyan constitutional referendum was held on 21 November 2005. The exchange rate between the KSH and the USD went from a high of 81.1 November 2004 to 72.26 in December 2005. The 2007–08 Kenyan crisis was a political, economic, and humanitarian crisis that erupted in Kenya after incumbent President Mwai Kibaki was declared the winner of the presidential election held on December 27, 2007. During this period the exchange rate between the USD and KSH went from 69.1 in January 2007 to 62.8 in March 2008. A constitutional referendum was held in Kenya on August 4, 2010 on whether to adopt a proposed new constitution passed by parliament on April 1, 2010. Exchange rate was 75.7 in January 2010 and 81.7 in July 2010. General elections were held in Kenya on 4 March 2013. They were the first elections held under the new constitution, which was passed during the 2010 referendum and also the first general elections run by the I.E.B.C. KSH exchanged for USD at 86.4 in January 2013 and 84.9 in April of the same year.

1.2 Research Problem

Political factors, especially political risk, are often cited as potential determinants of the exchange rate both in popular economic writing as well as academic research. Studies utilizing traditional models of exchange rate determination have either been unable to find significant

links between political risk and nominal exchange rate (Isard, 1995), or tend to be based on anecdotal, rather than quantitative evidence (Cosset & Rianderie 1985). There does not seem to be any anecdotal reason why the exchange rate should necessarily move in a particular direction in response to political risk. Although increased political risk is usually viewed as a reason for exchange rate depreciation, a deterioration in the political climate of a country might encourage the purchase of its currency (perhaps due to investor belief that political turmoil might lead to a country dollarizing its foreign exchange at a higher rate than presently), hence leading to an appreciation (Lim 2003).

Ntwiga in 2012 analyzed the effects of the 2007 election violence shocks on exchange rates in Kenya. The GARCH model was used to test for asymmetry volatility and estimate annual volatility. Friedman nonparametric test was used to test for the significance difference between the countries' and periods' volatility. Correlation tests for linear relationship between the countries and each of the periods under study. The violence shocks adversely affected the exchange rates by increasing asymmetrical volatility, market over reaction and negative perception of the country. Emerging and developed markets differed in perception, information flow and reactions to the violence. Therefore, significant change in economic and political scene is bound to shift the market equilibrium.

Lim (2003) applies Markov regime-switching model to identify regime switches for a sample of 25 countries over an 8 year time period. It then uses the estimation transition probabilities obtained as observations for the dependent binary variable in a panel Probit model, which includes political risk as an independent variable. The study finds that political risk exerts a

(marginally) statistically significant contemporaneous effect on the nominal exchange rate. Furthermore, while only contemporaneous political risk is important for developed economies, both contemporaneous as well as lagged political risk play a role in developing countries.

There is a lack of empirical research specific to Kenya that analyses the effect that political risk has had on exchange rates over the long term. This research therefore aims at filling this knowledge gap by answering the research question of what effect political risk has on exchange rates in Kenya.

1.3 Objective of the Study

To investigate the effect of political risks on exchange rates in Kenya.

1.4 Value of the Study

This study will be significant to various groups as below;

It will provide knowledge that can help Policy makers in Kenya appreciate the significance of exchange rate while coming up with monetary policies that may deliberately influence the flow of foreign direct investments. With increased capital mobility and waves of capital inflows and outflows due to the recently discovered oil, there will be heightened potential for shocks and the pressure for flexibility. (Caramazza & Aziz, 1998). Hence such a study would be resourceful in providing empirical literature on the variables for informed monetary policy decisions.

Academic researchers dedicated to studying exchange rate movements in the country will benefit from this empirical study. So far no such study has been carried out in Kenya except on the effects of the 2007 election violence shocks.

Analysts can use the methodology from this study in forecasting expected exchange rates at given times. They can also use technical analysis to predict exchange rates from the findings of the study. This is more so because structural changes in the international economy represent one of the biggest challenges for professional forecasters. (Levich, 2001)

This study aims to increase the predictability of exchange rate movements not just for corporations but also individuals engaged in international business.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter looks at the theories advanced relating to exchange rate determination and political risk. It then goes further to evaluate empirical studies done in this area and their conclusions. The chapter looks at theoretic and empirical literature on exchange rate volatility including International Fischer effect, overreaction hypothesis, asymmetry in volatility and correlation in exchange rates.

It examines the history of Kenya's economic growth and how macroeconomic factors have impacted the economy of Kenya. Exchange rates which will be the main focus for our literature review under this chapter will therefore be better understood.

2.2 Theoretical Review

There are a number of theories that try to explain the determination of exchange rates and we will review specific ones relevant to this research. Exchange rates play an important role in providing economic indicators to potential foreign investors to a country. Hence it is essential to understand the theories of exchange rates in international trade. The following theories will inform this study..

2.2.1 International Fischer Effect Theory

The International Fisher Effect (IFE) theory suggests that foreign currencies with relatively high interest rates will tend to depreciate because the high nominal interest rates reflect expected rate of inflation (Madura, 2000). This theory also proposes that changes in the spot exchange rate

between two countries will also tend to equate the differences in their nominal interest rates (Demirag and Goddard, 1994).

Exchange rate control could be very costly, and even become pointless, when speculators attack a currency even under government protection. High interest rate will prevent capital outflows from foreign countries, hinder economic growth and, consequently, hurt the economy. Several factors could cause exchange rate changes. These include changes in foreign exchange supply and demand, balance of payments problems, rising inflation, interest rate, national income, monetary supervision, changing expectations and speculation (Khalwaty, 2000).

In linking exchange rate changes with changes in interest and inflation rates, the IFE theory states that the future spot rate of exchange can be determined from nominal interest differential. The differences in anticipated inflation that are embedded in the nominal interest rates are expected to affect the future spot rate of exchange (Sundqvist, 2002).

2.2.2 Purchasing Power Parity

The theory is also called the inflation theory of exchange rates. PPP can be traced back to sixteen-century Spain and early seventeencentury England, but Swedish economist Cassel (1918) was the first to name the theory PPP. Cassel once argued that without it, there would be no meaningful way to discuss over-or-under valuation of a currency.

Absolute PPP theory was first presented to deal with the price relationship of goods with the value of different currencies. The theory requires very strong preconditions. Generally, Absolute PPP holds in an integrated, competitive product market with the implicit assumption of a risk-neutral world, in which the goods can be traded freely without transportation costs, tariffs, export quotas, and so on. However, it is unrealistic in a real society to assume that no costs are needed

to transport goods from one place to another. In the real world, each economy produces and consumes tens of thousands of commodities and services, many of which have different prices from country to country because of transport costs, tariffs, and other trade barriers.

Although absolute PPP may contradict practical data, this does not imply market failure. It may simply reflect the inability, without expenses, to instantaneously move goods from one place to another. Thus, a more general version of PPP, called the relative purchasing power parity, was introduced to describe the relationship of prices with the exchange rate in different economies. If absolute PPP holds, the, the real exchange rate equals one. If relative PPP holds, the real exchange rate should be a constant, but is not necessarily equal to one. If an economy adopts a fixed exchange rate regime, the relative PPP model forecasts that the home prices change at the same speed as foreign prices. Conversely, if the inflation rates in the two economies are the same, according to relative PPP, the exchange rate should be constant. Mundell has in fact taken the fact that the PRC and the US experience the same inflation rate as a rationale for supporting a renminbi peg to the dollar.

2.2.3 Interest Rate Parity

Interest rate parity is a no-arbitrage condition representing an equilibrium state under which investors will be indifferent to interest rates available on bank deposits in two countries.
(Feenstra & Taylor, 2008). The fact that this condition does not always hold allows for potential opportunities to earn riskless profits from covered interest arbitrage. Two assumptions central to interest rate parity are capital mobility and perfect substitutability of domestic and foreign assets. Given foreign exchange market equilibrium, the interest rate parity condition implies that the expected return on domestic assets will equal the exchange rate-adjusted expected return on foreign currency assets. Investors cannot then earn arbitrage profits by borrowing in a country

with a lower interest rate, exchanging for foreign currency, and investing in a foreign country with a higher interest rate, due to gains or losses from exchanging back to their domestic currency at maturity. Mishkin (2006). Interest rate parity takes on two distinctive forms: uncovered interest rate parity refers to the parity condition in which exposure to foreign exchange risk (unanticipated changes in exchange rates) is uninhibited, whereas covered interest rate parity refers to the condition in which a forward contract has been used to eliminate exposure to exchange rate risk. Each form of the parity condition demonstrates a unique relationship with implications for the forecasting of future exchange rates: the forward exchange rate and the future spot exchange rate.

Economists have found empirical evidence that covered interest rate parity generally holds, though not with precision due to the effects of various risks, costs, taxation, and ultimate differences in liquidity. When both covered and uncovered interest rate parity hold, they expose a relationship suggesting that the forward rate is an unbiased predictor of the future spot rate. This relationship can be employed to test whether uncovered interest rate parity holds, for which economists have found mixed results. When uncovered interest rate parity and purchasing power parity hold together, they illuminate a relationship named real interest rate parity, which suggests that expected real interest rates represent expected adjustments in the real exchange rate. This relationship generally holds strongly over longer terms and among emerging market countries.

2.2.3.1 Covered Interest Rate Parity

When the no-arbitrage condition is satisfied with the use of a forward contract to hedge against exposure to exchange rate risk, interest rate parity is said to be covered. Investors will still be indifferent among the available interest rates in two countries because the forward exchange rate

sustains equilibrium such that the dollar return on dollar deposits is equal to the dollar return on foreign deposit, thereby eliminating the potential for covered interest arbitrage profits. Furthermore, covered interest rate parity helps explain the determination of the forward exchange rate.

2.2.3.2 Uncovered Interest Rate Parity

When the no-arbitrage condition is satisfied without the use of a forward contract to hedge against exposure to exchange rate risk, interest rate parity is said to be uncovered. Risk-neutral investors will be indifferent among the available interest rates in two countries because the exchange rate between those countries is expected to adjust such that the dollar return on dollar deposits is equal to the dollar return on foreign deposits, thereby eliminating the potential for uncovered interest arbitrage profits. Uncovered interest rate parity helps explain the determination of the spot exchange rate.

2.2.4 Overreaction Hypothesis

Goyal (2007) observe that investor's withdrawal from emerging markets during the periods of crises were always large, which makes the markets extremely volatile. Between 1982 and 1999, Fair (2002) observed sixty-nine events with an effect of greater than or equal to 0.75% absolute change in the S & P 500 futures. Time duration between trades is important and might contain useful information about market microstructure (Dunis et al., 2003; Goyal, 2007; Mende, 2005). An analysis is presented of possible extreme market movements in the exchange rate during the crisis period compared to the pre and post violence periods. Data available for analysis in the study is the daily mean exchange rates. Fabozzi and Focardi (2004: 573) observes that, according, to the overreaction hypothesis, investors react to unanticipated news that will benefit a company's stock and this pushes the price up more than anticipated in a normal situation.

Subsequently, there is a decline in the price of the stock. A possibility is that consumers and firms respond only to change in prices that are unprecedented in recent history. They also tend to respond to changes in prices proportionately showing a nonlinear transformation between the price and the level of information flow (Kilian, 2008; Shrivastava, 2005; Wang and Yang, 2006; Andrew, Hodrick, Xing and Zhang, 2006).

2.2.5 Asymmetry in Volatility

Wang et al. (2006) tackle the issue of asymmetric volatility in the foreign exchange markets in depth. They found that currency rates are not symmetric, for some currencies have greater economic importance than others and bad news leads to greater exchange rate movements than good news. Studies on the informed and uninformed customer show that the amount of asymmetric information in the market plays an important role in determining the equilibrium exchange rate (Onur, 2007; Goudarzi and Ramanarayanan, 2011). I expect an asymmetry in information to play a role between emerging and the developed markets, with contrasting market reactions.

One fact about volatility is that it persists and clusters. High-volatility days tend to group together and that the same is true for low-volatility days (Poon and Granger, 2005; Braun, Nelson and Sunier, 1995; Wang et al., 2006; Mende, 2005). The celebrated Black and Scholes model shows that the mean return on the stock is irrelevant and volatility is the most important factor in determining option prices. Braun et al., (1995) posit that if shocks to volatility persist for long periods, then changes in asset prices due to volatility movements can be large and the GARCH model can be used to capture volatility clustering.

2.3 Macroeconomic Risks

Macro risk refers to financial risk that is associated with macroeconomic or political factors. There are at least three different ways this phrase is applied. It can refer to economic or financial risk found in stocks and funds, to political risk found in different countries, and to the impact of economic or financial variables on political risk. Macro risk can also refer to types of economic factors which influence the volatility over time of investments, assets, portfolios, and the intrinsic value of companies.

2.3.1 Political Risk

Broadly, political risk refers to the complications businesses and governments may face as a result of what are commonly referred to as political decisions—or any political change that alters the expected outcome and value of a given economic action by changing the probability of achieving business objectives.

There are both macro- and micro-level political risks. Macro-level political risks have similar impacts across all foreign actors in a given location. While these are included in country risk analysis, it would be incorrect to equate macro-level political risk analysis with country risk as country risk only looks at national-level risks and also includes financial and economic risks. Micro-level risks focus on sector, firm, or project specific risk

2.3.2 Macro-level Political Risk

Macro-level political risk looks at non-project specific risks. Macro political risks affect all participants in a given country. A common misconception is that macro-level political risk only looks at country-level political risk; however, the coupling of local, national, and regional political events often means that events at the local level may have follow-on effects for

stakeholders on a macro-level. Other types of risk include government currency actions, regulatory changes, sovereign credit defaults, endemic corruption, war declarations and government composition changes (Clark 1997). These events pose both portfolio investment and foreign direct investment risks that can change the overall suitability of a destination for investment. Moreover, these events pose risks that can alter the way a foreign government must conduct its affairs as well. Macro political risks also affect the organizations operating in the nations and the result of macro level political risks are like confiscation, causing the seize of the businesses' property.

Research has shown that macro-level indicators can be quantified and modeled like other types of risk. For example, Eurasia Group produces a political risk index which incorporates four distinct categories of sub-risk into a calculation of macro-level political stability. This Global Political Risk Index can be found in publications like The Economist. Other companies which offer publications on macro-level political risk include Economist Intelligence Unit and The PRS Group, Inc.

2.3.3 Micro-level Political Risk

Micro-level political risks are project-specific risks. In addition to the macro political risks, companies have to pay attention to the industry and relative contribution of their firms to the local economy. An examination of these types of political risks might look at how the local political climate in a given region may affect a business endeavor. Micropolitical risks are more in the favour of local businesses rather than international organizations operating in the nation. This type of risk process includes the project-specific government review Committee on Foreign

Investment in the United States (CFIUS), the selection of dangerous local partners with political power, and expropriation/nationalization of projects and assets (Bremmer 2007).

For instance, Dubai Ports World suffered significant public relations damage from its attempt to purchase the U.S. port operations of P&O, which might have been avoided with more clear understanding of the US climate at the time.

Political risk is also relevant for government project decision-making, whereby government initiatives may be complicated as a result of political risk. Whereas political risk for business may involve understanding the host government and how its actions and attitudes can affect a business initiative, government political risk analysis requires a keen understanding of politics and policy that includes both the client government as well as the host government of the activity.

2.4 Determinants of Exchange Rate

Exchange rates are determined in the foreign exchange market, which is open to a wide range of different types of buyers and sellers where currency trading is continuous: 24 hours a day except weekends. The spot exchange rate refers to the current exchange rate. The forward exchange rate refers to an exchange rate that is quoted and traded today but for delivery and payment on a specific future date (O'Sullivan & Sheffrin 2003).

In the retail currency exchange market, a different buying rate and selling rate will be quoted by money dealers. Most trades are to or from the local currency. The buying rate is the rate at which money dealers will buy foreign currency, and the selling rate is the rate at which they will sell the currency. The quoted rates will incorporate an allowance for a dealer's margin (or profit) in trading, or else the margin may be recovered in the form of a "commission" or in some other

way. Different rates may also be quoted for cash (usually notes only), a documentary form (such as traveller's cheques) or electronically (such as a credit card purchase). The higher rate on documentary transactions is due to the additional time and cost of clearing the document, while the cash is available for resale immediately. Some dealers on the other hand prefer documentary transactions because of the security concerns with cash.

2.4.1 Exchange Rate Regime

Each country, through varying mechanisms, manages the value of its currency. As part of this function, it determines the exchange rate regime that will apply to its currency. For example, the currency may be free-floating, pegged or fixed, or a hybrid.

If a currency is free-floating, its exchange rate is allowed to vary against that of other currencies and is determined by the market forces of supply and demand. Exchange rates for such currencies are likely to change almost constantly as quoted on financial markets, mainly by banks, around the world.

A movable or adjustable peg system is a system of fixed exchange rates, but with a provision for the devaluation of a currency. For example, between 1994 and 2005, the Chinese yuan renminbi (RMB) was pegged to the United States dollar at RMB 8.2768 to $1. China was not the only country to do this; from the end of World War II until 1967, Western European countries all maintained fixed exchange rates with the US dollar based on the Bretton Woods system. (O'Sullivan & Sheffrin 2003). But that system had to be abandoned due to market pressures and speculations in the 1970s in favor of floating, market-based regimes.

Still, some governments keep their currency within a narrow range. As a result currencies become over-valued or under-valued, causing trade deficits or surpluses.

2.5 Empirical Review

Del Bo (2009) investigates the effect of exchange rate and institutional instability on the level of Foreign Direct Investment flows between developed and developing countries by presenting an empirical investigation on a panel of countries over two decades, both with cross country and cross sector data, justified by a partial equilibrium model of foreign entry. The issue is first presented with a partial equilibrium model of FDI in an oligopolistic industry , where n identical foreign firms have to decide whether to enter a host market characterized by exchange rate volatility and political risk. The results are that both exchange rate variability and political risk have a dampening effect on FDI flows, and that the interaction term is negative, indicating that the two effects reinforce each other. The econometric analysis confirms and verifies these results. The sectoral evidence points in the direction of specific industry effects, especially with respect to the role of interest rates and wages. The general conclusion regarding the role of exchange rate instability and institutional risk are confirmed, with some qualifications for the primary, financial, depository, trade and service sectors.

Clare and Gang (2009) examine the relationship between foreign direct investment (FDI), exchange rate risk and political risk using data for 53 countries during the years 1999 to 2003, To examine the determinants of a U.S. multinational's allocation of its FDI in the world the data set they created is a cross-sectional time-series panel of 53 countries over the years 1999-2003. The data for both "all industries" and "manufacturing" FDI outflows by country were obtained from the BEA's "All Nonbank U.S. Direct Investment Abroad: Capital Outflows by Country and Industry" for the years 1999 to 2003, and covers all foreign affiliates, not just majority-owned.

The BEA only makes the yearly sales data available for majority-owned affiliates whereas the FDI is for all foreign affiliates.

They estimate a succinct model with four explanatory variables, overall political risk and three variables that are discounted by r : sales in dollars (S \$); sales in the foreign market ($f S$) (denominated in terms of the host country currency and then converted to dollars through the exchange rate, e); and the exchange rate risk variable which also includes $f S$. Since $S\$ = Stotal - eS f$, and as $f S$ is also contained in the exchange rate risk variable, to reduce the effects of multicollinearity the \$ S and $f eS$ were combined and *total S* was used. This was divided by (r) to obtain the respective sales variable. Political risk (*PolRisk*) measured each nation's political stability. The greater the political stability, the larger is this index and the more appealing the location for investment. They employed the "Political Risk Score" from *Euromoney's* March editions of Country Risk Assessment which covers items as risk of non-payment of loans, goods, dividends, and non-repatriation of profits. This score constitutes 25% of the weight in calculating a country's overall risk factor. The higher the score the less risky (more stable) is the nation. A score of 25 indicates relatively little political risk; a score of 0 indicates the greatest risk.

They found that exchange rate risk has a significant and negative impact on FDI for all countries, both developed and developing. Furthermore, they found that political stability has a positive effect on FDI, but is only significant for developing countries. Exchange rate risk has a negative impact on the foreign direct investment of U.S. multinationals. When investing in developed nations the firms appear to take past and present exchange rate variation into consideration.

Deseatnicov and Akiba, (2011) examine the role of exchange rate and political risks in the Japanese outward Foreign Direct Investment (FDI) activities with a panel data of 30 developed and developing countries for the period of 1995-2009. A number of econometric methods were used in order to provide evidences for the established hypothesis. Main results and conclusions are based on the Generalized Method of Moments (GMM) specification. The estimation model is constructed on the basis of the OLI (ownership, location and internalization advantages) and general equilibrium theoretical models. Exchange Rate and Political risk variables are included as additional explanatory variables with market potential, wages, skilled workforce endowments, investment cost, openness and distance. They found that, the model with exchange rate, political risk factors and some traditional explanatory variables reasonably explains recent Japanese outward FDI flows and reveals new patterns in its behavior depending on the economic stage of development.

In 2012, Ntwiga carried out a study on election violence shocks of the 2007 general election and their effect on foreign exchange rates. Daily time series data from January 2007 to December 2008, for pre-violence, violence and post-violence periods was analysed. The GARCH model was used to test for asymmetry volatility and estimate annual volatility. Friedman nonparametric test was used to test for the significance difference between the countries' and periods' volatility. Correlation tests for linear relationship between the countries and each of the three periods under study, while descriptive statistics summarizes the data. The study found that the violence period had highest correlation with GARCH parameters indicating a reactive period, showing over reaction in the market. Emerging and developed markets exchange rates were found to correlate negatively but positively amongst themselves, with similar perception on the crisis. The violence

shocks adversely affected the exchange rates by increasing asymmetrical volatility, market over reaction and negative perception of the country. Emerging and developed markets differed in perception, information flow and reactions to the violence. The study concluded that significant change in the economic and political scene is bound to shift the market equilibrium.

Omondi (2012) examined the impact of exchange rate fluctuations on foreign direct investments in Kenya. All the sectors of the Kenyan economy were the target population for this research project. Time series data for exchange rate fluctuation and foreign direct investments to Kenya between 1981 and 2010 were collected from Central Bank of Kenya and the World Bank Country data websites for analysis. The standard deviations for the exchange rates were derived for each year under study to determine the fluctuations. The absolute figures of the foreign direct investments data to Kenya was transformed through logarithmic transformation for normalization purposes. Pearson moment correlation was used to examine the relationship between exchange rate fluctuations and foreign direct investments over the period of study. The variables were plotted against on a graph and a best line of fit determined to generate the linear statistical model for their relationship. From the collected data it was observed that while 1987 and 2002 recorded the lowest fluctuations in exchange rates and fairly low net foreign capital inflows into the country, conversely 1993 recorded the highest exchange rate fluctuations and the relatively high foreign direct inflows. This should point at a strong relationship between the two variables. However the inferential analyses found a weak relationship between exchange rate fluctuations and foreign direct investments. The best line of fit also revealed a positive for exchange rate fluctuations plotted against the logarithm of net foreign direct investments in current prices of tens of millions of USD. This means that an increase in the exchange rate

fluctuations leads to an increase in the foreign capital inflows. However this finding is made less important by the insignificant relationship between the two variables.

The conclusions drawn from this study finding suggested that the impact of exchange rate fluctuations in attracting FDI is insignificant.

2.6 Summary of Literature Review

Only one empirical studies has been found in Kenya conducted specifically on the impact of political risk on exchange rates. There is a research gap in studies focusing on the relationship between political risk and exchange rates in Kenya. The only study that has been done in this area utilised GARCH methodology to analyse the effect of political risk shock on exchange rates. This study was only short term as it focused on only one year and also did not utilise the event study methodology. It is hence important to understand the impact of this exchange rate volatility on the uncertainty surrounding capital inflows to Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the proposal of how to go about collecting information on exchange rate movements in Kenya that would be used to complete the research process and provide an analysis of the information so collected.

3.2 Research Design

To examine the effect of Political Risk on Exchange rates in Kenya, Event Study methodology was used. To construct an event study, the event, event date, event window, estimation window and estimation model was determined. The events defined were the general elections of 2013 and the constitutional referenda of 2010. The event window was thirty days before and after these events. These can be expressed as -30 to +30. The estimation window and post-event window was twenty four days. Er ,AR, and CAR, were then calculated. The t- test was used as the test statistic due to its simplicity of use. The level of significance was set at 10% using a two tailed test at a 90% confidence level.

3.3 Population

In the observation of movements in foreign exchange markets, exchange rate data was employed. The data used in this study span daily observations from January 1962 to April 2013.

3.4 Sample

The period under study was May 2010 to April 2013. The data was divided into the pre and post-election periods of the August 2010 Constitutional referendum and the March 2013 General elections.

The currencies for the study were the, USD, EURO, and USHS. The sample is selected EURO is the currency of most of Europe, and the USHS, Kenya's neighbor, member of the East Africa Community and also emerging market currency. Data is available from the Central Bank of Kenya website (Central Bank of Kenya, 2013).

Purposive sampling was used to determine the sample. This is the technique that allows the researcher to use cases that have the required information with respect to the objectives of the study (Mugenda & Mugenda, 2003). This sampling technique is most suitable because the data of interest can be selected for the period that is being studied which is the periods with political risk.

3.5 Data Collection

The nature of data collected was secondary quantitative data gathered from the Central Bank of Kenya website as well as newspapers and websites. This consists of daily quoted exchange rates for the currencies under study.

3.6 Data Analysis

Data was analysed using S.P.S.S. as well as Microsoft Excel. An Event study is a statistical method to assess the impact of an event on the value of a factor (Gilson & Black, 1995). For example, the announcement of a merger between two business entities can be analyzed to see whether investors believe the merger will create or destroy value. The basic idea is to find the abnormal return attributable to the event being studied by adjusting for the return that stems from the price fluctuation of the market as a whole.

As the event methodology can be used to elicit the effects of any type of event on the direction and magnitude of stock price changes, it is very versatile. Event studies are thus common to various research areas, such as accounting and finance, management, economics, marketing, information technology, law, and political science.

One aspect oftentimes used to structure the overall body of event studies is the breath of the studied event types. On the one hand, there is research investigating the stock market responses to economy-wide events (i.e., market shocks, such as regulatory changes, or catastrophic events). On the other hand, event studies are used to investigate the stock market responses to corporate events, such as mergers and acquisitions, earnings announcements, debt or equity issues, corporate reorganisations, investment decisions and corporate social responsibility (MacKinlay 1997; McWilliams & Siegel, 1997)

3.6.1 Analytical Model

Data was analyzed using the market model which measured the estimation of abnormal return on exchange rates. Following is the formula for the model to compute abnormal returns;

$$AR_{jt} = R_{jt} - Er_{jt}$$

Where

AR_{jt} = Abnormal Return of currency prices j on day t

R_{jt} = Actual Return of currency prices j on day t

Er_{jt} = Expected Return of currency prices j on day t

Actual Return of currency j in period t will be computed as follows;

$$R_{jt} = \frac{P_{jt} - P_{jt-1}}{P_{jt-1}}$$

Where

P_{jt} = Price of currency j on day t

P_{jt-1} = Price of currency j on day prior to t

Expected return of currency j in period t was computed as follows;

$$Er_{jt} = a_f + b_f\,R_{mt}$$

Where

a_f = Risk free rate of return

b_f = Relative riskiness of forex market prices

R_{mt} = Rate of return of Interbank Rate on day t

The abnormal returns were aggregated trading day wise and then divided by the number of currencies. Thus cross sectional and time series aggregation was done. After this CARs were computed. The formula for CARt is as follows;

$$CARt = \sum_{t-k}^{t} ARi$$

Where

k = Number of event days before day t

t test was used to determine the statistical significance of CARt and ARt. For computation of t statistics the aggregate pre-event standard deviation of abnormal returns of all the forex was computed. Individual currencies pre-event standard deviation i.e. from -60 to -31 was computed and the aggregation done. The formula for estimation of pre-event standard deviation of daily abnormal returns is as follows;

$$i, pre\ s = \frac{\sqrt{\sum^{-30}(ARjt - AARjt\ pre}}{n}$$

Where

i, pre s = Standard deviation of abnormal returns of currency i estimated for pre-event measurement period.

n = number of days in pre-measurement period

AAR pre = Average of abnormal return of currency I estimated for pre-event measurement period.

Aggregate pre-event standard deviation was computed as follows;

$$s_{N, pre} = \sqrt{\sum_{I=1}^{N} \partial^2 I\, pre}$$

$$N^2$$

i, pre s was applied on AAR of each day. The t test for AARs was as follows;

$$AAR\ t\ stat = \frac{AAR_t}{s_{N, pre}}$$

For testing CARs the t test formula is;

$$CAR_t\ t\ stat = \frac{CAR_t}{s_{N, pre}\sqrt{N_t}}$$

Where

N_t = absolute value of the event year t plus 1 (e.g. for event day -30, the absolute value will be 4 and $N_t = 4$

A testable hypothesis was set H1: the null hypothesis being tested was that political risk do not have an effect on exchange rates. If AR_t or CAR_t are statistically significant it indicates that the forex prices on an average reacted to politically risky events. If the t test statistic was larger in

absolute value than 1.671 or -1.671, the relevant abnormal return was statistically significant at

10% level.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter analyses the data collected for exchange rates and interbank rate between May 2010 and April 2013. This data was collected from CBK website. Analysis involved evaluation of abnormal returns around election dates.

4.2 Data Presentation

This study analyzed the returns of the currencies and compared the same with the market returns so as to establish the abnormality of returns following the August 2010 and March 2013 elections.

Table 4.1 t-statistics for 60 days surrounding August 2010 Referendum

Date	Currency	Er	AR	CAR	t-Stat	sig
-30	USD	0.00103	0.00341	0.00443	1.08912	0.2805
0	USD	0.00041	-0.00346	-0.01678	-1.70597	0.2733
+30	USD	0.00016	-0.00325	-0.00918	-1.04054	0.3024
-30	USH	-0.00094	-0.00347	-0.00316	-0.50776	0.6136
0	USH	-0.00041	-0.00107	-0.00445	-0.15571	0.8768
+30	USH	-0.00019	0.00195	0.00769	0.28573	0.7761
-30	EURO	-0.00015	-0.00996	-0.00996	-1.41374	0.1627
0	EURO	-0.00039	0.00477	0.05692	0.67655	0.5013
+30	EURO	-0.00022	-0.00017	0.06429	-0.02439	0.9807

Source: *Research Findings*

In order to determine the sensitivity of foreign exchange prices to these events, t statistics for 30 days before, during and after the events were calculated. If the value was more than 1.671 or less than -1.671, this was indication that the foreign exchange prices were sensitive to these events.

During the 2010 referendum, the USD had statistically significant abnormal returns on day -28 at -2.62556 day -5 at -2.10704 and +15 at -1.80187. the USH did not show any statistically significant abnormal returns. EURO however had significant abnormal returns on day -24 at 1.97421. It was noted that on the event date the CARs were not statistically significant.

Table 4.2 USD t-statistics for 60 days surrounding March 2013 Election

Date	Currency	Er	AR	CAR	t-Stat	sig
-30	USD	-0.00379	0.00365	0.00935	-0.96817	0.3369
0	USD	-0.00376	0.00256	0.11444	-0.67937	0.4996
+30	USD	-0.00376	0.00408	0.20117	-1.08066	0.2843
-30	USH	0.00048	-0.00034	-0.00034	-0.05357	0.9575
0	USH	0.00038	0.00082	-0.01052	0.12928	0.8976
+30	USH	0.00038	-0.00726	-0.02662	-1.14826	0.2555
-30	EURO	0.00018	-0.00530	-0.00530	-1.32350	0.1908
0	EURO	0.00014	-0.00477	-0.04162	1.07137	0.2884
+30	EURO	0.00015	0.00146	-0.06954	0.57156	0.5698

Source: *Research Findings*

For the March 2013 election, the USD had statistically significant returns on day -2 at 2.02960, +2 at -2.27907 and +8 at -1.9095. the USH had significant returns on day +29 at 3.07489. the EURO showed statistically significant returns on day t-14 and t-22. It was also noted that on the event date abnormal returns were not statistically significant.

All the currencies under study showed erratic abnormal returns for both the events except the USD during the March 2013 election period during which the abnormal returns were positive.

The USD had negative abnormal returns for the periods t-1 to t+3 which means that no investor benefitted from above normal returns pointing at the market adjusting to the political events. This implies that the market does react fast to political events and points to efficiency but not

perfect efficiency. However period between t-15 to t1 had above normal returns meaning that the investors enjoyed above normal returns.

The study sought to establish the variability of the forex return following political events and therefore determine the forex market reaction to the events. The information presented in the above tables show that the variability in forex prices does increase erratically with time though there is more variability in the days preceding and after the political events. However the t significance shows that 15 of the statistics were significant . 10 of which were in the post event period. 6 out of 10 were between t0 and t15.

Results support the semi strong form market hypothesis since forex prices adjust so fast to public information that no investor can earn an above normal return by trading on the event date and after.

To track abnormal returns over a number of trading days , CAR is computed throughout the event periods as presented in the tables above. It can be noted that CAR for the forex market are erratic during the entire event window. From the results shown in the table above, the CAR for all currencies was found to be positive and negative in the period after political events that trading volume reacted both ways towards the events. In the pre event period the CAR for all currencies was found to have both negative value and indication the market was not sensitive to political events, in the results on t-value, the study found that period surrounding the event date. The value of t was close to 1.671 an indication that trade volume was very sensitive to the events.

4.3 Interpretation of Findings

There was evidence of political risk causing the return on exchange rates to be significantly different from what they would ordinarily have been.

From the findings on sensitivity of forex price to the events, the study found that during and after t value was close to 1.671 for the USD in 2010 and for the EURO in 2013, this was an indication that the forex prices were sensitive to the events. On nearing the event dates, the forex market was very sensitive to the events which could be attributed to speculation by the investors. From the findings on abnormal returns for the entire market following the two events, the study found that t-2 to t+1 had positive abnormal returns greater than 1. The other currencies under study did not however show statistically significant reaction to the two events.

Ntwiga (2012) found that the dominant foreign currency, USD, had higher volatility and more market reaction. This is in agreement with the findings of this study. GARCH shows an above average volatility clustering in the violence period due to overreaction and lag effects in the post violence. GARCH persistent and reactive coefficients vary in the three periods being lowest during the violence period as the violence lasted for only two months. USHS had the highest persistent coefficient, then GBP. USHS, pre-violence, and TSHS, post-violence period indicates that the expected future and current volatility are the same (summation of persistent and reactive coefficients is one). Generally, volatility and market reaction varies on period and country basis. Accepting that, market over reacted and induced asymmetry volatility

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, conclusions are drawn from the analytical findings of the previous chapter and recommendations made to inform any future policy aimed at predicting exchange rates in Kenya. The limitations to this research project are also highlighted with recommendation of areas for further study to contribute to the knowledge on exchange rate determinants in Kenya and better understand the relationship between exchange rates and political risk.

5.2 Summary

The general objective of the study was to investigate the effect of political risk on foreign exchange rates in Kenya. Data was analysed this using the event study methodology. The population of data used in this study span daily observations from January 1962 to April 2013. The period under study was May 2010 to April 2013. The currencies for the study were the, USD, EURO, and USHS. The events under study were the August 2010 referendum and the March 2013 election. In the analysis of data, Er, AR and CAR were calculated. From the appendix and time series data, it is revealed a significant relationship between the two variables in Kenya in the case of the USD exchange rate. This means that significant political events have an impact on depreciation or appreciation of the USD in Kenya. It further means that in coming up with forex strategies; institutions should put a lot of focus on political risk factors

5.3 Conclusions

The correlation between the USD and the EURO with the Kenyan Shilling, versus the USHS correlation with the Kenyan Shilling in the two periods shows that the variations are due to

importance of the currency to the Kenyan economy. Countries in the same block, in terms of economic and market growth will have high correlations. Information asymmetry from uninformed and informed investors in the Kenyan market could have triggered this behaviour during the events.

From this research we conclude that that the impact of political risk on exchange rate fluctuations is significant in Kenya. We also note that though the relationship between the two variables is positive hence we conclude that an increase in political risk leads to an increase in exchange rate though the impact is weak. However other research methodologies can be applied in future researches to see if this conclusion is sustained.

5.4 Recommendations for Policy

Since we have established from this study that political risk impact on exchange rate fluctuations in Kenya. These may include factors like an unfavorable political climate, stagnation in growth and development of key and emerging sectors in the country like agriculture tourism and manufacturing. It would therefore be important for policy makers not to put a lot of effort in maintaining stable political environment in the country.

Player in the foreign exchange market should also develop models for predicting politically significant events and strategies for mitigating the accompanying exchange rate movements.

The primary finding of this paper is that political risk is a key determinant of exchange rates therefore hints at the need for credible theories of either nominal exchange rate determination or currency crises to include political economic factors that impact on these phenomena. Although this has been to a lesser extent, incorporated in risk premia (for the former) and time inconsistent or opportunistic policy maker behavior (for the latter), there has been to my knowledge, no

formal work that considers the possibility that special interest groups might have an impact on exchange rates and how currency crises may be induced by the incongruence of their interests with that of the general population.

In terms of policy implication that arise from the analysis, the importance of political stability in generating positive externalities for exchange rate stability suggests that governments should seek to reduce the amount of political change and upheaval taking place. This is easier said than done, nonetheless policy makers can seek to minimize the influence of political events on the macro economy by establishing an independent Central Bank that does not actively intervene in currency markets, in response to calls by the fiscal authority. In that manner, political risks are less likely to have a spillover effect on the economic equilibrium and exchange rates. Attempts to mitigate exchange rate volatility via government intervention often run into the unfortunate paradox of simply being translated into political or regulatory risk.

5.5 Limitations of the Study

The main shortcoming of the paper is that the time period of the sample (2010-2013) is relatively small. Part of this is due to limitations in time. With availability of time, the study could be repeated with a larger dataset. Likewise, the limited sample of currencies used in the study is another shortcoming. Therefore future empirical work could extend the sample to a larger set of currencies in order to reinforce (or refute) the findings here.

This research did not factor the effect of time lagged data for exchange rate fluctuations in terms of how long it takes for foreign investors to respond to such fluctuations. Investors are known to be speculative and would want to strike when they can make most returns. Depreciation in currency would trigger investors' reaction seeking to maximize their profits.

The events studied were not spontaneous whose outcome could not be predicted. Because of this, it became easier for the market to predict the outcome of the events. Market players knowing the timing of these events well in advance also contributes to this.

5.6 Areas for Further Research

Future research opportunities may involve considering the effect of political risk volatility on exchange rate in Kenya. The Generalized Autoregressive Conditional Heteroskedasticity (GARCH) could be used in analyzing volatility clustering, its asymmetry and variations. The GARCH model further estimates the daily and annual volatility of the exchange rate data. However it would be interesting to factor in foreign investor responsiveness in future studies and establish if it is one of the determinants of foreign capital inflows into the country.

An interesting area of study would be on the effect of exchange rates on political risk of a country such as Kenya. A measure of political risk could be derived from such factors as institutional risk indicators, literacy levels. GDP, and energy use.

Lastly, there exists a gap of knowledge on the determinants of exchange rates in Kenya in general. This is an area that should be thoroughly studied as it has major potential benefits for this country's economy.

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APPENDIX I: EXCHANGE RATE DATA

USD Returns for 60 days surrounding August 2010 Referendum

Date	Currency	Mean	USD Return	Interbank Rate	Interbank Return
22-06-2010	USD	80.63610	0.00136	1.16000	0.01754
3/8/2010	USD	80.14580	-0.00151	1.62000	-0.01220
16-09-2010	USD	80.84030	-0.00023	1.12000	0.00901

USH Returns for 60 days surrounding August 2010 Referendum

Date	Currency	Mean	USH Return	Interbank Rate	Interbank Return
22-06-2010	KES/USHS	27.965	-0.00003	1.16000	0.01754
3/8/2010	KES/USHS	27.612	-0.00746	1.62000	-0.01220
16-09-2010	KES/USHS	27.783	0.00068	1.12000	0.00901

EURO Returns for 60 days surrounding August 2010 Referendum

Date	Currency	Mean	EURO Return	Interbank Rate	Interbank Return
22-06-2010	EURO	99.24230	-0.01011	1.16000	0.01754
3/8/2010	EURO	105.41800	0.00437	1.62000	-0.01220
16-09-2010	EURO	104.92800	-0.00039	1.12000	0.00901

USD Returns for 60 days surrounding March 2013 Election

Date	Currency	Mean	USD Return	Interbank Rate	Interbank Return
18-01-2013	USD	86.86530	0.00186	5.77220	0.02477
5/3/2013	USD	86.03750	-0.00119	9.61380	-0.00719
18-04-2013	USD	83.79330	-0.00126	7.76300	-0.01714

USH Returns for 60 days surrounding March 2013 Election

Date	Currency	Mean	USH Return	Interbank Rate	Interbank Return
21-01-2013	KES / USHS	30.684	0.00014	5.82210	0.00864
5/3/2013	KES / USHS	30.859	0.00119	9.61380	-0.00719
19-04-2013	KES / USHS	30.697	-0.00688	7.71610	-0.00604

EURO Returns for 60 days surrounding March 2013 Election

Date	Currency	Mean	EURO Return	Interbank Rate	Interbank Return
21-01-2013	EURO	115.68400	-0.00512	5.82210	0.00864
5/3/2013	EURO	112.19400	-0.00463	9.61380	-0.00719
19-04-2013	EURO	109.52000	0.00161	7.71610	-0.00604