EFFECT OF DIASPORA REMITTANCE ON STOCK MARKET PERFORMANCE AT THE NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI, KENYA

NOVEMBER 2015

DECLARATION

I hereby declare that this research project is my original work and has not been presented in any other institution.

Signature …….. Date …….

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D63/74923/2014

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

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ACKNOWLEDGEMENT

I thank the Almighty God for seeing me through the entire research period and academic life at large. Many thanks go to my supervisor DR. Cyrus Iraya for his guidance, relentless support and patience during this entire research period. I am greatly indebted to him.

I'm also grateful to my fellow MSC and MBA students at university of Nairobi for their support and encouragement throughout the research process. To my loving family, I will be always indebted to their support, love and sense of importance and belonging they have always accorded me.

DEDICATION

This research project is dedicated to my loving wife Teresia and my son Elvis for their continued support and love.

Special dedication to my parents for believing in me and the major sacrifices they made to make me whom I'm today.

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LIST OF ABBREVIATIONS

CBK	:	Central Bank of Kenya
FDI	:	Foreign Direct Investment
GDP	:	Gross Domestic Product
KES	:	Kenya Shilling
NASI	:	Nairobi Securities All Share Index
NSE	:	Nairobi Securities Exchange
SPSS	:	Statistical Package for Social Sciences
USD	:	United States Dollar

ABSTRACT

Stocks market is an important component of a market economy and provides companies with access to capital and vital information to investors. Additionally, stock market plays an important role on liquidity creation and economic growth. It acts as a major channel through which the savings of the surplus unit is transformed into medium and long term investments in the deficit unit of the economy. diaspora remittances on the other hand are vital to economic performance especially in developing countries. The relationship between diaspora remittances and stock market performance has been highly neglected by scholars with minimal empirical evidence available. This is not withstanding the fact that diaspora remittance to developing world has been on the rise with World Bank (2015) expecting the remittance to reach $440 billion in 2015, an increase of 0.9 percent compared to 2014.Therefore this study sought to determine the effect of diaspora remittances on stock market performance using evidence from the Nairobi Securities Exchange. The study used secondary data collected from the Central Bank of Kenya and Nairobi Securities Exchange. Stock market performance was measured by Nairobi Securities Exchange All Share Price Index (NASI). Inflation, interest rates and exchange rates were used as control variables. Descriptive analysis design was applied by the study and data analyzed on monthly basis. The study found that diaspora remittance has strong and significant positive effect on stock market performance. Increase in diaspora remittance will significantly improve the performance of stock market. Further, the study found that inflation, lending interest rates and exchange rates have significant negative effect on stock market performance. The study recommends the government to create conducive environment that encourage the diaspora population to invest more in Kenya.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The concept of diaspora remittances is not new to discussion of migration and development. Recently, however, an upward trend of migrant's monetary flows has led to a resurgence of focus on the topic more so in Kenya. According to Ratha *et al*. (2011) diaspora remittances have grown significantly to become a primary source of foreign inflow in Africa to an extent of exceeding foreign aid and foreign direct investments (FDI). This has led to the topic's prominence among donors, international financial institutions, commercial banks, money transfer operators, microfinance institutions, and policy makers hence the debate on the influence of remittances on performance of key sectors of the economy. Theoretically a positive relationship exists between stock market development and economic development (Alajekwu, 2012). However, there is little evidence to confirm any causal relationship between the inflows of remittances and performance of various key segment performances that includes the Nairobi stock exchange**.**

Unlike other sources of external finance, diaspora remittances tend to be more stable making them a reliable source of financing for developing countries (Biller, 2007). This is due to the fact that remittances are person-to-person flows, well targeted to the needs of the recipients, and do not typically suffer from the governance problems that may be associated with official aid flows. Since they are sent directly to the recipient, they are less susceptible to bureaucratic bottlenecks and corruption (Ratha & Mohapatra, 2007).

Diaspora remittance has led to economic boom and has resulted in improvement of both economic and social welfare of direct and indirect beneficiaries. World Bank (2010) indicates that diaspora remittances has become an important source of external finance for developing countries and its role cannot be ignored even though the benefits of remittances for development are conditional upon the broader economic and political context (Biller, 2007).

The stock market also known as the equity market and is one of the important areas of a market economy and provides access to capital to companies, provides access vital information about companies and the potential of gains based on the firm's future performance for secondary investors (Osoro, 2013). Additionally, stock market plays a key role in the development of emerging market economies. It acts major channel through which the savings of the surplus unit is transformed into medium and long term investments in the deficit unit of the economy (Adenuga, 2010). Better savings mobilization increase savings rate, and in turn spurs investments and earns investment income to the owners of those funds. All these factors have contributed to an immense interest in the links between migration and development as attributed by Bakewell (2008).

1.1.1 Diaspora Remittance

Different authors have defined diaspora remittance differently but conceptually, there is an agreement on what it entails. CBK (2015) defines remittance as money sent by a person in a foreign land to his or her home country. Dilip and Sonia (2011) define diaspora as people who have migrated, for various reasons, and their descendants who have maintained a connection to their homeland. Remittances on the other hand refer to economic resources sent back to the country of origin mostly in monetary terms by citizens in the diaspora (Dilip & Sonia, 2011). Ratha and Mohapatra (2007) define diaspora remittances as money sent from foreign nations by country's citizens living in diaspora. The North-South Centre of the Council of Europe (2006) defines diasporas' social remittances as ideas, practices, mind-sets, world views, values and attitudes, norms of behavior and social capital (knowledge, experience and expertise) that the diasporas mediate and either consciously or unconsciously transfer from host to home communities.

Carling (2008) has however questioned the usefulness of conventional and technical definitions of remittances, arguing that remittances' senders are not always migrants. In contrast, other experts believe that the sources (that is those who remits and what kind of revenue) of remittances are totally irrelevant.

Researchers have argued that diaspora remittance can have a significant effect on their countries of origin through their economic and social linkages (Dilip & Sonia, 2011). In the recent past, transfer of cash by Kenyans living outside the country here in referred to as diaspora remittances has taken center stage and has been recognized as a catalyst for economic growth and a source of foreign exchange.

Statistical records from the World Bank (2010) show that the amount of diaspora remittance to Kenya is estimated at Ksh 151.2 Billion ($ 1.8 Billion) accounting for 5.4% of GDP. As the flow of remittances from international migration has increased, interest in the economic and social impact of remittances from diaspora has grown. According to the world bank estimates, remittance flows to developing countries recovered by 8% to USD 351 billion in 2011, compared to USD 129 billion global official development assistance in 2010 (World Bank, 2010).

Officially recorded remittances to the developing world are expected to reach $440 billion in 2015, an increase of 0.9 percent over the previous year. The 2015 remittance growth rates are the slowest since the global financial crisis in 2008/09. Nonetheless, the number of international migrants is expected to exceed 250 million in 2015, and their savings and remittances are expected to continue to grow. Sub-Saharan Africa region is projected to slow to 0.9 percent in 2015, amounting to $33 billion. Nigeria alone accounts for around two-thirds of total remittance inflows to the region, but its remittances are estimated to have remained flat in 2014, at roughly $21 billion. The regional growth in remittances in 2014 largely reflected strong growth in Kenya (10.7 percent), South Africa (7.1 percent) and Uganda (6.8 percent) (World Bank, 2015).

The growth of remittance inflows in developing countries has generated intense debate and controversy among academics and policy makers studying the contribution of remittances on the economic welfare of recipient economies (Adams & Cuecuecha, 2010). This controversy revolves around the issue of how the remittances are spent. Burnside and Dollar (2000) argue that the effect of remittance inflows on the economic development of recipient countries hinges on whether they are invested or consumed.

If invested, remittances will generate a positive impact on growth and if consumed, there will either be no impact on growth or there will be a reduction in the economic performances. Despite the upward trends in remittances to Kenya, there are factors, which in the end would lead to a decrease in the level of remittance. These factors include persistent unemployment in Europe and US, which affects employment prospects of existing migrant sand hardening political attitudes towards new immigration. This portrays that though remittances are a vital factor towards the economy growth, it faces a lot of controversies and this necessities more study about it.

1.1.2 Stock Market Performance

A stock market or equity market is a public market (a loose network of economic transactions, not a physical facility or discrete entity) for the trading of company stock and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately (Jumba, 2010). Stock market is a part of capital market which refers to the market for securities, where companies and governments raise long-term funds. It is a market in which money is lent for periods longer than a year. A nation's capital market includes such financial institutions as banks, insurance companies, and stock exchanges that channel long-term investment funds to commercial and industrial borrowers (Jumba, 2010).

The assessment of an efficient market's performance is termed as stock market performance. It is an aggregate measure that provides information to the investors about the market by characterizing the global markets and specified market segments (Odera, 2005). Yartey and Adjasi (2007), define a basic feature of an efficient capital market to be its constant liquidity in that the performance of a market is not static. This is indicated by an easy entry and exit by investors. A well performing market is expected to lead to a lower cost of equity capitals for firms and allow individuals to more effectively price and hedge risk. Casu *et al.* (2006) indicate that market performance is an important tool to various stakeholders who might be interested in a certain institution or industry. The parties that can be interested in market performance include shareholders and bond holders, direct competitors, financial markets, regulators, credit rating companies and investors at large.

The stock market performance acts as an indicator of the overall performance of the economy in the sense that it assists to allocate the necessary capital needed for the consistent growth of an economy (Garza-Garsia & Yu, 2010). The price of shares and other assets is an important part of the dynamics of economic activity, and can influence or be an indicator of social mood. The stock market is often considered the primary indicator of a country's economic strength and development. Rising share prices, for instance, tend to be associated with increased business investment and vice versa. Share prices also affect the wealth of households and their consumption. Therefore, central banks tend to keep an eye on the control and behaviour of the stock market and, in general, on the smooth operation of financial system functions (Jumba, 2010).

Further, Alile (1997) argues that the determination of the overall growth of an economy depends on how efficiently the stock market performs in its allocative functions of capital. When the stock market mobilizes savings, it simultaneously allocates a larger portion of the same to firms with relatively high prospects as indicated by their returns and level of risk. In addition to that, they provide listed companies with a platform to raise long-term capital and also provide investors with a forum for investing their surplus funds. Stock markets therefore encourage investors with surplus funds to invest them in additional financial instruments that better matches their liquidity preferences and risk appetite. Better savings mobilization may increase the savings rate, and which in turn spurs investments and earns investment income to the owners of those funds (Alile, 1997).

Performance of stock market also affects its liquidity with high performance implying more liquidity and vice versa. The liquidity that an exchange provides affords investors the ability to quickly and easily sell securities. This is an attractive feature of investing in stocks, compared to other less liquid investments such as real estate (Jumba, 2010). Stock market liquidity helps to reduce the downside risk and cost of investing in projects that do not pay-off for a long time (Alile, 1984). With a liquid market, the initial investors do not lose access to their savings for the duration of their investment project because they can quickly and easily sell their stake in a company (Bencivenga and Smith, 1991). As much as the stock markets are important in facilitating privatization channels and diversification of the financial sector services, they also provide the listed companies with a platform to raise long-term capital, and also offer the investors alternative investments to put their funds in.

The market capitalization of emerging market countries has more than doubled over the past decade growing from less than $2 trillion in 1995 to about $5 trillion in 2005 (Yartey & Adjasi, 2007). As a percentage of world market capitalization, emerging markets are now more than 12 percent and steadily growing (Standard & Poor, 2005).

The stock market performance in Kenya traditionally has been measured by the NSE 20 Share price index. However, the index has been criticized as not being an accurate measure of performance of the stock market performance since it does not include all shares being traded in the market. To complement the NSE 20 share index and to provide investors with a more comprehensive measure of the performance of the stock market, the NSE effective January 2008 introduced the Nairobi Securities Exchange All Share Index (NASI) which takes into account the performance of all firms listed on the NSE (NSE, 2015).

1.1.3 Diaspora Remittances and Stock Market Performance

Diaspora remittances are theorised to be directly linked to improved stock market performance. Pure altruism theory however indicates that the migrants' impact on the economy is merely coincidental. This is because; the migrants remit money back home in concern of the welfare of the remaining family members and not to boost the market (Hagen-Zanker & Siegel, 2007). Chami *et al.* (2005) states that the more unfavourable the economic conditions holding in the home country, the more diaspora remittances increase.

Pure self theory indicates that remittances are not always countercyclical. This can be viewed in instances where the volumes of remittances reduce following poor economic conditions in the recipient country (Brown, 2006). This therefore denotes that theoretically the market performance can be linked to the remittance volumes both directly and inversely though all this hasn't been proven and requires study (Brown, 2006).

Some empirical studies (Solimano, 2003; World Bank, 2006) suggest that diaspora remittance may have the potential to positively affect a country's economic growth. A group of studies (Aggarwal et al., 2006; Giuliano and Ruiz-Arranz, 2005) also confirm the significant positive impact of remittances on both bank deposits and bank credit to the private sector. They argue that diaspora remittances act as substitutes to other financial means such as credit and insurance, which do not necessarily exist in developing countries. Ratha (2013) found that diaspora remittances could raise domestic savings and improve financial intermediation, which could in turn improve the growth prospects of the origin countries. Further, Yasin (2005) found a positive correlation between diaspora remittance and development of financial systems in developing or emerging countries, mostly in the Middle East and North Africa. Chami *et al*. (2005) found a negative relationship between diaspora remittance and economic performance. Glytsos (2005) found that the effect of reducing diaspora remittance would be greater than the effect of raising them. Giuliano and Ruiz-Arranz (2005) also found a positive effect of diaspora remittance on growth, specifically for countries with lower financial development.

However, there is little evidence to confirm any causal relationship between diaspora remittance and stock market performance. Some countries receiving large amounts of remittances (for example the Philippines, Ecuador and Yemen) have done rather poorly and yet some others with large diaspora remittance inflows (for example, China, India and Thailand) have performed very well. A study covering 101 developing countries and an extended period from 1970 to 2003 found no direct link between diaspora remittance and per capita output growth (Spatafora, 2005). The exact linkage effect of the diaspora remittance towards the market performance Nairobi Securities Exchange hence cannot be evaluated based on the studies and theoretical analysis.

1.1.4 Nairobi Securities Exchange

The stock market is one of the most important sources for companies to raise money. It allows businesses to be publicly traded, or raise additional capital for expansion by selling shares of ownership of the company in a public market (Jumba, 2010). The stocks are listed and traded on stock exchanges which are entities of a corporation or mutual organization specialized in the business of bringing buyers and sellers of the organizations to a listing of stocks and securities together. The largest stock market in the United States, by market capitalization is the New York Stock Exchange, NYSE, and while in Canada, it is the Toronto Stock Exchange. Major European examples of stock exchanges include the London Stock Exchange, Paris Bourse, and the Deutsche Borse (Jumba, 2010). In Kenya, Nairobi Securities Exchange is the only stock market dealing with diverse securities ranging from stocks to bond of both short term and long term maturities (NSE, 2015).

Nairobi Securities exchange is an institution which is formally tasked with the responsibility to overseeing, listing, delisting and regulation of trading of financial securities such as shares. In Kenya, dealing in shares and stocks started in the 1920's when the country was still a British colony (NSE, 2015). The trading was based on the ability of clients to honor their agreements. At that time stock broking was conducted by accountants, auctioneers, estate agents and lawyer. Since then, the stock exchange market has experienced various changes. In 1954 the Nairobi Securities Exchange was constituted as a voluntary association of stockbrokers registered under the Societies Act with the name Nairobi stock exchange. Since Africans and Asians were not permitted to trade in securities, until after the attainment of independence in 1963, the business of dealing in shares was confined to the resident European community (NSE, 2015).

The NSE currently has 62 listed companies grouped into 10 main segments namely, agricultural, automobiles & accessories, banking, commercial and services, construction & allied, energy & petroleum, growth enterprise market segment (GEMS), insurance, investment, investment services, manufacturing & allied and telecommunication & technology (NSE, 2015). To address the low listing and increase stock exchange capitalization, NSE in 2013 introduced Growth Enterprise Market Segment (GEMS) which enables small and medium sized firms to raise substantial initial and ongoing capital, while benefiting from increased profile and liquidity within a regulatory environment designed specifically to meet their needs (NSE, 2015). This is expected to expand the Kenya's stock market.

The total foreign turnover at NSE, which is majorly the diaspora remittance, has been on an upward trend over time from a low of Kshs. 695 million in 1996 to as high as KShs. 31,470 million in May 2015. Foreign investors participation as a proportion of total equity turnover stood at 54 per cent in the first six months of the year 2014 compared to 48.6 per cent in 2013 and 8.2% in 1996. The general trend of the NSE All Share Index also shows that the proportion of foreign activity and the stock market index moved almost in the same pattern with the index being at 98.6 in 2008 and increasing to 150.2 in May 2014 (NSE Market Statistics, 2015). In general the opening of the NSE to foreign investors has led to improvement in trading volumes, enhanced levels of service to stockbrokers and increased volume of capital raised. Hence the performance of the NSE has been greatly influenced by the increase in the remittance over the years, mainly through investments (Migiro, 2010).

1.2 Research Problem

Diaspora remittance is vital to economic performance especially in the developing countries (World Bank, 2005). Various theories like altruism theory (Chami, Fullenkamp, & Jahjah, 2005) and base broadening theory (Merton, 1987) indicate that diaspora remittance has direct link to stock market performance. However, other theories like pure self theory (Brown, 2006) hold that there is minimal or opposite relation between remittances and market performances.

Diaspora remittance to developing world has been on the rise with World Bank (2015) expecting the remittance to reach $440 billion in 2015, an increase of 0.9 percent compared to 2014. The 2015 remittance growth rates are the slowest since the global financial crisis in 2008/09. In sub-Saharan Africa region, Kenya in 2014 received the highest share of growth in remittances at 10.7% (World Bank, 2015) to hit Ksh. 128.6 Billion ($ 1.4 Billion) (CBK, 2015).

Various studies have been done locally and globally relating to diaspora remittance and stock market performance. Globally, a study done on the effects of foreign remittance and market volatility on the stock exchange of Thailand by Haithaipat and Chaiyuth (2013) found out that remittance to play a stabilizing role in stock markets. Seyyed (2012) studied the effect of Karachi stock market on the economic development of Japan. In Kenya, Kimani and Mutuku (2003) did a study on the effect of factors of the economy and market performance in Kenya and found a negative relationship. Masila, Aduda and Onsongo (2012) studying the factors affecting stock market performance found a no relationship between foreign capital and stock market performance. Songole (2012) examined the relationship between selected macroeconomic variable and stock market return and found that remittance among other variables had a negative effect towards the performance of the market and stock return. Ochieng (2013) studied the impact of exchange rate on diaspora remittances in Kenya and found that exchange rate indeed had a positive impact on diaspora remittances. Kariguh (2014) studied the relationship between foreign investment activity and market return at the Nairobi Securities Exchange and found that increased foreign investor participation in the stock market is likely to push up share prices and result in increased returns.

From the studies, it is clear that empirical evidence on the effect of diaspora remittances on stock market performance remains scarce with majority of them concentrating on diaspora remittance and economic growth. Further, from the relevant studies, empirical findings indicate no consistent linkage between remittance and market performance in this case being NSE. As result, it is difficult to establish the exact effect of diaspora on the stock market performance. Therefore this study sought to determine the effect of diaspora remittances on stock market performance and hence answering the question; what is the effect of diaspora remittances on the performance of Nairobi Securities Exchange?

1.3 Research Objective

To determine the effect of diaspora remittance on stock market performance using evidence from Nairobi Securities Exchange.

1.4 Value of the study

Diaspora remittance serve the country in many ways including helping offset the country's current account, fostering economic performance and stabilizing the Kenyan shilling. The study is useful to the Kenyan government and policy formulators as they will gain knowledge on the relationship between diaspora remittance and Nairobi NSE performance. This will be important in policy formulation relating to diaspora remittances and coming up with mechanisms to foster increased remittances to Kenya.

With the knowledge, various NSE regulators like the Capital Markets Authority will be able to formulate regulations that will improve investor confidence and increased portion of diaspora remittances invested at NSE. The study is also a guide to the government in setting up administrative structures and mechanisms for government to tap directly into these foreign inflows from the diaspora as an asset for investment and national development.

To the investors, the findings will assist them in understanding trends in diaspora remittances affect stock market performance. Hence they will be better informed on how to gauge their investment options in order to get high yields by considering the trends in remittances and other macroeconomic variables.

In addition, scholars and researchers will find this study useful if they wish to use the findings as a basis for further research on the subject. The study has bridged the gap that existed in literature on the effect of diaspora remittances on stock market performance and precisely, the Nairobi Securities Exchange.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter has reviewed the existing theoretical and empirical literature relating to diaspora remittance and performance of NSE. The chapter reviews different theories relating to the study, discussing their proposition and implication to the research variables. It also reviews the determinants NSE performance. Empirical literature is also reviewed with emphasis on the objective of the study, methodology and the results. The chapter finalizes by giving a summary of the chapter.

2.2 Theoretical Review

This section has discussed various theories with implication on the relationship between diaspora remittances and stock market performance. The literature identifies five main theories, mainly; Theory of Altruism, Self Interest theory, Base-Broadening theory and Random Walk Model. These theories are critical in providing a framework for the understanding of the relationship between diaspora remittances and performance of the stock exchange market, in this case being the Nairobi Securities Exchange.

2.2.1 Theory of Altruism

This theory was proposed by Chami *et al.* (2003) and holds that the diaspora remittances increase during unfavorable economic situations in the home country. The emigrant worker's decision to remit is based mainly on the income needs of the relatives and not necessary to improve the economy. There is no expectation of reciprocation on the part of the member of diaspora. This implies that motivation of the migrant worker to remit increases when the family faces economic constraints; if it weren't for economic constraints of the family, no remittance would have been made. Remittances are therefore, a form of compensatory transfers which compensate households faced by economic disruptions thus enabling them smoothen their consumption (Chami *et al*,. 2003). As a result, the compensatory nature of remittances under the Pure Altruism model implies that remittances are countercyclical, that is, they increase during times when there is deterioration in economic conditions in the business cycle (Vargas-Silva, 200; Chami et *al*,. 2003).

Altruistic remittances can be countercyclical to GDP patterns possibly because migrants tend to remit more during periods of economic disturbances in order for their families in the home country to smoothen their consumption. This indicates that remittances do not have a positive relationship with the performance of the stock exchange market. They are mainly for consumption. In this study therefore, remittances cannot be said to influence the performance of NSE directly, however it may influence it indirectly and improve its performance during unstable economic situations.

2.2.2 Pure Self Interest theory

This theory holds that remittances are not always linked to economic conditions in the recipient country (Brown, 2006). Further, the theory holds that remittances are not always countercyclical and that there are instances that they reduce during poor economic conditions. This is oppositional to what is expected; that is the migrant to increase their remittances in order to improve the welfare of the family. In point of fact, the remittances somehow have a positive correlation with the market performance of the home country where bad economic volumes may result in low volumes of remittances. The migrants' remittance can be due to purely self-interests theory (Lucas & Stalk, 1985). Therefore they remit in order to invest in their home country.

During unfavorable economic conditions, its unfavorable for them to invest hence they shun away from remitting money. This causes a more decrease in the performance of the NSE. According to this theory, the performance of the NSE is directly linked to the diaspora remittance in that, good economic conditions will result in increased remittance and improved performance of NSE, and vice versa.

2.2.3 Base Broadening theory

This theory was proposed by Merton (1987) and indicates that foreign investment activities resulting from remittances cause the market to returns to rise. This is through broadening the investor base leading to diversification and risk sharing. Merton (1987) provides an intuitive and tractable model for illustrating how broadening the investor base for a given stock and by extension for an emerging equity market may raise the market returns through risk pooling.

Merton (1987) argues that, the assumed barriers to foreigners' investments from holding fully diversified portfolios, are informational in that; investors will fail to invest in stocks if they are not fully informed about them. If both the domestic and informed foreign investors have the same information set, they will invest equivalently. Migrants net purchases creates substantial shocks to net investor demand as foreign inflows maybe based on foreign inflows based on foreign investors' perception that the shares are undervalued or that there are other portfolio benefits that may be derived by investing in emerging markets (Richards, 2004).

Hence, if the diaspora population is more informed of the stock market, they will increase their amount of remittances in investments. This will positively affect the performance of the NSE. Consequently, the amount of diaspora remittance in the market drives up returns and performance of the stock market. The implication of the theory is that investment of diaspora remittance at the stock market will push stock prices up due to increased demand.

2.2.4 Random Walk Model

The random walk hypothesis was introduced by Kendall (1953) and later advanced by Fama (1965). The theory holds that the performance of the stock market is completely independent of fundamental variables. It states that the stock returns are independent and identically distributed over time, that is, the stock prices follow a random walk (Fama, 1965). This means that not even the diaspora remittance will have influence on the performance of NSE. This is because the stock markets are efficient.

When a stock market is efficient, security prices reflect historical price and an investor cannot generate an abnormal profit by trading based on historical price information and that future prices cannot be predicted by analyzing prices from the past prices. Therefore, the time path of stock prices is more appropriately specified by a random walk plus drift model, under the random walk hypothesis, there is no seasonality in stock prices, because the stock prices are completely random. The theory implies that the performance of the NSE is completely independent and it's not pre-determined by diaspora remittance.

2.3 Determinants of Stock Market Returns

Stock returns are generally considered to be a reflector of the performance of the stock market, in this case the Nairobi Securities Exchange. According to Warther (1995), investor activities may move security prices due to information revelation and price pressure, and market response to information revelation will make prices move in the same direction as foreign activity, hence investor activity will be positively correlated with security returns**.** This section therefore explains some of the determinants of the stock returns.

2.3.1 Interest Rates

Supply of funds and demand for funds depend on the prevailing interest rates. From the supply of funds point of view, funds will be borrowed from banks by investors at the prevailing interest rates. Hence, investors will invest more in stock market if the lending interest rates are low since they will be able to borrow more and vice versa.

Boyd and smith (1996) suggest that stock markets and banks may act as compliments rather than as substitute source of capital source of capital and that the level of stock market development is positively correlated with development of financial markets. Shiller and Beltratti (2002) indicate that changes in interest rates carry information about certain changes in future fundamental and hence affecting market performance. Some studies however argue that the positive relationship is only evident in small and illiquid financial markets.

2.3.2 Exchange Rate

Exchange rate in short run has positive relationship with stock market performance. This is explained by the fact that foreign investors will have more local currency to invest since for every dollar, they will get more shilling. However, in long term, the effect is expected to be negative as depreciation of local currency indicates poor economic performance. Barsky (2009) explains that in long term, this is due to the investors' risk prevalence. The foreign investors will demand a risk premium for expected poor economic performance while local investors maintain more precautionary savings as and shun away of risky assets. This will result in the stock returns to reduce significantly.

2.3.3 Inflation Rate

Inflation can be described as a decline in the real value of money or a loss of purchasing power. When the general price level rises, each unit of currency buys fewer goods and services. The effects of inflation on the economy are diverse and can be both positive and negative (Wanjala, 2014). The negative effects are however most pronounced and comprise a decrease in the real value of money as well as other monetary variables over

time. As a result, uncertainty over future inflation rates may discourage investment and savings, and if inflation levels rise quickly, there may be shortages of goods as consumers begin to hoard out of anxiety that prices may increase in the future.

2.3.4 Market Capitalization

This is a measure of stock market return according to Otuke (2006). It indicates market movements by measuring the total value of stocks in a particular stock market and aggregating the market value of the quoted stocks. High activity at the stock market may signal more investments into the stock market and this may result in market turnover. Market turnover indicates the inflows and outflows in stock market and is highly based on traded shares (Kariguh 2014). This causes market capitalization due to fluctuations in share prices or issuance of new share prices or issuance of new shares and bonus issues. This changes cause a change in performances of the stock market either positively or negatively.

Investment activities have a positive relation with subsequent stock market returns but a negative relation between returns and subsequent investment activity; this is consistent with price pressure hypothesis (Warther, 1995). Pavabutr and Yan (2003) also show that exposure to foreign investment segments is associated with a reduction in risk premium, which diminishes among stocks favored by foreign investors and decreases over time as the market becomes more liberalized. In order to increase the market returns, investments ought to be increased. Bekaer et al (2002) argues that, investment activities maybe increased by liberalization due to portfolio rebalancing.

Market capitalization is also an important source of market information and hence affects market performance. This is because investors are more likely to invest in markets that they are fully aware of it and its stocks (Merton, 1987). Based on the market information, the feedback may either be positive or negative. The positive feedback has positive influence to the market performance. Positive feedback trading may lead to prices exhibiting momentum such that prices will keep on falling as foreign investors sell but rising as they buy. Positive feedback trading may, however, not be destabilizing as trading may be due to information about fundamentals (Choe et al., 1999). However, Bohl and Sikolos (2008) hold the opposing view that feedback traders do not base their asset decisions on fundamental values but react to stock price changes. If this is the case, then trading by positive feedback traders will be destabilizing. In whichever the case the stock exchange return will be highly influenced by informed investors.

2.4 Empirical Literature

Globally, various studies have been done on either stock market performance or/and diaspora remittance. Levine and Zervos (1991) examined the nature of links between stock markets, banks and income growth, on a cross-country study consisting of 47 countries. The study found that the size of both stock markets and banks were correlated with the future economic growth. The study identified that the problems with indigeneity of the variables were perhaps even more severe with stock market variables: where the market capitalization represented the present value of future earnings, and so there was most likely a positive correlation between market capitalization and expected economic performance.

In study involving 10 developing countries, Luintel and Khan (1999) found a bi-directional causality/feedback effect between financial development and economic growth in all the countries they studied. Further, Chami, Fullenkamp, and Jahjah (2003) used aggregate remittance data for a sample of 83 countries over the 1970 - 1998 periods to examine the relationship between workers' remittances and per capita GDP growth. The study used panel regressions of growth of real GDP per capita on workers' remittances to GDP conditional on initial per capita income, investment to GDP ratio, inflation rate, regional dummy and the ratio of net capital flows to GDP. Later the study replaced workers' remittances to GDP variable with a change in that ratio as a regressed to incorporate the dynamic nature of private transfers. Chami et al (2003) found that, the investment to GDP and net private capital flows to GDP ratio were positively affecting growth but workers' remittances to GDP ratio either was not significant or negatively related to growth.

Ziesemer (2006) developed an open economy model to analyze the impact of remittance on economic growth through two channels: physical capital channel and the human capital channel. The paper estimated two variants of an open economy model for the two channels using the general method of moments with autocorrelation correction. Data consisted of pooled data from four countries that received remittance in 2003. The study established the following results: First, remittances had the largest impact on savings in countries with low per capita income and remittances were found to have a positive relationship with steady-state level of GDP. The implication of these results, according to the author, is that remittances will increase growth not only through increase in investment but also through increase in literacy levels.

Hongbin (2007) studied stock market development and economic growth: evidence of China in his study concluded that there exists a two-way causality between China's stock market development and economic growth, that is, economic growth can not only promote the development of the stock market, but also the stock market development similarly pushes economic growth. The study found that, although the impact of stock market is more limited in the short-term, it tends to be significant in the long-term. The study proposed that since the stock market plays the function of national economy 'barometer' it needed to be further strengthened.

Dawson (2008) studied financial development and economic growth in developing countries. The study found that there was a bi-directional causality between remittances and performance, from finance and economic development, and from economic development to finance. Senbet and Otchere (2010) studied African stock markets-opportunities and issues, in Marc Quintyn and Genevieve. The study found that there were possibilities that the benefits derived from integrated market vary depending on the policies embraced in domestic markets and the level of stock market development. Though integration of African stock markets with the rest of the world has increased following periods of reforms, these markets remain thin and illiquid, causing a barrier to financial globalization despite the high returns they record. The major challenges affecting stock markets in Africa are that only few stocks are traded and such stocks form a larger proportion of total market capitalization. In addition there is inadequate supervision by regulatory authorities.

Jahur *et al.* (2014) studied determinants of stock market performance in Bangladesh. The study used secondary data sources, and applied descriptive measures and linear regression model to analyze the data. The study found that in addition to remittances, all the macro-economic variables such as Consumer Price Index, Interest Rate and Exchange Rate also have significant impact on the stock market performance.

Locally, Mongeri (2011) examined the impact of foreign exchange rates and foreign exchange reserves on stock markets performance at NSE using monthly time series data of NSE share index, foreign exchange rates and reserves for the period 2003-2010. The study established that foreign exchange rates had negative significant impact on stock market performance. Also, the study established that foreign exchange reserves had positive significant impact on stock market performance. The study also revealed that there is no significant relationship between Foreign exchange rates and foreign exchange reserves.

Wachira (2013) studied the seasonal effect influence and market returns: evidence from the Nairobi Securities Exchange. The objective of this study was to find out whether there exists a January effect at the Nairobi Securities Exchange. The population of interest was all the listed companies for equity stocks at the NSE as at December 2012. The data comprised of daily values of the two major indices; Nairobi Securities Exchange 20-share index and Nairobi Securities Exchange All-share index. Regression analysis was used to analyze the data collected. The results show negative coefficients in the model used. These coefficients confirm existence of January effect since they signify higher returns in January than other months.

Mbithi (2013) conducted a study on the effects of foreign exchange rates on the financial performance of firms listed at the NSE. The research design was descriptive which involved the use of both qualitative and quantitative data. The sample size constituted of 46 firms except for financial and investment but the results of 41 firms were analyzed after eliminating spoilt and inconsistent questionnaires. The research utilized questionnaires for data collection comprising of structured questions. Data was collected from primary and secondary sources. Primary source was from senior managers in finance and internal audit through the use of questionnaires. The information was obtained for 10 years between the financial years (2002-2012) while the secondary data was obtained from financial statements. From the findings the study found that listed firms financial performance is affected by the foreign exchange rates movements. The study further concluded that unrealized foreign exchange gains/losses had an effect on the Net Income of listed companies as it was posted to either income statement or owners' equity.

Ondiala (2014) conducted a study on the turn of the month effect at the NSE. The objective of the study was to investigate the turn of the month effect at the Nairobi Securities Exchange. This study adopted a descriptive research design. This study collected market share prices per segment and then computed stock price indices and stock returns (Change in stock prices). To establish whether there exists month effect at the NSE on segment basis, the study used a paired t-test to test if there was a significant difference in mean returns. The study established there was no significant difference between the end of the month prices and those recorded during the month.

Kariguh (2014) conducted a study on the relationship between foreign investment activity and market return. This study used a descriptive research design since the study was seeking to determine the relationship between foreign investment activity and market returns at the NSE. The foreign investment activity was measured by the monthly foreign investor trade turnover for the period 2008-2013. The study found that the NSE stock market return is driven up by the amount of foreign investment in the market and hence affects the performance of the market. The implication is that foreign investor activities push stock prices up when they come in which may be due to increased demand.

2.5 Summary of Literature Review

From the reviewed literature, it is clear that diaspora remittance is an important ingredient in economic growth in developing countries. The upward trend depicted by diaspora remittances in developing nations has generated great debate on its role on various economic sectors and more so the stock market performance. Theoretical literature seems to provide contradicting information on the relationship between diaspora remittance and stock market performance. Further, there is scanty empirical literature on the relationship and most studies are not conclusive.

Studies conducted both locally and internationally provide differing findings. While some authors established a weak relationship, others found a strong relationship or no relationship. Yet again, some authors established relationships only in the long-run, while others established long-run and short-run relationship. Further, very few studies have analyzed the relationship in Africa let alone in Kenya.

Majority of the studies also have dealt with the subject on cross country perspective where the behavioral pattern of remittances is analyzed using data from several countries. No one study in Kenya has examined the effect of diaspora remittances on stock market performance despite the fact that diaspora remittances have been on the rise. This therefore creates a research gap and necessities further research. This study seeks to fill this gap by determining the effect of diaspora remittance on the stock performance of stock markets using evidence from the Nairobi Securities Exchange.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter represents the methodology used to conduct the study research and all the other relevant information pertaining to how the study and was conducted. The chapter explains the research design that was employed in the study, data collection technique and concludes with the data analysis technique that was used.

3.2 Research Design

A research design is a scheme, outline or plan that is used to generate answers to various research problems. Descriptive research design is a systematic, empirical design in which the researcher does not have a direct control of independent variable as their manifestation has already occurred or because the inherently cannot be manipulated (Mugenda &Mugenda, 2008). This study applied descriptive research.

3.3 Data Collection

This study used secondary data collected from the Central Bank of Kenya and Nairobi Securities Exchange. Data on stock market performance was collected from the Nairobi Securities Exchange for seven years period from February 2008 to May 2015. Diaspora remittances statistics, inflation, interest rates and exchange rates were collected from the Central Bank of Kenya from February 2008 to May 2015. The data was collected on monthly basis.

3.4 Data Analysis

Data analysis involved reducing accumulated data into manageable size, developing summaries, looking for patterns and applying statistical techniques such as bar charts, percentages, frequency tables and pie charts (Cooper and Schindler, 2006). Quantitatively, information was presented in tables and figures. Descriptive statistics like the mean and standard deviation were used to describe the data.

Correlation and regression analysis was conducted using the statistical package for social sciences to achieve the study objectives. The results were then presented in tables from which the interpretations were drawn. The following model was used in the study to establish the effect of diaspora remittance on performance of the stock market performance:

$$Y_s = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y_s = Stock Market Performance

X_1 = diaspora Remittance

X_2 = Exchange rate as measured by USD/KES rate

X_3 = Interest rates

X_4 = Inflation Rates

β_0, β_1 ,β_2 ,β_3 , β_4 are the coefficients of independent variables

3.4.1 Operationalization of Study Variables

Study variables have been operationalized as shown in table 3.1 below:

Table 3.1: Operationalization of Study Variables

Variable	Definition	Measurement
Y_s	Ys is the Stock Market performance; in this case stock market case study is the Nairobi Securities Exchange performance	Stock market performance was measured by the Log of Nairobi Securities Exchange All Share Index (NASI). NASI statistics were available per day and data summarized monthly.
X_1	X_1 is diaspora Remittance	diaspora Remittance was measured by the Log of amount of diaspora remittances as recorded by Central Bank of Kenya. Statistics available per month.
X_2	X_2 is the exchange rate in Kenya	Exchange rate was measured by the log of exchange rate prevailing over the study period for Kenyan Shilling against United State Dollars. USD/KES rate chosen since USD is the main currency in which diaspora remittances are received. Exchange

Variable	Definition	Measurement
		rates statistics were obtained from Central Bank of Kenya. Statistics available per month.
X_3	X_3 is the interest rates prevailing in Kenya over the study period	Interest rates were measured using the bank lending interest rates released by the Central bank of Kenya. The statistics are available per month.
X_4	X_4 is the inflation rates prevailing in Kenya over the study period	Inflation was measured using the inflation values obtained from Central bank of Kenya. Statistics available per month.

3.4.2 Test of Significance

Analysis of variance (ANOVA) was used to test the significance of the overall model at 95% level of significance. Coefficient of correlation (r) was used to determine the magnitude of the relationship between the dependent and independent variables. Coefficient of determination (r^2) was used to show the percentage for which each independent variable and all independent variables combined explained the change in the dependent variable.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents analysis, findings and discussion of the study on the effect of diaspora remittances on stock market performance. The study used secondary data obtained on monthly basis for the period February 2008 to May 2015. Stock market performance was measured by Nairobi Securities Exchange All Share Index (NASI). Inflation and lending interest rates were used as control variables in the study. Descriptive and inferential statistics were used to interpret the results of the study.

4.2 Description of Study Variables

This section sought to understand the trend in the study variables over the study variables and understand better the context of the study. The study variables were stock market performance (NASI), diaspora remittances, inflation, interest rates and exchange rates.

4.2.1 Nairobi Securities Exchange All Share Index

NASI was adopted in February 2008 as measure of performance of all shares performance. The initial index was 100 with the index moving up and down according to the market performance. The trend in NASI from February 2008 is documented in figure 4.1 below. As shown in the figure, on launch of the index, the performance of stock market was declining to record the lowest performance of 52.82 in February 2009. The performance of the stock market started to improve in March 2009 to February 2011 before starting to decline and hit a low of 66.33 in October 2011. However, since January

2012, performance of the stock market recorded positive growth to reach 175.70 in February 2015.

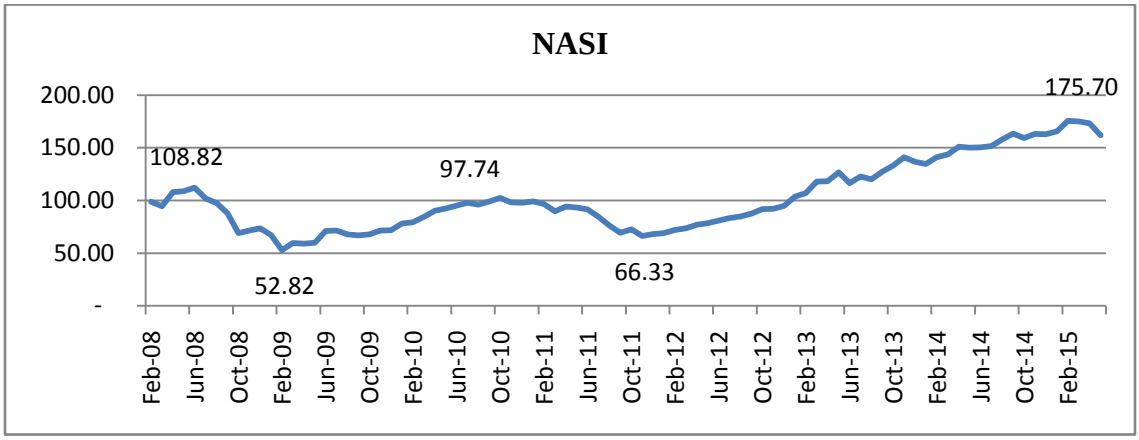

Figure 4.1: Trend in Nairobi Securities Exchange All Share Index

Source: Research Data, 2015

4.2.2 Trend in diaspora Remittance

diaspora remittances in Kenya have shown a positive trend over the study period as shown by figure 4.2 below. The lowest diaspora remittances were recorded in January 2009 at USD 39,535,000. Notably, the lowest NASI was recorded in February 2009, one month after lowest diaspora remittances in January 2009. Since February 2009, diaspora remittances have been on the rise hitting the highest mark of USD 130,172,000 in December 2014.

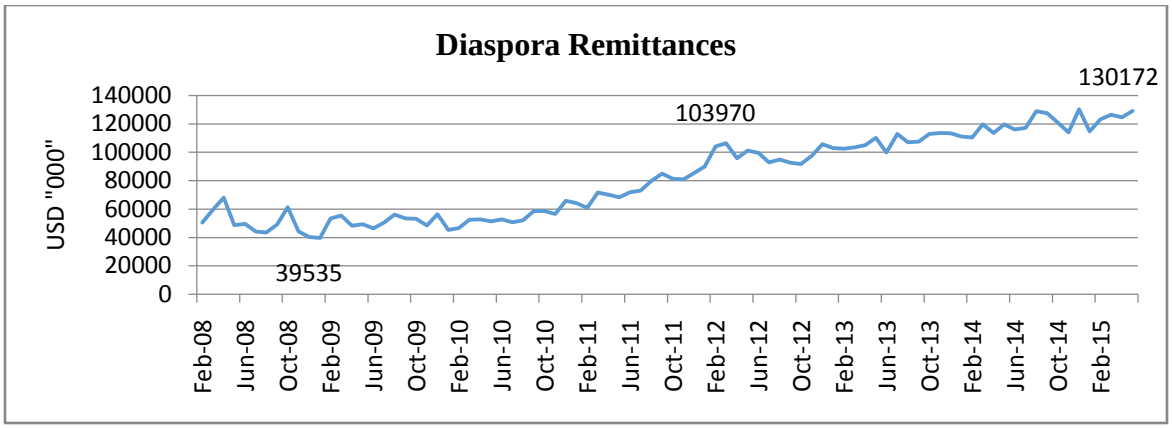

Figure 4.2: Trend in Diaspora Remittance

Source: Research Data, 2015

4.2.3 Trend in Inflation and Interest Rates

Inflation rates have been volatile in the study period as shown in figure 4.3 are shown in figure 4.3 below. Inflation rate in 2008 was on rise from 5.32% in February 2008 to 16.87% May 2009. The lowest inflation rates were recorded in January 2011 at 3.92 but rose to 16.45% in April 2012 after which inflation rates have been declining to close at 6.14% in May 2015. Lending interest rates have been stable in the study. However, in November 2011, lending interest rates rose to the highest in the highest during the period at 20.28%. Since then, interest rates have been on the decline to close at 15.26% in May 2014.

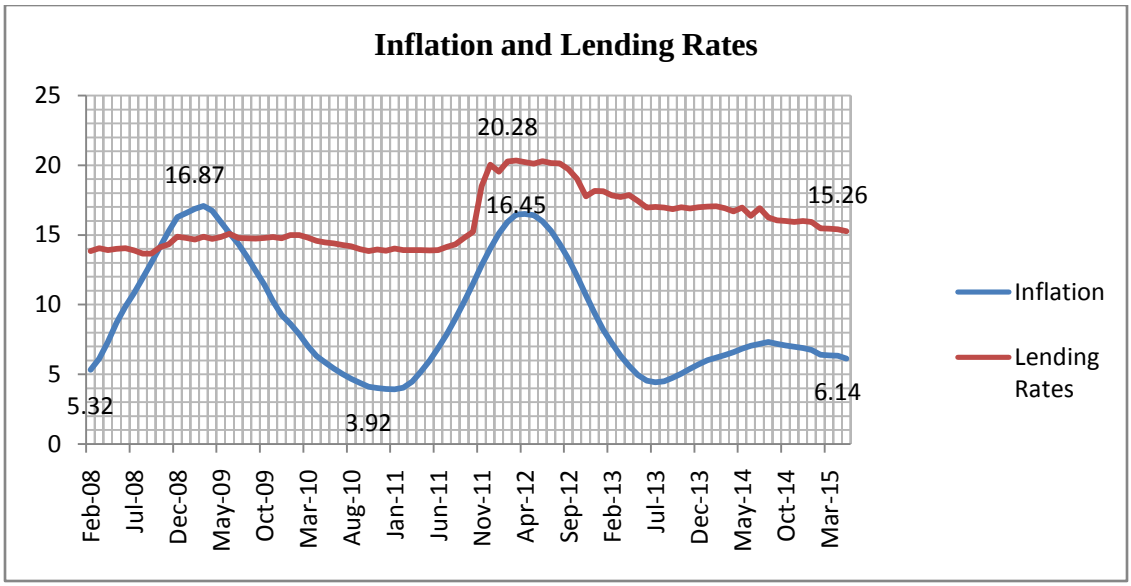

Figure 4.3: Lending and Inflation Rates

Source: Research Data, 2015

4.2.4 Trend in Exchange Rate

The lowest Kenya shilling USD exchange rate was recorded in May 2008 at 62.26. The Kenya shilling continued to depreciate against the USD to reach the highest at 101.27 in October 2011. The Kenya shilling USD closed at 96. 39 in May 2015. The trend in exchange rate is presented in figure 4.4 below.

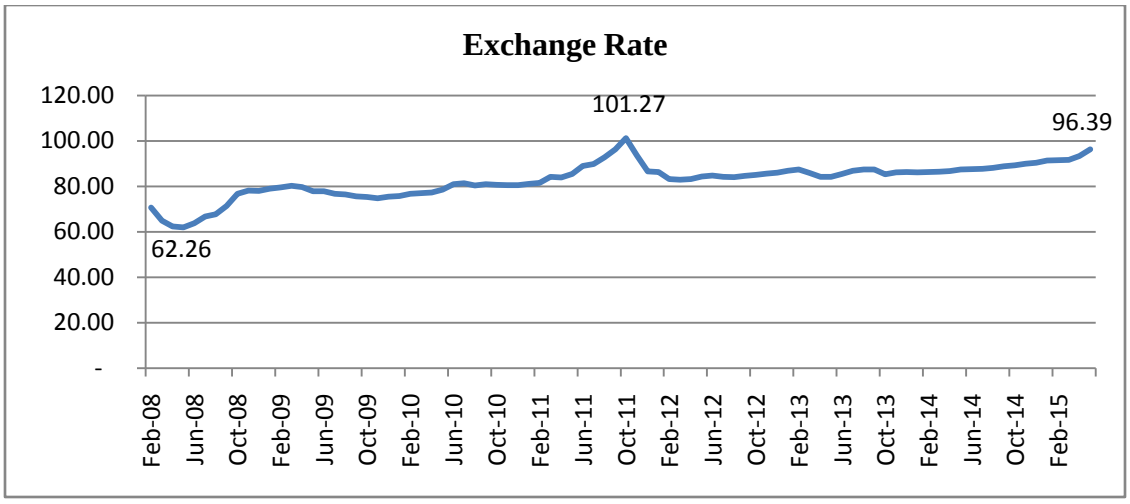

Figure 4.4: Trend in Exchange Rate

Source: Research Data, 2015

4.2.5 Descriptive Statistics

The descriptive statistics are shown in table 4.1 below. The minimum NASI attained during the study period was 52.82, maximum of 175.7, mean of 102.91 and standard deviation of 32.92. Notably, the mean of NASI for the period of 102.91 was above 100 implying that stock market performance has been impressive and above the 100 mark. The minimum diaspora remittances was USD 39, 535 million, maximum of 130.172 million, mean 819.0007 million and standard deviation of 28.788 million. The minimum inflation of rate was 3.93%, maximum of 17.07%, mean of 9.13% and standard deviation of 4.19%. The minimum lending rates were 13.66%, maximum of 20.84%, mean of 15.96% and standard deviation of 2%. Minimum exchange rate was 61.899, maximum of 101.27, mean of 82.66 and standard deviation of 7.51.

Table 4.1: Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
NASI	88	52.82	175.7	102.91	32.93
diaspora Remittance (USD '000')	88	39,535	130172	81900.07	28,788.38
Inflation (%)	88	3.93	17.07	9.13	4.19
Lending Rates (%)	88	13.66	20.34	15.96	2.00
Exchange Rate (USD/KES)	88	61.899	101.27	82.66	7.51

Source: Research Data, 2015

4.3 Normality Test

Multiple regression analysis requires that the study variables are normally distributed. Skewness which is the extent to which a distribution of values deviates from symmetry around the mean was used to test normality of the data. A value of zero means the distribution is symmetric, while a positive skewness indicates a greater number of smaller values, and a negative value indicates a greater number of larger values. Values for acceptability for empirical purposes are (+/-1 to +/-2). NASI had a skewness statistic of 0.7158, diaspora Remittance 0.1087, Inflation 0.6085, Lending Rates 0.8706 and Exchange Rate -0.6454. All the variables were acceptable since they were falling between +/-1 to +/-1.

Kurtosis which is a measure of the "peakedness" or "flatness" of a distribution was used in testing the normality of the study variables. A kurtosis value near zero indicates a shape close to normal. A negative value indicates a distribution which is more flat than normal, and a positive kurtosis indicates a shape peaked than normal.

An extreme positive kurtosis indicates a distribution where more of the values are located in the tails of the distribution rather than around the mean. A kurtosis value of +/-1 is considered very good for most empirical uses, but +/-2 is also usually acceptable. NASI had a kurtosis of -0.5837, diaspora Remittance -1.5283, Inflation -1.0781, Lending Rates -0.3380 and Exchange Rate 0.8888. The kurtosis values were all close to 0, +2 or -2 indicating that the data was distributed towards respective means and hence normal. The normality test results are presented in table 4.2 below.

Table 4.2: Normality Tests

Variable	Skewness	Kurtosis
NASI	0.7158	-0.5837
diaspora Remittance	0.1087	-1.5283
Inflation	0.6085	-1.0781
Lending Rates	0.8706	-0.3380
Exchange Rate	-0.6454	0.8888

Source: Research Data, 2015

4.4 Correlation Analysis

To determine the nature of the relationship between study variables, correlation analysis was used. Correlation coefficient determines the strength of a linear association between two variables and is denoted by *r* which can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increases so does the value of the other variable. A value less than 0 indicates a negative association, that is, as the value of one variable increases the value of the other variable decreases.

As shown in table 4.3 below, diaspora remittance has a Pearson correlation of 0.6743 and a p-value of 0.0000. This means that diaspora remittance has a strong positive effect on stock market performance as measured by NASI. The effect is significant at 95% and 99% confidence level since the p-value is less than 0.05 and 0.01 respectively. This means that increase in diaspora remittance will significantly improve the performance of stock market. This finding relate to that of Kariguh (2014) who found that the NSE stock market return was driven up by the amount of foreign investment in the market and hence affected market performance.

Inflation has a coefficient of -0.6930 and a p-value of 0.0000. This implies that inflation has a significant negative effect on stock market performance. Lending rates and stock market performance has a coefficient of 0.0511and a p-value of 0.6362. This means that lending interest alone has no significant effect on stock market performance at 95% confidence level since the p-value of 0.6362 is greater than 0.05. Exchange rate and NASI has a coefficient of 0.3277 and P-value of 0.0018. This means that exchange rate has positive effect on stock market performance which is significant at 95%. Thus depreciation of Kenya shilling against the USD will improve performance of stock market. This finding contradicts that of Mongeri (2011) who established that foreign exchange rates had negative significant impact on stock market performance.

Table 4.3: Correlation Analysis

		NASI	Diaspora Remittance	Inflation	Lending Rates	Exchange Rate
diaspora Remittance	Pearson Correlation	0.6743*	1			
Inflation	Pearson Correlation	-0.6930*	-0.2755*	1		
Lending Rates	Pearson Correlation	0.0511	0.6308*	0.3297*	1	
Exchange Rate	Pearson Correlation	0.3277*	0.7193*	-0.1626	0.4127*	1
	N	88	88	88	88	88

* Significant at 95% confidence

Source: Research Data, 2015

4.5 Regression Analysis

Multiple regression analysis was used to determine the effect of diaspora remittance on stock market performance. Inflation, lending rates and exchange rates were used as control variables. As shown in table 4.4 below, there is a strong positive relationship between independent (diaspora remittance, inflation, lending rates and exchange rates) and dependent variable (NASI) with a coefficient of correlation of 0.90218. The coefficient of determination of 0.81393 indicates that the independent variables can explain 81.393% of changes in stock market performance.

Table 4.4: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.90218	0.81393	0.80496	0.05920

Predictors: (Constant), Exchange Rate, Inflation, Lending Rates, Diaspora Remittance

Source: Research Data, 2015

The analysis of variance results are shown in table 4.5 below. As shown in the table, the model developed is significant at 95% and 99% confidence level since the p-value of 0.0000 is less than 0.05 and 0.01. This means that the effect of independent variables on the model has significant effect on the dependent variables.

Table 4.5: Model Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.2724	4	0.3181	90.7672	0.0000
Residual	0.2909	83	0.0035		
Total	1.5632	87			

Predictors: (Constant), Exchange Rate, Inflation, Lending Rates, diaspora Remittance
Dependent Variable: NASI
Source: Research Data, 2015

The model coefficients obtained by the study are shown in table 4.6 below. As shown in the model, diaspora remittances have a coefficient of 0.8719, inflation -0.0109, lending rates -0.0241 and exchange rate -1.0802. The positive coefficient shows that diaspora remittance positive effect on performance of stock exchange. This means that increase in diaspora remittance will lead to improved performance of the stock market while increase in other variables, namely inflation, lending rates and exchange rates have a negative effect and hence increase in these variables would lead to reduced performance. All the models except the constant are significant at 95% since their p-values are less than 0.05. These finding compares with that of Jahur *et al.* (2014) who found that in addition to remittances, all the macro-economic variables such as consumer price index, interest rate and exchange rate had significant impact on the stock market performance.

The predictive model developed by the study is Y_s= 0.2847 + 0.8719 X_1 + -0.0109X_2 + -0.0241X_3+ -1.0802X_4 where Y_s is the stock market performance, X_1 is diaspora remittance, X_2 is the exchange rate as measured by USD/KES rate, X_3 is interest rates and X_4 is inflation rates.

Table 4.6: Model Coefficients

	Unstandardized Coefficients	Std. Error	Beta	t	Sig.
(Constant)	0.2847	0.3403		0.8367	0.4052
diaspora Remittance	0.8719	0.0844	1.0459	10.3359	0.0000
Inflation	-0.0109	0.0022	-0.3402	-5.0444	0.0000
Lending Rates	-0.0241	0.0056	-0.3597	-4.2984	0.0000
Exchange Rate	-1.0802	0.2250	-0.3315	-4.8004	0.0000

a. Dependent Variable: NASI

Source: Research Data, 2015

4.6 Discussion of Findings

The study sought to determine the effect of diaspora remittance on stock market performance using evidence from Nairobi Securities Exchange. The study found that relationship between stock performance and diaspora remittance has a Pearson correlation of 0.6743 and a p-value of 0.0000. This means that diaspora remittance has a strong positive effect on stock market performance. The effect is significant at 95% and 99% confidence level since the p-value is less than 0.05 and 0.01 respectively. This means that increase in diaspora remittance will significantly improve the performance of stock market. This finding relate to that of Kariguh (2014) who found that the NSE stock market return was driven up by the amount of foreign investment in the market and hence affected market performance. However, this not withstanding that while diaspora remittances represent foreign inflow, not all foreign inflows are diaspora remittances.

Inflation and stock performance had a coefficient of -0.6930 and a p-value of 0.0000. This implies that inflation has a significant negative effect on stock market performance. Lending rates and stock market performance has a coefficient of 0.0511and a p-value of 0.6362. This means that lending interest alone has no significant effect on stock market performance at 95% confidence level since the p-value of 0.6362 is greater than 0.05. Exchange rate and stock market performance has a coefficient of 0.3277 and P-value of 0.0018. This means that exchange rate has positive effect on stock market performance which is significant at 95%. Thus depreciation of Kenya shilling against the USD will improve performance of stock market. This finding contradicts that of Mongeri (2011) who established that foreign exchange rates had negative significant impact on stock market performance.

Multiple regression analysis was used to determine the effect of diaspora remittance on stock market performance. Inflation, lending rates and exchange rates were used as control variables. Multiple regression analysis obtained a coefficient of correlation of 0.90218. This indicates a strong positive relationship between independent (diaspora remittance, inflation, lending rates and exchange rates) and dependent variable (stock market performance). The coefficient of determination of 0.81393 indicated that the independent variables could explain 81.393% of changes in stock market performance. The analysis of variance results indicated that the model developed was significant at 95% and 99% confidence level since the p-value of 0.0000 was less than 0.05 and 0.01. This means that the effect of independent variables on the model has significant effect on the dependent variables.

From the model developed, diaspora remittances had a coefficient of 0.8719, inflation -0.0109, lending rates -0.0241 and exchange rate -1.0802. The positive coefficient shows that diaspora remittance positive effect on performance of stock exchange. This means that increase in diaspora remittance will lead to improved performance of the stock market while increase in other variables, namely inflation, lending rates and exchange rates have a negative effect and hence increase in these variables would lead to reduced performance. All the models except the constant are significant at 95% since their p-values are less than 0.05. These finding compares with that of Jahur *et al.* (2014) who found that in addition to remittances, all the macro-economic variables such as consumer price index, interest rate and exchange rate had significant impact on the stock market performance. The predictive model developed by the study is $Y_s = 0.2847 + 0.8719\ X_1 + -0.0109X_2 + -0.0241X_3 + -1.0802X_4$ where Y_s is the stock market performance, X_1 is diaspora remittance, X_2 is the exchange rate as measured by USD/KES rate, X_3 is interest rates and X_4 is inflation rates.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter contains summary of the study, conclusion and recommendation for policy and areas for further research. Data analysis and summary and conclusions were made in line to the study objective which was to determine the effect of diaspora remittance on stock market performance using evidence from Nairobi Securities Exchange.

5.2 Summary of the Findings

This study sought to determine the effect of diaspora remittance on stock market performance using evidence from Nairobi Securities Exchange. Secondary data obtained from Nairobi Securities Exchange and Central Bank of Kenya was used. The study found that diaspora remittances have strong and significant positive effect on stock market performance with a coefficient of correlation of 0.6743 and a p-value of 0.0000. This means that increase in diaspora remittance will significantly improve the performance of stock market. This finding relate to that of Kariguh (2014) who found that the NSE stock market return was driven up by the amount of foreign investment in the market and hence affected market performance. However, this not withstanding that while diaspora remittances represent foreign inflow, not all foreign inflows are diaspora remittances.

Multiple regression analysis was conducted to determine the relationship between independent variables (diaspora remittance, inflation, lending rates and exchange rates) and dependent variable (stock market performance). The regression analysis obtained a coefficient of correlation of 0.90218. This indicates a strong positive relationship between diaspora remittances and stock market performance subject to the control variables. The coefficient of determination of 0.81393 indicated that variables studied could explain 81.393% of changes in stock market performance. The analysis of variance results indicated that the model developed was significant at 95% and 99% confidence level since the p-value of 0.0000 was less than 0.05 and 0.01. This meant that the effect of independent variables on the model has significant effect on the dependent variables.

From the model developed, diaspora remittances had a coefficient of 0.8719, inflation -0.0109, lending rates -0.0241 and exchange rate -1.0802. The positive coefficient shows that diaspora remittance positive effect on performance of stock exchange. This means that increase in diaspora remittance will lead to improved performance of the stock market while increase in other variables, namely inflation, lending rates and exchange rates have a negative effect and hence increase in these variables would lead to reduced performance. All the models except the constant are significant at 95% since their p-values are less than 0.05. These finding compares with that of Jahur *et al.* (2014) who found that in addition to remittances, all the macro-economic variables such as consumer price index, interest rate and exchange rate had significant impact on the stock market performance.

The predictive model developed by the study is $Y_s = 0.2847 + 0.8719 X_1 + -0.0109X_2 + -0.0241X_3 + -1.0802X_4$ where Y_s is the stock market performance, X_1 is diaspora remittance, X_2 is the exchange rate as measured by USD/KES rate, X_3 is interest rates and X_4 is inflation rates.

Inflation was found to have a significant negative effect on stock market performance with a coefficient of 0.6930 and a p-value of 0.0000. Lending rates and stock market performance was found to have a coefficient of 0.0511 and a p-value of 0.6362. This meant that lending interest alone had no significant effect on stock market performance at 95% confidence level since the p-value of 0.6362 is greater than 0.05. Exchange rate was found to have positive effect on stock market performance with a coefficient of 0.3277 and P-value of 0.0018. This finding contradicted that of Mongeri (2011) who established that foreign exchange rates had negative significant impact on stock market performance.

The performance of stock market was found to be declining to record the lowest performance of 52.82 in February 2009. The performance of the stock market started to improve in March 2009 to February 2011 before starting to decline and hit a low of 66.33 in October 2011. However, since January 2012, performance of the stock market recorded positive growth to reach 175.70 in February 2015. diaspora remittances in Kenya also were found to have positive trend over the study period. The lowest diaspora remittances were recorded in January 2009 at USD 39,535,000. Notably, the lowest NASI was recorded in February 2009, one month after lowest diaspora remittances in January 2009.

5.3 Conclusion

Based on the study findings, the study makes a number of conclusions. First, the study concludes that diaspora remittances have strong and significant positive effect on stock market performance. This means that increase in diaspora remittance will significantly improve the performance of stock market. This implies that a substantial percent of diaspora remittances are invested in the stock market and hence improving stock market performance.

The study also concludes that inflation has a significant negative effect on stock market performance. This means that increase in inflation rate in an economy will decrease performance of the stock market and hence negatively affecting its liquidity. This could be explained by the fact that inflation erodes peoples' purchasing power and leaves the investors with fewer resources to invest in a stock market.

The study also concludes that lending interest rates alone have no significant effect on stock market performance. However, when combined with other macroeconomic variables, lending interest rates have significant negative effect on stock market performance. This could be explained by the fact that changes in interest rates have effect on other macroeconomic variables that includes the inflation rate and exchange rates.

Finally, the study concludes that exchange rates have significant positive effect on stock market performance. However, when combined with other macroeconomic variables, exchange rates have significant negative effect on stock market performance. This could be explained by the fact that depreciation of Kenya shilling against foreign currency would mean foreign investors have more shillings to invest in stock market and hence

improved performance. However, in long run, depreciation of Kenya shillings would lead to unfavorable macroeconomic variables which will discourage investment in at stock market and hence its performance.

5.4 Policy Recommendations

Stock market plays an important role in economic development and growth by creating liquidity and allocation of resources to deficit sectors of the economy. This study found that diaspora remittances have strong and significant positive effect on stock market performance. Therefore, this study recommends that the government to take measures to boost investor confidence to encourage the diaspora population to invest more in Kenya. This can be done by elimination of corruption, having stable political environment, formulation of policies that ensures macroeconomic environment and generally having the right governance systems. Campaigns should be run by the government and nongovernmental organizations to educate the Kenyans in diaspora the importance of investing in Kenya in growth and development of the country.

The study also found that inflation has a significant negative effect on stock market performance. Therefore this study recommends that the Central Bank of Kenya through the monetary policy committee to ensure reasonable inflation rates is maintained in the economy. Low inflation is likely to slow down economic growth. However, high inflation rate will negatively affect the economy and negatively affects performance of stock market. The same is true on exchange rates where reasonable exchange rate has to be maintained.

Finally, the study recommends that commercial banks regulator, namely the Central Bank of Kenya to ensure that commercial banks lending rates remain low and affordable. This will ensure that investors have more finances to invest in the stock market which in turn will promote economic growth.

5.5 Limitations of the Study

This study was limited to the accuracy of data obtained from central bank of Kenya and the Nairobi Securities Exchange. The study was not able to verify the accuracy of the information provided. Further, the data used was collected for different use and not only this study.

Further, the study was limited to the fact that it only relied on secondary data only to establish the relationship between the study variables. This means that the study did not capture other variables and information responsible for the stock market performance expects the ones included in the study. There could be other emotional and psychological factors affecting investment behaviors and hence the stock market performance that were not included in this study.

Finally, the data on diaspora remittance used was only that published by the Central Bank of Kenya. The data suffers the limitation of incomprehensiveness in that it does not include diaspora remittances through informal channels. Data on diaspora remittances from the Central Bank of Kenya captures remittances sent through financial institutions operating in Kenya and hence excludes remittances through all other informal channels.

5.6 Suggestions for Further Research

There is need to conduct a study on the effect of diaspora remittance and stock market performance using both primary and secondary data. This will ensure that change in market performance as a result of psychological factors as explained by behavioral finance may be captured and adjustments done on market performance. Market performance data can be collected on a daily basis and adjustment done to remove performance as a result of market inefficiencies.

The study recommends that a study should be done on the effect of diaspora remittance on other specific sectors of the economy that includes real estate which is also perceived to receive substantial share of the diaspora remittances. This will be important for the recognition of this key source of foreign income in Kenya on varied economic segments.

Further study can be done on the effect of diaspora remittances on the economic growth. The future research could incorporate macroeconomic variables such as, exchange rates and interest rates. Also, the major source of Kenyan remittances is from North America. There is need for further research to determine the factors that contribute to the difference in the source of diaspora remittances. This would be important in determining which parts of the world campaign should be conducted on the need to invest in Kenya.

Finally, a study on the informal channels of sending and receiving money should be done to establish ways providing incentives that can encourage sending and receiving of remittances through the formal channels.

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APPENDICES

Appendix I: Study Data

Month/ Year	NASI	diaspora Remittances USD "000"	Inflation (%)	Lending Rates (%)	Exchange Rate (KES/USD)
May-15	162.13	129101	6.14	15.26	96.39
Apr-15	173.20	124473	6.33	15.4	93.44
Mar-15	175.11	126259	6.37	15.46	91.73
Feb-15	175.70	123236	6.41	15.47	91.49
Jan-15	165.80	114642	6.74	15.93	91.36
Dec-14	162.89	130172	6.88	15.99	90.44
Nov-14	163.27	113972	6.97	15.94	89.96
Oct-14	159.23	120907	7.08	16	89.23
Sep-14	163.45	127399	7.19	16.04	88.84
Aug-14	157.94	128826	7.33	16.26	88.11
Jul-14	151.69	117101	7.19	16.91	87.77
Jun-14	150.37	116064	7.05	16.36	87.61
May-14	150.20	119657	6.85	16.97	87.41
Apr-14	151.13	113409	6.58	16.7	86.72
Mar-14	143.89	119585	6.39	16.91	86.49
Feb-14	141.05	110421	6.21	17.06	86.28
Jan-14	134.66	110969	6.01	17.03	86.21
Dec-13	136.65	113216	5.72	16.99	86.31
Nov-13	141.17	113420	5.39	16.89	86.10
Oct-13	133.24	112919	5.05	17	85.31
Sep-13	127.35	107452	4.75	16.86	87.41
Aug-13	119.96	107049	4.5	16.96	87.49
Jul-13	122.86	112834	4.44	17.02	86.86
Jun-13	116.31	99809	4.56	16.97	85.49
May-13	126.80	110150	4.96	17.45	84.15
Apr-13	118.07	104993	5.61	17.87	84.19
Mar-13	117.91	103393	6.33	17.73	85.82
Feb-13	106.91	102372	7.24	17.84	87.45
Jan-13	103.50	102970	8.2	18.13	86.90
Dec-12	94.86	105656	9.38	18.15	85.99
Nov-12	92.20	97504	10.67	17.78	85.63
Oct-12	91.78	91627	12.04	19.04	85.11
Sep-12	87.38	92519	13.29	19.73	84.61
Aug-12	84.66	94819	14.33	20.13	84.08
Jul-12	83.26	92736	15.27	20.15	84.14
Jun-12	80.75	99488	15.97	20.3	84.79
May-12	78.48	100995	16.4	20.12	84.38
Apr-12	76.91	95625	16.5	20.22	83.19
Mar-12	73.47	106198	16.45	20.34	82.90
Feb-12	72.07	103970	15.93	20.28	83.18
Jan-12	68.94	89755	15.1	19.54	86.34
Dec-11	68.03	85244	14.02	20.04	86.66
Nov-11	66.33	80802	12.82	18.51	93.68
Oct-11	72.71	81311	11.49	15.21	101.27

Month/ Year	NASI	diaspora Remittances USD "000"	Inflation (%)	Lending Rates (%)	Exchange Rate (KES/USD)
Sep-11	69.38	84854	10.18	14.79	96.36
Aug-11	76.15	79563	9	14.32	92.79
Jul-11	84.32	72797	7.88	14.14	89.90
Jun-11	91.36	71888	6.88	13.91	89.05
May-11	93.21	68124	5.96	13.88	85.43
Apr-11	94.18	70071	5.2	13.92	83.89
Mar-11	89.50	71577	4.49	13.92	84.21
Feb-11	96.66	60759	4.05	13.92	81.47
Jan-11	99.02	64139	3.93	14.03	81.03
Dec-10	97.82	65617	3.96	13.87	80.57
Nov-10	98.01	56380	4.02	13.95	80.46
Oct-10	102.36	58503	4.12	13.85	80.71
Sep-10	98.92	58557	4.4	13.98	80.91
Aug-10	95.93	51993	4.69	14.18	80.44
Jul-10	97.74	50652	5.03	14.29	81.43
Jun-10	95.10	52541	5.43	14.39	81.02
May-10	92.33	51172	5.85	14.46	78.54
Apr-10	90.13	52679	6.32	14.58	77.25
Mar-10	84.43	52309	7.03	14.8	76.95
Feb-10	79.18	46423	7.88	14.98	76.73
Jan-10	78.15	45117	8.64	14.98	75.79
Dec-09	71.64	56329	9.24	14.76	75.43
Nov-09	71.29	48231	10.24	14.85	74.74
Oct-09	67.68	53037	11.42	14.78	75.24
Sep-09	66.73	53347	12.41	14.74	75.61
Aug-09	67.79	55947	13.42	14.76	76.37
Jul-09	71.43	50372	14.35	14.79	76.75
Jun-09	70.96	46347	15.11	15.09	77.85
May-09	59.75	49180	15.93	14.85	77.86
Apr-09	58.86	48117	16.72	14.71	79.63
Mar-09	59.49	55361	17.07	14.87	80.26
Feb-09	52.82	53353	16.87	14.67	79.53
Jan-09	67.17	39535	16.56	14.78	78.95
Dec-08	73.37	40129	16.27	14.87	78.04
Nov-08	71.28	43970	15.25	14.33	78.18
Oct-08	68.84	61113	14.13	14.12	76.66
Sep-08	87.75	48953	13.02	13.66	71.41
Aug-08	97.54	43388	11.92	13.66	67.68
Jul-08	101.74	44137	10.83	13.9	66.70
Jun-08	112.11	49490	9.86	14.06	63.78
May-08	108.82	48538	8.7	14.01	61.90
Apr-08	107.78	67872	7.32	13.91	62.26
Mar-08	94.64	59344	6.13	14.06	64.92
Feb-08	98.60	50382	5.32	13.84	70.62

Source: Central Bank of Kenya and Nairobi Securities Exchange