IMPACT OF FOREIGN PORTFOLIO EQUITY INVESTMENTS ON THE MARKET CAPITALIZATION OF THE NAIROBI SECURITIES EXCHANGE (2004-2013)

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UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

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STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Africa for academic credit.

Signed: _____ Date: _____

Gathenya James M.(ID 639906)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: _____ Date: _____

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Dean, Chandaria School of Business

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ABSTRACT

The study investigates the effect of the Foreign Portfolio Equity Investments on the development of the stock market in Kenya for the period 2004 to 2013. The objective of this study was to empirically examine whether there exists a relationship between Foreign Portfolio Equity Investment (FPEI) and the market capitalization (MC) of the Nairobi Securities Exchange (NSE). Further, the study investigated the strength and direction of the relationship between FPEI and MC and also the nature of causality between the FPEIs and the growth of the NSE.

The study employed the use of observation descriptive research whereby secondary data on Market Capitalization data from the CBK and the foreign Portfolio investment data from the World Bank (WB) was collected and later analysed using the SPSS software. The study was a census study using the market capitalization of all the listed companies in the NSE and the sum total of the FPEI made in all the listed companies at the NSE in any given year of study.

The data is organized on yearly basis and used the Pearson Product Moment Correlation analysis, the simple linear regression and the cross-correlation analysis in establishing the nature, strength, direction and causality of the relationship between the market capitalization and FPEI. In addition the nature of causality between MC and FPEI was established using the cross-correlation tests. The study used the NSE Market capitalization values as the measure of the stock market development rather than constructing a composite index because market capitalization is a good proxy for such general development of the market and is less arbitrary than any other index.

The study is important to the capital market regulators and the technocrats at the National Treasury since it provides better empirical evidence on the impact of FPEIs on the development of the NSE and such evidence can be used as a basis of developing policies and structures to ensure the development of the NSE is well-grounded and that sustainable growth of the capital market is achieved. The study is also important to the investors in the NSE as it provides empirical evidence of the relationship between the FPEIs and the development of the NSE thus

ensuring that the investors are better equipped to make investment decisions. To the researchers and academicians, the study expands the body of knowledge on the relationship between the two.

The results of the Pearson Product Moment Correlation analysis showed that there was a positive correlation between the FPEI and MC with the correlation coefficient (r) of 0.753 and with a p-value of 0.019, which is less than 0.05 meaning that the results were statistically significant.   The findings on the correlation showed that, overall, there was a strong, positive correlation between FPEI and market capitalization which means that increases in the market capitalization were correlated with increases in FPEI and an increase in FPEI was correlated with an increase in MC.

In addition the study showed that the FPEIs significantly determines the market capitalization since the results of the simple linear regression analysis of the FPEI and market capitalization data for the period 2004 to 2013 generated a coefficient of determination, R^2, is 0.567; therefore we conclude that about 56.7% of the variation in MC is explained by variations in FPEI. In addition the results shows a constant (β_0) of 574.199 and β_1 of 2.134E-5 (0.00002132) and thus the estimation model generated was Y =574.199+0.00002132X where Y is MC and X is the FPEI figure for a given year.

Further, the study shows that there is no causality relationship between market capitalization and the Foreign Portfolio Equity Investments as shown in the cross correlation. Based on the assumption that the series are not cross correlated and that one of the series is white noise, the cross-correlation test results show that there is only one significant cross-correlation at lag 0 i.e. there is no lag between MC and FPEI so the MC and FPEI figures for one variable do not impact the figures of the other variable for the subsequent periods.

The study concludes that the FPEI is a major determinant in the development of the NSE and thus continuous and sustainable efforts should implemented to encourage more foreign investors to invest in the NSE. Such measures should be constantly reviewed to ensure necessary, up-to-date controls are in place to guard the NSE from any shocks from external economies which may affect the flow of FPEIs. On the impact of portfolio flows on stock market performance, the

study concludes that portfolio flows are important in determining market returns as they lead to share price changes. Given that the stock market is liberalised, it is necessary to be cognisant of the implications of this on the stock market performance. Further, the study concludes that, for the period under study, the MC and FPEIs impact each other during the same period but they have no impact on each other during the subsequent periods i.e there is no spill-over effect to the subsequent periods.

The study recommends that due to the strong, positive correlation relationship between MC and FPEIs monetary authorities should ensure macroeconomic stability prevails, that there are favourable legal and taxation rules and that measures are put in place to ensure that inflows of short term capital are not disruptive as they lead to appreciation of the currency, making the country uncompetitive. The study also recommends that since no causality was found between FPEI and market capitalization, further research be conducted in this area covering a much longer period and using different tests such as the granger-causality test.

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ABBREVIATIONS

Below is a list of the abbreviations used in the report

CBK: Central Bank of Kenya

FPEI: Foreign Portfolio Equity Investments

KES: Kenya Shillings

MC: Market Capitalization

NSE: Nairobi Securities Exchange

USD: United States Dollar

CHAPTER ONE

1.0   INTRODUCTION

1.1   Background of the study

One of the factors that play a critical role in the economic development of a country is the nature and depth of the financial markets. Financial markets provide the channel through which funds flow from savers to investors. In an economy, the commercial banks perform the role of financial intermediation between borrowers and savers by providing the credit market which enables debt financing for investments.

A substitute method of intermediation is available in form of equity financing which is availed through the growth and development of capital markets. Capital markets facilitate the mobilization of long term financial resources by providing a mechanism through which securities in form of stocks and bonds are dealt. Through the capital markets, companies are able to raise capital directly from the public thereby lowering the cost of capital to the firm. Through the capital markets, the ownership of the firms is spread to many people and entities in the economy and this helps in the distribution of risks and wealth amongst smaller investors. Capital markets provide investors with an effective opportunity for making investment choices which suit their diverse appetites of risk and returns based on available information. Through this process, the capital markets act as a vehicle through which an economy is able to generate more savings and productive investments. For a capital market to be considered effective, it must demonstrate one fundamental aspect; Constant liquidity which refers to the easy mechanism through which investors are able to enter and exit the market. This requires sufficient volume and size of transactions in the market (Tuladhar, 1996).

The stock market is an important vehicle which provides businesses with an invaluable avenue to raise capital. The stock market enable companies to be publicly listed and traded, or to increase additional capital for expansion by floating shares of ownership in a public market. A critical factor of a stock market is its liquidity which refers to the ease with which investors are able to acquire and dispose securities. The market liquidity makes investment in stocks a more attractive investment vehicle compared to other less liquid investments such as real estate. The price of shares and other assets form an integral part of the dynamics of economic activity in a

country and can be used to influence or be an indicator of social mood. Usually, a stock market is considered one of the primary measurement of the strength and development of a country's economy. In fact, an economy whose stock market indicators such share indices and market capitalization are on the rise is considered to be an up-and-coming economy. The performance of share prices in the stock market is used as a measure of business investment in an in an economy such that a constant rise in prices may signal increased business investment and vice versa. Share prices and the returns of the stock markets impact on the financial status of the households and their consumption behaviour. Consequently, in the world over, central banks tend monitor the control and operations of the stock markets in addition to ensuring the smooth operations of the financial system functions. Stock exchanges also perform the role of clearing house for stock transactions which means that they provide a mechanism through which buyers and sellers collect and deliver the shares and guarantee payment to the seller of a security. Through this clearing house role the stock markets are able to eliminate the risk of counterparty defaults. (en.wikipedia.org/wiki/Stockmarket 2010).

A developed and well-functioning stock market provides the economy with an efficient environment for investment. For such stock markets the cost of equity capital for firms is greatly reduced and individuals investors are able to better and more effectively price and hedge risk. Furthermore, a well-functioning stock market is a key attraction for foreign portfolio capital investors and also accelerates the mobilization of domestic resources available for investment in the capital markets and thereby expanding the resources available for investment in developing countries. Due to the critical role played by the stock market in shaping the economic growth of a country, the prudential authorities such as the World Bank and International Monetary Fund (IMF), invested in deliberate programs aimed at making specific intervention to facilitate the development of stock markets for emerging markets in developing countries during 1980s and 1990s. The result has been monumental growth of these emerging stock markets since the early 1980s. The market capitalization of emerging market countries more than doubled over the ten years from 1995 to 2005 growing from less than $2 trillion in 1995 to about $5 trillion in 2005 (Yartey, 2008).

For developing countries, foreign portfolio equity investment has different characteristics and implications compared to foreign direct investment (FDI). Besides supplementing domestic savings, FDI is expected to facilitate transfer of technology, to introduce new management and marketing skills and to extend host country's markets and foreign trade. FPEI, on the other hand, supplements foreign exchange availability and domestic savings but are not often project specific. It is expected that FPEI leads to improvement in the functioning of the stock markets, which in turn results into increased trading volume and market capitalization as foreign portfolio investors intend to invest on the basis of well - researched strategies and realistic stock valuation, Bodla and Kumar (2009).

Further, it is believed, foreign funds inflows could help in achieving a higher degree of liquidity at stock markets, to increase price earning (P/E) ratios and consequently to reduce cost of capital for investment. This lower cost of capital and a vibrant stock market can encourage new equity issues. Foreign Portfolio Equity Investments provide investors with a wide array of assets with varying degree of risk, return and liquidity. This increased choice of assets and existence of developed capital markets provides savers with more alternatives and thus increased liquidity. , Bodla and Kumar (2009) argue that the above in turn results in augmenting households savings directed towards stock markets. The liquid markets can improve the allocations of capital and can enhance prospects for long term economic growth. Generally, foreign equity investors concentrate on secondary markets. A strong secondary market, besides providing liquidity to primary markets, allows the efficient firms to price their new issues at a premium. Moreover, increased competition from foreign institutional investors also paves the way for the derivatives market.

Following several incidences of economic and financial crises in the 1990s and 2000s, there has been an upsurge in the interest for research aimed at analyzing the impact of FPEIs on the economic well-being of a host country. Although it is generally accepted that investments flows have positive impacts on the economic development of a country, in terms of increased liquidity and reduction in the cost of capital, lessons from the financial crises have indicated that short-term FPEI could have unfavourable consequences in the host economy. Consequently, it is absolutely important to assess the extent to which inflows from FPEI could be beneficial to a

country and its economy. In general, the merits of capital market integration through liberalisation of investment regulations are well-documented in the literature. FPEI contributes positively in the development of an efficient domestic capital market and brings several benefits to the host country. Increased FPEI leads to greater liquidity in the capital market, resulting in a deeper and broader market, Levine and Zervos (1996).

Feldman and Kumar (1995) and Shinn (2000) explained that the spill-over effects of positive competitive pressure to attract foreign investment would necessitate higher industrial standards and regulations through better corporate governance and greater business transparency, resulting in stronger investor protection and thus enhanced investor confidence. Bekaert and Harvey (2003) observed that an increased liquidity in the capital market is beneficial to the economic activity in a country since it results to increased access to financing at lower cost of capital. Consequently, the inflow of FPEI into the stock market helps to alleviate financial constraints of firms as was shown by Knill (2004) and Beck, Demirguc-Kunt, and Maksimovic (2005). Patro and Wald (2005) is among the studies relating to FPEI and the domestic stock markets which has shown favourable contribution of FPEI in supporting the domestic stock market. The multiplier effect further propagates the impact of growth in the stock market through the wealth effect. In this sense, capital flows act as catalyst to economic growth and contribute towards increased wealth creation. Ultimately, better access to financing provided by the free flow of portfolio investments contributes to efficient allocation of capital, Love (2003).

Despite its many advantages to the economic activity of the host country, FPEI could have adverse effects on the host economy. The potentially damaging aspects of FPEI are to be found in its nature which is short-term and thus also volatile. In particular, FPEI volatility has often been quoted as the major reason behind financial market distress, leading to financial crisis. The Asian financial crisis of 1997-1998 provided critical lessons which show that large and abrupt reversal of portfolio investment usually causes panic in the financial market, since it is interpreted to be a manifestation of a looming financial crisis, Sula and Willet (2006). Further, as highlighted by Henry (2003) and Demirguc-Kunt and Detragiache (1999), a study of the experiences of many countries which experienced financial crisis, has shown that the volatility of portfolio investment further exacerbates the impact of a financial crisis. FPEI volatility

presents the policy makers with complexities in the implementation of macroeconomic stabilisation policies of a country. Patro and Wald (2005) concluded that this uncertainties in the flow of FPEI result in the unpredictability of the behaviour of exchange rates, money supply and stock market volatility. Specifically, sustained periods of excessive capital inflows due to high capital mobility could result in the formation of asset price bubbles, leading to inflationary pressure, while sudden withdrawals in portfolio investment accompanied by major correction in asset prices can pose serious risk to the economy (Bank Negara Malaysia, 2006).

Kaminsky and Schmukler (2001) concluded that the benefits of FPEI are long-term with some adverse effects in the initial stage of the process. The long-term gains of FPEI outweigh its short-term ill effects and bring real benefits to the growth and development of the domestic financial markets and the economy in general.

Errunza (2001) observes that reform of local capital markets and relaxation of capital controls to attract Foreign Portfolio Equity Investments (FPEIs) has become an integral part of development strategy. The level of direct participation by foreign investors in local exchanges depends on the opportunities for investment in the market. Further, short term capital flows, such as Foreign Portfolio Equity Investments, impact on growth through their contribution to development of domestic capital markets, which is through resource mobilization, market development and globalisation effect.

According to Allen, Otchere and Senbet (2011), the ability of a country to attract short term capital depends on macroeconomic and political factors. Conover, Jensen and Johnson (2002) established that emerging market equities are attractive diversification vehicles for investors in developed countries due to the much lower average correlation of the emerging markets with the developed markets. Liberalization changes the source of systematic risk for pricing stocks and the expected return that can be received from a stock determines its attractiveness.

According to Bekaert, Harvey and Lumsdaine (2002), foreign portfolio is reversible and tends to leave as fast as they come in an economy. In concurrence, Gazioglu (2008) observed that, capital inflow slowdown or reversal may make a country insolvent or drastically lower the

productivity of its capital stock. Consequently, portfolio flows may significantly affect an economy and greatly affect the stability of a stock market since the values of shares of companies traded in that market is affected by the buy-sell cycles of the foreign investors.

Pavabutr and Yan (2007) observed that foreign flows affects the volatility of the daily and weekly returns in the Thailand Stock Market due to the unexpected shocks to foreign flows while Frankel (2011) explains that most of the volatility observed in developing countries originates from financial shocks from global markets, mainly due to globalization.

1.2   Statement of the problem

Financial markets, and in particular stock markets, have grown considerably in developing countries including Kenya over the last two decades. This is due, in part, to globalization which has promoted better links among financial markets and greater participation of foreign financial firms around the world. In addition, other factors such as better fundamentals as seen in higher economic growth, structural reforms in the form of privatization of state-owned enterprises and specific policy changes such as financial reforms have contributed immensely in the growth of these stock markets (Claessens, Klingebiel, and Schmukler, 2001).

The IMF and World Bank supported reforms in the developing countries during the 1980s and early 1990s created a conducive environment for the developing countries since, through them, most of these countries we able to implement critical reforms in their capital markets such as stock market liberalization, improvements in securities clearance and settlements systems, and the development of regulatory and supervisory framework. These reforms in the capital markets created a favourable environment for the flow of funds from developed to the developing countries. One of the major components of an economy's financial system is the stock market. It is a source of financing a new venture based on its expected profitability. The stock market is reflection of the economic strength of any country. In order to promote investment, economic growth and savings, the development of stock market is necessary and cannot be ignored in any economy (Kalim and Shahbaz, 2009).

Although there is numerous evidence of studies which have been conducted on the impact of Foreign Portfolio Equity Investment on capital market growth in emerging markets, the theoretical and empirical work on the subject has not attained any consensus. There are two major trends in the literature. The first school of thought argues that economic activities in a country constitute the key drivers of stock market growth and development, Yartey (2008). This school of thought opines that financing a country's growth through Foreign Portfolio Equity Investment can expose countries to sudden inflows and outflows that can destabilize sound economies and force them into drastic macroeconomic adjustments and wreak havoc in their securities market. Studies in support of this idea include Dellas and Martin (2002) and Carlson and Hernandez (2002). The second strand of the literature argues that greater openness which leads to inflow of foreign investment has enabled the developing countries to benefit from research and development (R&D) from advanced economies and also boosted growth of manufacturing in emerging markets as well as advanced the growth of their capital markets, Choe and Stulz (1999)

Sultana and Pardhasaradhi (2012) established a moderate correlation between stock market of India (Sensex & Nifty) and portfolio investment. In contrast Pal, (2006) reported different results and claimed that Foreign Portfolio Equity Investment is not related to the stock market of India and did not boost the stock market of India.

Osinubi and Amaghionyeodiwe (2010) claimed that Foreign Portfolio Equity Investment was basically just a change of ownership and may not be a positive investment transfer but they claimed that Portfolio Investment fills the gap in domestic resources and plays a role in development of the country. Eniekezimene(2013) concludes that Foreign Portfolio Equity Investment is positively related to capital market growth in Nigeria. Further, Chukwuemeka, Stella, Oduh and Onyema (2012) claimed that there are a number of merits and demerits associated with portfolio investment. However, their results show a long term positive relationship between Foreign Portfolio Equity Investment and market capitalization.

Several studies in Kenya have examined the nature of the relationship between FPEI and NSE. In their study Aduda, Masila and Onsongo (2012) found no significant relationship between stock market development and FPEI while Nyang`oro (2013) in his study established that the

domestic stock market returns are affected by the participation of foreign investors as well as by the lagged unexpected flows and not by its contemporaneous value.

From the above literature, especially the studies conducted in Kenya and Nigeria, there is no consensus on the impact of Foreign Portfolio Equity Investment in stock market development. Furthermore, the studies done at the NSE are too few to be used as a basis of a conclusive result. It is then not possible to generalize the impact of the FPEI on NSE, and there lies a gap. This study seeks to fill the knowledge gap that has been generated by the above researches in Kenya which have found contrasting results.

1.3   Purpose of the study

The purpose of the study is to investigate the impact of Foreign Portfolio Equity Investments in the development of the stock market in Kenya as proxied by the market capitalization of the Nairobi Securities Exchange.

1.4   Research Questions

The study was guided by the following research questions:

1.4.1   What is the nature of the relationship between the Foreign Portfolio Equity Investments and the development of the Nairobi Securities Exchange?

1.4.2   To what extent does the Foreign Portfolio Equity Investments impact the market capitalization of the Nairobi Securities Exchange?

1.4.3   What is the direction of the causality relationship between the Foreign Portfolio Equity Investments and the development of the Nairobi Securities Exchange?

1.5   Importance of the study

1.5.1   Stock Market regulator

To the Capital Market Authority (CMA), the stock market regulator, the study provides comprehensive empirical evidence on the impact of the Foreign Portfolio Equity Investments on

the development of the Nairobi Stock Exchange and such evidence can be used as a basis of developing policies and structures to ensure the development of the NSE is well-grounded.

1.5.2 The Nairobi Securities Exchange

This study is beneficial to the NSE since understanding the relationship between FPEI and the market capitalization will help in better prediction of the likely movements on the market following the activity of foreign investors. The positions taken by the foreign investors may directly affect the profitability of the NSE

1.5.3 Domestic Investors at the NSE

Some domestic investors at the NSE base their investment decisions based on the activity of the foreign investors. To such local investors, the study will provide empirical evidence of the relationship between the Foreign Portfolio Equity Investments and the development of the NSE thus ensuring that the investors are better equipped to make investment decisions.

1.5.4 Public Sector

To the government technocrats at the treasury including KRA, the study presents them with critical information that can be used in formulation of policies which would facilitate further growth of the stock market even as they manage other macroeconomics parameters such as exchange rates which may be affected by FPEI movements. The activity of the foreign investors has an impact on the capital gains tax collections.

1.5.5 Brokers and Underwriters

The brokerage firms and other underwriters derive their income from the activity of investors at the NSE. Understanding the relationship between NSE and FPEIs will help the brokers and underwriters to better position their business during different circumstances.

1.5.6 Researchers and Academicians

To the researchers and academicians, the study presents them with the valuable information on the relationship between the Foreign Portfolio Equity Investments and the development of NSE thus deepening the body of knowledge

1.6   Scope of the study

The study covers the development of the Nairobi Securities Exchange and is limited to the ten year period covering 2004-2013, which is a period of improved though fluctuating foreign investor participation since it is after the coming to power of a new government in 2003 and the covers the time before, during and after the infamous post-election violence. The study uses secondary data from the Central Bank of Kenya and the World Bank and covers the market capitalization of all the companies listed at the Nairobi Securities Exchange. The study was limited by lack of monthly FPEI data which would have provided for a better comparison with the monthly Market Capitalization data obtained from the CBK.

1.7   Definition of Terms

1.7.1   Foreign Direct Investment (FDI): an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor (The International Monetary Fund [IMF] Balance of Payments Manual: Fifth Edition, 1993). The World Bank, (2003) defined foreign direct investment (FDI) as "the flow of capital in terms of equity financing from abroad being not less than 10 percent of the share in a business activity"

1.7.2   Portfolio investment: is defined as cross-border transactions and positions involving debt or equity securities, other than those included in direct investment or reserve assets. (The International Monetary Fund [IMF] Balance of Payments and International Investment Position Manual 6th Edition,2009)

1.7.3   Portfolio Equity is defined to include net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts (American or global), and direct purchases of shares in local stock markets by foreign investors – The World Bank.

1.7.4   Gross Domestic Product (GDP): Gross domestic product is an aggregate measure of production equal to the sum of the gross values added of all resident institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs). The sum of the final uses of goods and services

(all uses except intermediate consumption) measured in purchasers' prices, less the value of imports of goods and services, or the sum of primary incomes distributed by resident producer units.(The Organisation for Economic Co-operation and Development[OECD], Glossary of Statistical Terms,2002)

1.8   Chapter Summary

This chapter has explained in details the purpose of the study which aimed to investigate the impact of the Foreign Portfolio Equity Investments on the development of the NSE. The chapter also provided a background of the study, the significance and the scope of the study.

The chapter 2 of the study provides the literature review, which is an analysis, in great length, of the available literature on the theoretical background and the empirical studies on the relationship between FPEI and development of stock markets. Chapter 3 provides the research methodology used in the study while chapter four provides a detailed presentation of the results and the findings of the study. In chapter five there is a discussion of the results and the presentation of the conclusions and the recommendations from the study.

CHAPTER TWO

2.0   LITERATURE REVIEW

2.1   Introduction

This chapter reviews the theoretical and empirical evidence underlying the impact of the Foreign Portfolio Equity Investments on the development of the stock markets. In this chapter, I review in details the theory which explains the relationship between FPEI and the development of the capital market and also the empirical evidence of the studies which have been conducted to investigate this relationship. This in-depth review provides a firm background for analyzing and quantifying the impact of FPEIs on the development of the Nairobi Securities Exchange

2.2   The Relationship Between FPEIs and Stock Market Development

Foreign portfolio flows have been encouraged as a way of improving market activity and providing access to foreign capital. Liberalisation of the stock market opens the domestic market for foreign trade, allowing risk sharing among foreign and domestic investors, which reduces the risk premium in the market. The reduction or fall in risk premium reduces the cost of capital and makes some projects which had negative net present value (NPV), to have positive NPV, Henry (2000). Chari and Henry(2004) posit that liberalisation also leads to stock price appreciation when the cost of capital falls, changing the expected return and the source of systematic risk for pricing stocks from the local stock market index to a world stock market index. However, the level of volatility in emerging and frontier markets creates an element of risk in these markets, since investors cannot make informed decisions.

The market factors in these risks by accounting for systematic risk through change in stock prices and diversifying unsystematic risk. However, stock market liberalisation is gradual and involves subsequent liberalisations together with favourable unanticipated macroeconomic events, Henry (2000b). Hence, news of future liberalisation increases the equity price index, if aggregate cost of equity capital is reduced.

2.2.1   Impact of Foreign Investors on Market Activity

Foreign investors enter emerging markets for diversification and also to maximize their returns. Financial market theory suggests that, over the long run, higher returns should compensate for the higher risks of emerging markets, Tokat (2004). For foreign investors, return depends on capital gain at the end of the period and the exchange rate. Thus, the return is approximately equal to the sum of domestic return on the security and the return on foreign currency, Sharpe et al. (2003). This means that the rate of return of a country's currency has an impact on the pricing of equities in the domestic market.

According to Stulz (1999), foreign flows causes stock prices volatility since when they come in, they create a demand for the shares resulting to an increase in prices and when they leave, they offload the shares thus creating excessive supply which pushes prices downwards. Hence, capital flows have an impact on valuations only if they are undertaken because of information with foreign investors that is not yet incorporated in prices. This literature introduces information asymmetry that exists between foreign and domestic investors, which may be due to the fact that foreign investors are less informed about a country and its firms and thus process information differently due to intellectual or emotional biases, hence creating aversion towards international investments, Dahlquist and Robertsson (2001). Foreign investors will therefore discount share prices relative to domestic investors whose actions depend on adverse information they hold, but not factored in asset prices Stulz (1999). On the other hand, investors prefer firms that have high past returns as this is an indicator of performance, and overweight firms with relatively high risk, Dahlquist and Robertsson (2001).

Hargis (1998) studied the result of opening of Latin American stock markets to foreign investors and he established that such an exercise increase the participation in the markets this making them more liquid. Further he observed that with the greater participation, more companies were disposed to issuing securities in such markets and this by extension resulted to further diversification. Using the increases in market capitalization, volume of trading and turnover ratio as proxies of stock market development and from his observations he concluded that liberalization of Latin American stock markets led to their further development. The study also established a marked increase in price to earnings (P/E) ratios of stocks traded in Latin America after their liberalization of their respective stock exchanges.

2.2.2   Relationship of Capital Inflows on Market Returns

In a study on the relationship between aggregate stock market returns and cash flows (net purchase of equity) from an array of investor groups, Boyer and Zheng (2011) found quarterly flows to be auto-correlated for each of the different investor groups and a significant and positive contemporaneous relation between stock market returns and flows of Mutual Funds and foreign investors in U.S. They found that investors are driven by unexpected flows component rather than expected flows, but little evidence that investor flows followed past stock market returns.

Kim and Yang (2009) investigated the effect of capital inflows on domestic asset prices in Korea from January 1999 to September 2007. The study identified three channels by which capital inflows might result in increased asset prices; these are, by directly affecting the demand for assets, through money supply and liquidity which, in turn, might boost asset prices, and by generating economic booms in capital receiving economies leading to increase in asset prices. However, other factors such as improved economic performance, monetary expansion and low interest rates could also affect asset prices in emerging markets. They used the end-of-period data for asset prices to control simultaneity between asset prices and capital inflows and treated capital inflows as contemporaneously exogenous to asset. They found the influence of capital inflow shocks to be more significant on the stock market, but limited in other parts of the economy. Capital inflow shocks led to an increase in stock prices, but limited effects on nominal and real exchange rates due to accumulation of foreign exchange reserves.

Twerefou and Nimo (2005) observed that, in emerging markets, stock price is the main indicator of risk as investors are more concerned about share price movements. Hence, foreign entry has an impact on market return through its effect on the portfolio risk premium. However according to the efficient markets hypothesis, since the expected part of the announcement is already embedded in stock prices then the security prices should respond to the unexpected announcement.

While examining the dynamics of the relationship between institutional investment flow and stock returns for India using daily data over the period of 1st Jan 2002 to 31st July 2012,

Pramod and Puja (2014), concluded that Foreign Institutional Investors (FIIs) flow do not have any significant impact on market returns but the flows are significantly affected by their own lags and lagged returns, implying that they follow their own past strategy as well as the recent market behavior. Sehgal and Tripathi (2009) compared the investment behaviour of mutual funds and FIIs and found that the stock market returns cause both FII flows and mutual fund flows, thereby acknowledging positive feedback trading strategy

Thiripalraju and Acharya (2011) investigated the interaction between institutional investment and market return in Indian stock market using daily net investment data of Foreign Institutional Investors (FIIs) and Mutual Funds (MFs) from January 2000 to December 2009. They found a bidirectional causality between FIIs investment and stock market returns and that FIIs investment is positively related to lagged market return

Luciana, Meurer and Silva (2010) examined the relationship between stock returns and foreign investment in Brazil. They concluded that the inflows of foreign investment boosted the returns from 1995 to 2005. There was a strong contemporaneous correlation, although not Granger causality. The returns Granger-caused foreign presence, but the reverse causality was not found. This suggests that positive feedback trading played a role, and that the market promptly assimilated the relevant new information that arrived.

In their study Chukwuemeka et al (2012), modelled the determinants of FPEI for the Nigerian stock market and converted the data for the period 1981-2010 into quarterly series then used the finite distributed lag model of time series analysis to observe the which ones would be long run determinants of FPEI for the Nigerian stock market. Among other observations, the study discovered that FPEI has a positive long-run relationship with market capitalization for the Nigerian stock Market.

In his study Eniekezimene (2013), studied the impact of Foreign Portfolio Equity Investment on capital market growth in Nigeria, found that Foreign Portfolio Equity Investment has a positive impact on capital market growth with the speed of adjustment from short run to long run as indicated by the ECM-1 having a relatively high value of 66% in absolute terms.

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Boubakria, Cossetb, Debabc and Valéry (2013) examined the link between privatization and globalization, measured by FDI and FPEI, for developing countries. They focused on developing economies including Brazil, Russia, India and China (BRIC) due to their importance in attracting foreign investors. Among other observations, they observed that there was a strong positive correlation between the stock market capitalization and FPEI.

2.3 Relationship Between FPEI and the Equity Market Capitalization

The correlation between foreign capital inflows and stock returns has been explained using a number of hypotheses which have been advanced depending on how foreign portfolio flows affect domestic stock prices and thus the market capitalization. The hypothesis include the positive feedback hypothesis, the base-broadening hypothesis and the price pressure hypothesis.

2.3.1   The Base-Broadening Hypothesis

The 'base-broadening' argument contends that once foreigners begin to invest in a country, the financial markets in that country are now no longer moved by national economic factors alone but rather begin to be affected by foreign market movements as well. As the market itself is now affected by more factors than before, its exposure to domestic shocks decline. Consequently the 'risk' of the market itself falls, people demand a lower risk premium to buy stocks, and stock prices rise to higher level (Chakrabarti, 2001).

The base-broadening hypothesis was developed from the work of Merton (1987) who provides an intuitive and tractable model for illustrating how broadening the investor base for a given market   may raise equity prices through risk sharing. Merton demonstrates in his framework that if investors were able to invest in all equities, the standard capital asset pricing model pricing relations would hold, that is, the expected return on a given market (or share in his original model) would be a function of its covariance with the global market, but not its variance. However, with segmentation restrictions, the expected return on a market, with a restricted investor base, will be higher than its unrestricted return by a risk premium that is a convex function of the markets conditional variance, the narrowness of the investor base and

the investor's risk aversion. Merton's model predicts that the greater the number of 'informed' investors the lower the required rate of return.

Nyang`oro (2013) suggests that the base-broadening hypothesis implies that foreign inflows cause the a rise in the prices of equities in emerging market. By broadening the investor base, diversification and risk sharing is increased thereby lowering the required risk premium. According to Narag(2000) the supposed liquidity risk of securities in a market is greatly lowered by the entry of new investors. In this case, investors invest only in stocks of which they are informed. Stocks with narrow investor bases exhibit higher expected returns because for the holders of these shares the variance of the returns on the stocks is more systematic than it appears from the perspective of the market as a whole. From the works of Richards (2004), foreign portfolio inflows may be premised on two perceptions by foreign investors ; that the shares are undervalued or there are other portfolio benefits that may be derived from their investments in emerging markets. He observed that this net purchases by foreigners create substantial shock to net investor demands.

Berkaert, Harvey and Lumsdaine (2002) use this idea to show that equity flows should lower the cost of capital in many countries and facilitate the flow of capital to firms and countries that have the best investment opportunities irrespective of their location. In their empirical work, Berkaert et al (2002) use dividend yield to proxy the cost of capital and find a negative relationship between equity flows and dividend yields, implying that as investor base increases the cost of capital declines, which in turn increases equity prices.

The base broadening hypothesis has also been used to establish a relationship between equity flows and equity return in the segmentation literature, Henry (2000). Stulz (1999) implicitly suggests that a dramatic change in investor base, surrounding liberalization in emerging market equities, has implications for their pricing. In particular, because of greater risk sharing and increased liquidity, expected returns should fall and cause prices to increase. The base broadening hypothesis has also been interpreted as a sort of 'radar' theory. As the equities of a particular country are exposed to a larger number of investors, the required return for this equities decline, which leads to an increase in price.

While the base broadening hypothesis is compelling, the efficient market hypothesis implies that relevant information available at the start of the period should already be reflected in the price of assets at the start of the period. Therefore, if foreign demand is expected to ultimately push prices to a higher equilibrium level, prices should rise ahead of actual inflows argued Clark and Berko (1997). Additionally, if investors are unsure of the magnitude of new foreign demand, the arrival of new information that causes investors to increase their estimates of total foreign inflows should push prices to a higher level. This implies that lagged inflows should be important.

2.3.2   The Price Pressure Hypothesis

The price pressure hypothesis suggests that rise in prices associated with inflow surges are due to temporary illiquidity meant to absorb demand from foreign entry, Demeritte (2000). Thus inflow induced price increases would be reversed subsequently. This implies that there is an initial increase in securities prices caused by the expectations and information asymmetry but due to learning process, the prices revert to their original level. Here, entry of foreign investors in the market gives an indication of good performance and new information. According to Warther (1995), foreign inflows may cause information revelation and price pressure which in turn may result to increase in securities prices, that is, market response to information revelation will make prices move in the same direction as flows which means that foreign inflows and outflows will be positively correlated with security returns.

Bekaert et al. (2002) find equity flows to increase after liberalization and argue that this is due to portfolio rebalancing. Their study supports price pressure hypothesis with equity flow shocks initially increasing returns. Pavabutr and Yan (2003) show that exposure to foreign flows is associated with a reduction in risk premium, which diminishes among stocks favoured by foreign investors and decreases over time as the market becomes more liberalized. Warther (1995) on the other hand find no evidence that returns are negatively related to past flows, but find a positive relation between flows and subsequent returns and a negative relation between returns and subsequent flows, which is inconsistent with price pressure hypothesis.

The rationale behind this hypothesis is that the shocks from increased flows generate expectations of additional future flows. This expectation is reflected by the current price increase followed by increase in expected future flows. When the expected flows do not materialize in the future, the prices fall, Froot, O'Connell and Seasholes (2001). The theory of price pressure hypothesis suggests that the rise in prices is associated with increased inflows; based on this we expect to see prices return to the fundamental when the actual flows do not match the expected flows.

2.3.3   The Positive Feedback Hypothesis

This hypothesis suggests that there is a correlation between foreign investment inflows and contemporary stock returns, and that a positive price response to liberalization would be possible if foreign investors are positive feedback traders Bohl and Sikolos (2008). Narag (2000) defines a positive feedback trader as one who buys when the market increases and sells when market falls. The trades of foreign investors are extremely correlated, they trade as a herd, which may lead to prices falling as foreign investors sell but rising as they buy. This herding can be the outcome of investors using the same information to trade or the product of irrational psychological factors. According to Choe et al (1999) in circumstances where securities trading is based on information about fundaments, a capital market may not be destabilized by positive feedback trading. This contrasts with the observations of Bohl and Sikolos (2008) who suggests that in cases where investment decisions of feedback traders are not based on fundamental information but rather they respond to movements in stock prices, positive feedback will destabilize capital markets. Evidence on positive feedback hypothesis has been found to hold in Korea through the work of Choe et al. (1999), by foreign institutional investors in India by Batra (2003), and in six Asian emerging markets which is argued to be due to behavioural factors or foreigners extracting information from returns rather than portfolio-rebalancing effects, Richards (2004). Positive feedback trading has also been found to hold by Bohl and Sikolos (2008) in a sample of developed and emerging markets.

2.4   The Nature of the Causal Relationship Between Foreign Portfolio Equity Investments and Stock Market Development

Investigating the impact of foreign capital on economic growth and stock market has important policy implications. A number of studies support the view that the benefits of FPI are long-term with some adverse effects in the initial stage of the process. According to Kaminsky and Schmukler (2001), the long-term gains of FPI outweigh its short-term ill effects and bring real benefits to the growth and development of the domestic financial markets and the economy in general.

Over time, the increase in international flow of portfolio investment has been explained by various studies to be caused by a wide range of factors. In their study Rai and Bhanumurthy (2007) examined the determinants of Foreign Institutional Investments in India. Their study was necessitated by the need to understand the behavior of these flows since their huge volume and their impact on the other domestic financial markets was of great importance at the time of liberalizing capital account. In this study, by using monthly data, they established that FIIs inflows were dependent on stock market returns, inflation rate (both domestic and foreign) and ex-ante risk. In terms of magnitude, the impact of stock market returns and the ex-ante risk turned out to be major determinants of FII inflow. Further results from this study did not show any causation running from FII inflow to stock returns. They concluded that in order to attract further external outflows which have a positive impact on the real economy, India needed to stabilize the stock market volatility and minimize the ex-ante.

2.4.1   Nature of Causality Between Market Returns and FPEI

In his study, Malik (2013) investigated on the role of foreign private investment and foreign remittance in the stock market development of three major South Asian Countries i.e. Bangladesh, Pakistan and India. He used Market Capitalization as an indicator of market development and measured the impact of three other factors foreign remittance, foreign portfolio investment and FDI inflow. He observed that Foreign Portfolio Investment granger causes market capitalization in Pakistan and India only while Market capitalization granger causes portfolio investment only in India.

Ekeocha (2008) modelled the long-run determinants of FPI in Nigeria over the period of 1986-2006 converted into quarterly series using the variables market capitalization, sovereign risk premium, real exchange rate, level of institutional quality, investment, real interest rate, level of financial openness and trade openness. He observed that FPI is co-integrated with real rate of return on investments in the capital market, real interest rate, and investment implying that these variables are bound together in the long run. The results indicate that FPI is positively related to real rate of return on investments in the capital market, real interest rate, and investment. On the other hand it is negatively related to real exchange rate, market capitalization, trade degree of openness and institutional quality in Nigeria.

Using Granger causality tests and multiple linear regression Anayochukwu (2012) studied the relationship of portfolio investment and stock market returns in Nigerian stock market. The study showed that unlike inflation rate which was statistically not significant, FPI had a positive and significant impact on stock market returns. In the case of causality test, the evidence of the results showed that there is a unidirectional causality running from stock market returns to foreign portfolio investment in the economy, which in turn will foster stock market returns in Nigeria.

While analyzing the dynamic effects of capital flow shocks upon stock market developments in Nigeria, Ogbuagu and Ewubare (2014), employed the use of Vector Auto-regression Model (Granger – Causality Wald Test, Impulse Response Test and Variance Decomposition Test), to achieve their objectives. The result of their study showed that Net portfolio investment (NPI), among other inflows, does not granger cause Market Capitalization (MC).

Obiechin (2010) empirically investigate how three types of private capital flows could promote economic growth in recipient developed and developing countries. Their focus is on the role of stock markets as a channel through which foreign capital flows could promote growth. The findings reveal that FDI exhibits a positive impact on growth, while both foreign debt and portfolio investment have a negative impact on growth in all sample countries. However, the results indicate that stock markets might be a significant channel or leading institutional factor through which capital flows affect economic growth. The findings provide clear implications

that the negative impact of private capital flows can be transformed into a positive one if the stock market development has attained a certain threshold level, regardless of whether it is in developed or developing countries.

Chee-Keong, Baharumshah, Yusop and Habibullah (2010) use Ordinary Least Squares (OLS) methodology with a Parsimonious Error Correction Model Specification, after testing for the stationary status (unit root) and long run relationship (co-integration) of the variables, the result shows that foreign portfolio investment has a positive impact on capital market growth with the speed of adjustment from short run to long run as indicated by the ECM-1 having a relatively high value of 66% in absolute terms. The study thus recommends appropriate and quick measures to reverse the current trend of nationalization in the demand deposit banks, improvement in the market's legal framework to ensure safety of investment and the sincere pursuit of the privatization program for a private sector growth led economy.

2.5   Chapter Summary

This chapter has explained in details the theoretical and empirical evidence of the impact of the Foreign Portfolio Equity Investments in the development of the stock market. From the review it is evident that different researchers have come to different conclusions regarding the impact of FPEIs in the the capital market. There has been little evidence on the study FPEIs on the development of the Nairobi Securities Exchange and this study seeks to contribute towards the filling of this gap. The next chapter explains the research methodology used in the study including the research design, the population and sample design and the data collection and data analysis techniques.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology that was used in the study. Research methodology refers to the process and procedures used to collect and analyse data used in a study in order to make informed decisions. In other words, research methodology is the work plan of the study. In this chapter the research design, population and sampling design, data collection methods, research procedures and data analysis methods used in the study are explained.

3.2 Research Design

Kothari (2004) says that the research design is the conceptual structure within which the research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Cooper and Schindler (2008:140) define research design as the blueprint for the collection, measurement and analysis of data. This study uses available data from the Central Bank of Kenya, the Nairobi Securities Exchange and the National Bureau of Statistics and the World Bank. The data is organized on yearly basis and uses statistical and quantitative techniques to answer the study hypotheses. The study uses the Stock Market capitalization as the measure of the stock market rather than constructing a composite index because market capitalization is a good proxy for such general development of the market and is less arbitrary than any other index.

The study employed observation descriptive research of secondary data. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). This research design was used because the study was limited to examination, analysis and description of the interaction of the FDEIs and the stock market.

3.3 Population and Sampling Design

3.3.1 Population

According to Mugenda & Mugenda (2003), a target Population is the results of the population on which the study was conducted. The target population of the study consisted of all the listed companies in the NSE for the period 2004-2013. As at the end of 2013, 61 firms had been listed in the NSE.

3.3.2 Sampling Design

Sampling design refers to the step by step process which a researcher uses to identify organizations to be included in the study, and at the organizational level mechanisms put in place to identify respondents and discussants in the study without biasness (Gill & Johnson, 2010).

The study was a census study of the market level data and was limited to the ten year period covering 2004-2013. The period was selected in order to provide a more recent data and thus more relevant results as well to provide for a relatively long period during which different operating environments/conditions are likely to have been at play.

3.3.2.1 Sampling Frame

According to Carl-Erik, Bengt and Wretman (2003), Sampling frame refers to a list of members of the research population from which a sample can be drawn. It is a list of all those within a population who can be sampled, and may include individuals, households or institutions. Being a census study, the sampling frame consisted of the annual market capitalization for the period Jan 2004 to December 2013 for all the firms listed at the NSE, in each specific year.

3.3.2.2 Sampling Technique

Sampling technique refers to the method of selecting the population to be investigated. The study covers all the companies listed in the NSE for all the years of the period under study.

3.3.2.3 Sample Size

The study is a census study of all the companies listed in the NSE during the study period. For each year of study, the study considered the market capitalization of all the listed companies in the NSE and compared it to the reported FPEIs for the same year.

3.4   Data Collection Methods

The survey made use of secondary data provided by the NSE, Central Bank of Kenya and the Kenya National Bureau of statistics and the World Bank for the period 2004-2013. The data collected constituted the monthly market capitalization (which was converted into annual average market capitalization) and the annual Foreign Portfolio Equity Investments. To ensure systematic and accurate data collection, recording and capture, the data was collected using a secondary data guide, found in Appendix Afs. The data was historical and readily available in publications of the above institutions.

3.5   Research Procedures

The study involved the collection of the secondary data from the two sources i.e, the Central Bank of Kenya and the World Bank websites. Once collected, the data was then captured into the SPSS software and then analyzed. Thereafter a report generated with the study results, conclusions and recommendations.

3.6   Data Analysis Methods

Quantitative data analysis techniques were used to analyze the data. Data obtained from the research instruments was analyzed using Statistical Package for Social Science (SPSS). The analysis was conducted in two stages; the first involved calculation of the descriptive statistics of the data collected. This statistics included the mean , standard deviation, variance, skewness and the kurtosis of the Market capitalization and FPEI data collected.

The second stage involved the establishment of the relationship between the stock MC and the FPEI as well as determining the strength and the direction of this relationship. This was done using the Pearson Product Moment correlation analysis in calculating the correlation coefficients between the MC and FPEIs and simple linear regression to develop a regression model for the

relationship. In addition the nature of causality between MC and FPEI was established using the cross-correlation tests.

3.7   Chapter Summary

In this chapter, the research methodology has been explained in details. The details of the description of the data to be used in the study, the data collection techniques, data analysis techniques as well as the research procedures have been exhaustively outlined. In the next chapter, the results and finding of the analysis of the data collected during the study are presented.

4.0   RESULTS AND FINDINGS

4.1   Introduction

This chapter focuses on the presentation of the results and findings of the analysis of the data collected using the methodology explained in Chapter 3. It is an exhaustive presentation of data where quantitative analysis has been conducted using the SPPS. Data presentation is done using tables and graphs to give a vivid impression and facilitate easy of analysis. The chapter is made up of two parts; the first part presents the descriptive analysis of data while in the second part, the results of the various tests conducted to establish the nature of the relationship between MC and FPEI are presented.

4.2   Descriptive Statistics

4.2.1   Monthly Market Capitalization

During the period under review, the monthly market capitalization was on an upward trend as shown in figure 4.1 below. The total capitalization increased from KES 281B in July 2004 to a high of KES 1.975T in Nov 2013.
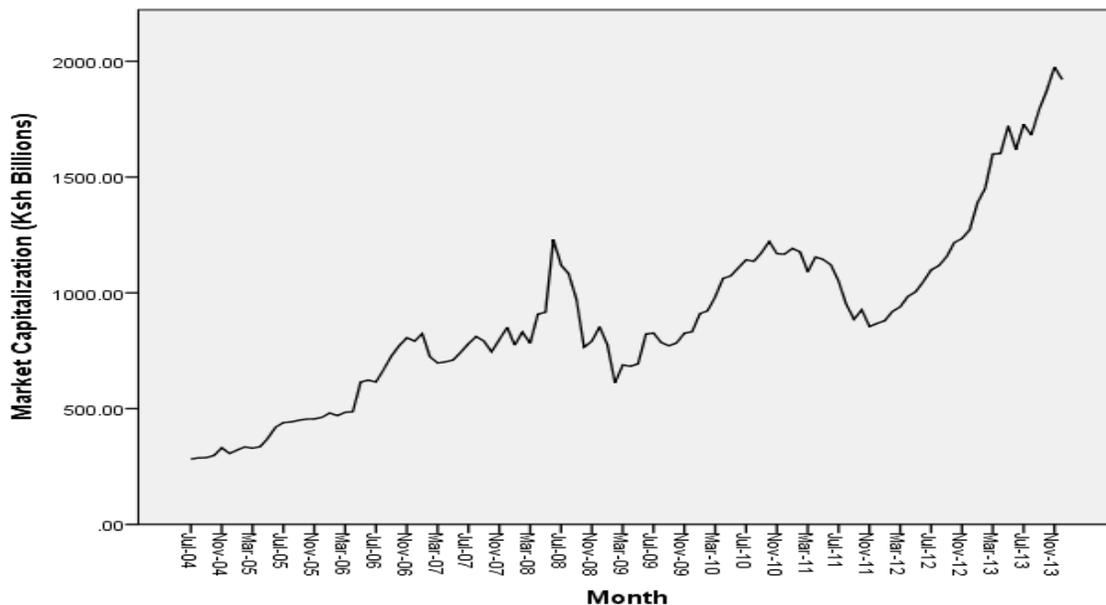
Figure 4.1: Monthly Market Capitalization

During the period of study, the monthly market capitalization was on an upward trend with an average monthly turnover of KES 896B and a standard deviation of KES 382B which indicates that the Market capitalization values were spread over a large range of values. The data was also positively skewed with a skewness of 0.651.Table 4.1 below summarizes this findings.

Table 4.1: Descriptive Statistics For The Monthly MC

	N	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
MC	114	896.2092	382.09191	145994.228	.674	.226	.459	.449
Valid N (listwise)	114							

4.2.2 Annual Average Market Capitalization

Since the FPEI data is available annually, in order to ease the attainment of the study objectives, the Market capitalization data was converted to annual averages as shown in the Table 4.2. The annual average market capitalization for the 10 years had a mean of KES 866.34B and a standard deviation of 398.32. Just like for the monthly data, the annual average MC had a positive skewness of 0.651

Table 4.2: Descriptive statistics for Annual Average MC

	N	Mean	Std. Deviation	Variance	Skewness			
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
MC	10	866.3400	398.32144	158659.967	.651	.687	1.142	1.334
Valid N (listwise)	10							

Figure 4.2 below shows the graphical representation of the the annual average market capitalization for the period 2004 to 2013.
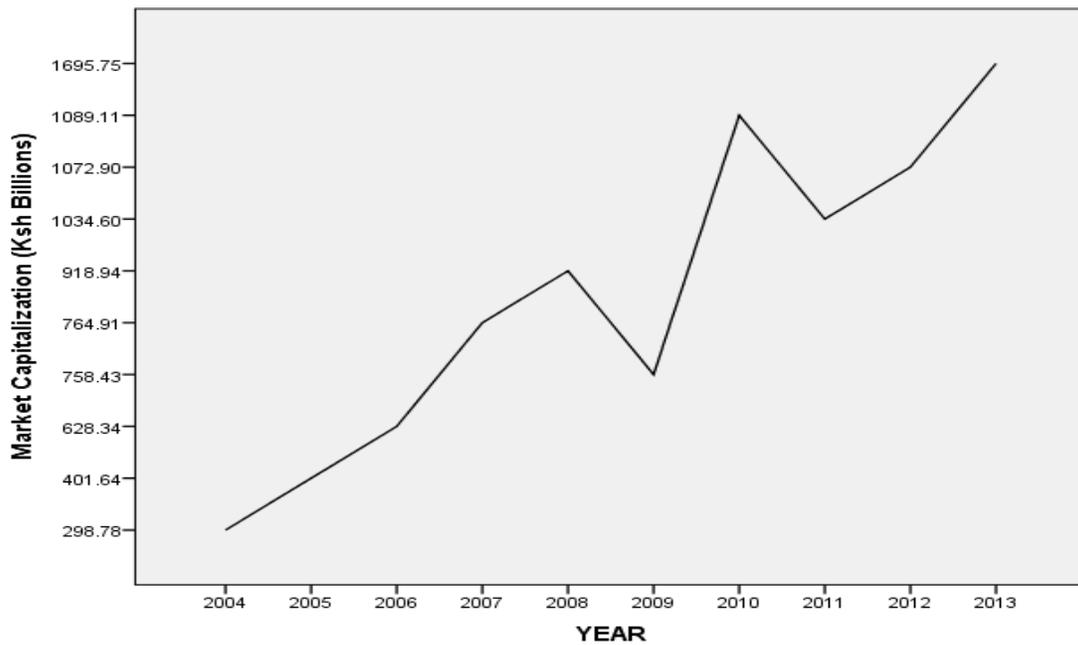
Figure 4.2: Annual Average MC

4.2.2　Foreign Portfolio Equity Investments

The Foreign Portfolio Equity Investments have been erratic during the period under review, hitting a lowest point in 2007 during the infamous Post-election Violence and the highest point being experienced in 2012. The FPEI had a mean of $9,371,715 and a standard deviation of $10,163,299 and the data was positively skewed with a skewness of 0.882. Table 4.3 presents the descriptive statistics.

Table 4.3: Descriptive Statistics For FPEI

	N	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic ('000')	Statistic(Millions)	Statistic	Std. Error	Statistic	Std. Error
FPEI	9	9,371,715.96	10,163.3	103,292,652.08	.882	.717	-1.358	1.400
Valid N (listwise)	9							

Figure 4.3 shows the graphical representation of the annual FPEI into Kenya for the period 2004-2013, in US dollars. The figures shows that the FPEI amounts hit the lowest point in 2007 when only a total of USD 454,264.30 was invest in Kenya as opposed to a high of USD 25,832,134 invested in 2013.
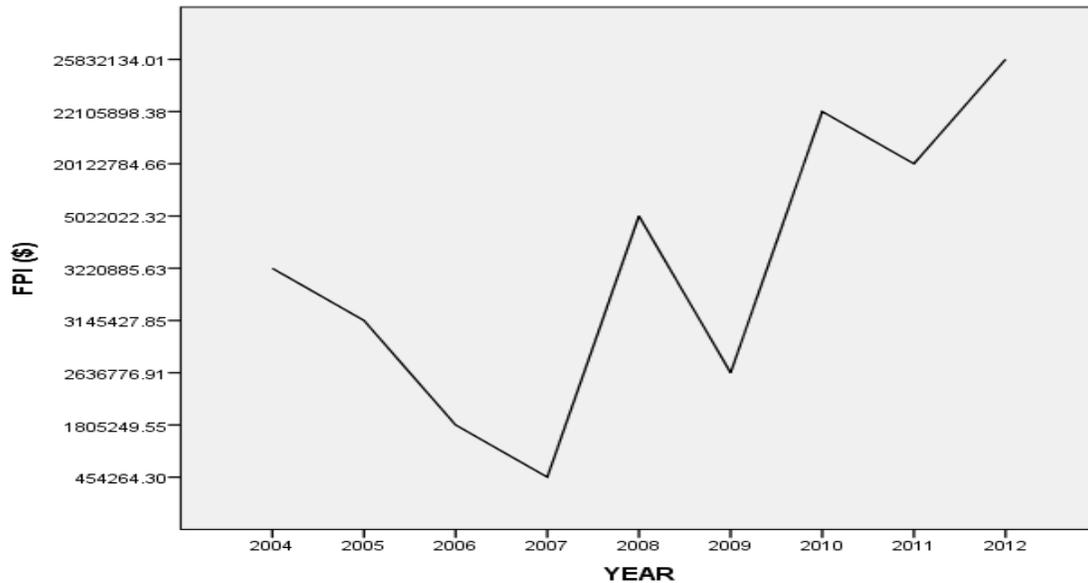
Figure 4.3: Graphical representation of the annual FPEI

4.3   The Nature And Strength Of The Relationship Between Market Capitalization and FPEI

The nature and strength of the relationship between market capitalization and FPEI was investigated through the computation of the Pearson product-moment correlation coefficient.

Table 4.4:   Results for the Pearson product-moment correlation coefficient

		FPEI	MC
FPEI	Pearson Correlation	1	.753[*]
	Sig. (2-tailed)		.019
	N	9	9
MC	Pearson Correlation	.753[*]	1
	Sig. (2-tailed)	.019	
	N	9	10

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

Table 4.4 shows the results of the Pearson product-moment correlation coefficient computed to assess the relationship between market capitalization and the FPEI over the period between 2004 and 2013. The findings on the correlation showed that there was a positive correlation between the two variable with the correlation coefficient (r) of 0.753 and with a p-value of 0.019, which is less than 0.05, the results were statistically significant. Overall, there was a strong, positive correlation between FPEI and market capitalization which means that increases in the market capitalization were correlated with increases in FPEI.

4.4 The impact of Foreign Portfolio Equity Investments on the Market Capitalization of the NSE

The impact of the FPEI on the Market Capitalization was assessed by the use of simple linear regression by applying the model:

$Y = \beta 0 + \beta 1 X + \text{€}t$

Where

Y= Market Capitalization

X=Foreign Portfolio Equity Investment

β0=Constant

β1= regression coefficient

and €t= Error Term

Table 4.5a shows the results of the simple linear regression analysis of the FPEI and market capitalization data for the period 2004 to 2013. The results shows a correlation coefficient, R, of 0.753 and therefore we can conclude that MC is positively correlated with FPEI and the relationship is strong. The coefficient of determination, R^2, is 0.567; therefore we conclude that about 56.7% of the variation in MC is explained by variations in FPEI.

Table 4.5b shows the results of the coefficients of simple linear regression analysis of the FPEI and market capitalization data for the period 2004 to 2013. The results shows constant (β_0) of 574.199 and β_1 of 2.134E-5 (0.00002132). Therefore the estimation model becomes

$$Y = 574.199 + 0.00002132X$$

Table 4.5a: Simple Linear Regression results for MC and FPEI

Model	R	R^2	R^2	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.753ª	.567	.505	202.59032	.567	9.168	1	7	.019	

a. Predictors: (Constant), FPEI

b. Dependent Variable: MC

Table 4.5b: Coefficients for Linear Regression results for MC and FPEI

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	574.199	94.460		6.079	.001
	FPEI	2.134E-5	.000	.753	3.028	.019

a. Dependent Variable: MC

4.5 The nature of causality between FPEI and Market Capitalization

The nature of causality between FPEI and market capitalization was tested using the cross-correlation techniques in SPPS. Table 4.7 shows the result of the cross-correlation tests for market capitalization with FPEI. Based on the assumption that the series are not cross correlated

and that one of the series is white noise, the cross-correlation test results show that there is only one significant cross-correlation at lag 0 i.e there is no lag between MC and FPEI so the MC and FPEI figures for one variable do not impact the figures of the other variable for the subsequent periods. Figure 4.6 shows a graphical representation on the autocorrelation results
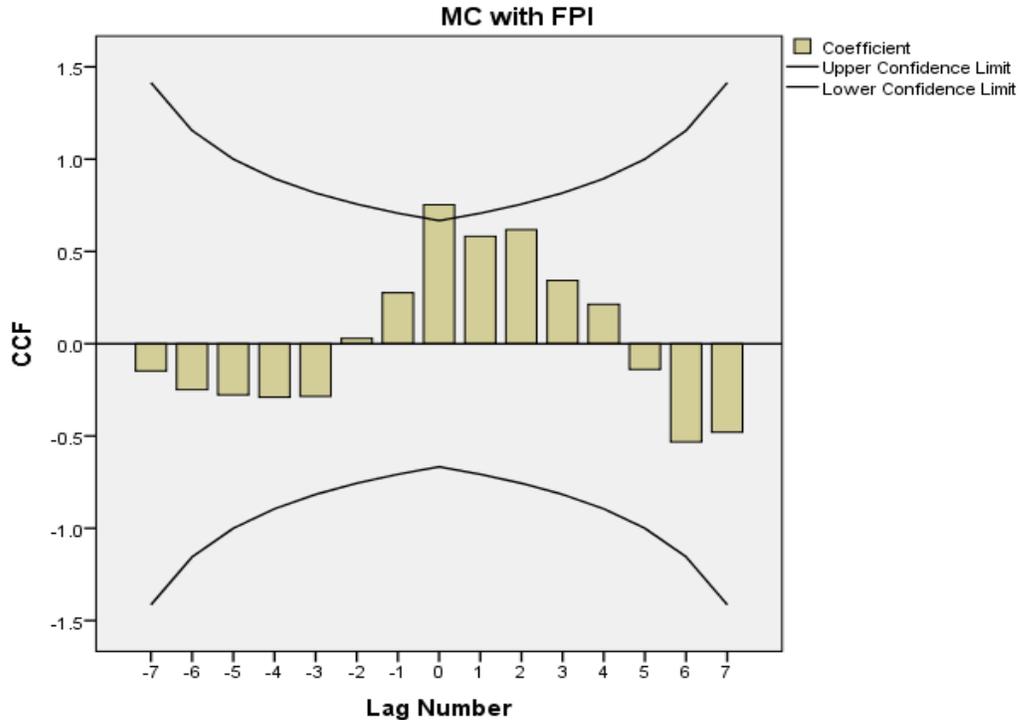
Figure 4.4 : Cross-correlation results for MC with FPEI

Table 4.6 : cross-correlation results for MC with FPEI

Series Pair: MC with FPEI

Lag	Cross Correlation	Std. Error[a]
-7	-.148	.707
-6	-.248	.577
-5	-.277	.500
-4	-.290	.447
-3	-.285	.408
-2	.029	.378

-1	.276	.354
0	.753	.333
1	.581	.354
2	.618	.378
3	.343	.408
4	.214	.447
5	-.139	.500
6	-.532	.577
7	-.480	.707

4.6   Chapter Summary

In this chapter, there is a presentation and description of the findings and the results of the tests that were carried out on the data that was collected during the study. Various statistical tests including Pearson Product Moment Correlation, simple linear regression and cross-correlation were conducted using the SPSS software and consequently presented using the tables and graphs to assist in faster and in-depth understanding of the results. In the next chapter an exhaustive discussion of the results is done and presented together with the conclusions and recommendations.

5.0   DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1   Introduction

This chapter provides an exhaustive discussion of the study and the results of the tests carried and it contains four sections. The first section provides a summary of the study in terms of its objectives, the research methodology and the findings of each of the research questions. The second section provides an exhaustive discussion of the results of the study while the third and the last sections of the chapter provide the major conclusions and recommendations of the study.

5.2   Summary

This study sought to investigate the impact of the FPEIs on the development of the Nairobi Stock Exchange as proxied by its market capitalization for the period 2004 to 2014. During the period of the study, the market capitalization of the NSE has increased by close to seven times and the study was designed in order to research the role that the participation of foreign investors has played in the development of the Nairobi Stock Exchange. The knowledge of the relationship between the stock market and the FPEI is important to potential investors and the government technocrats especially in the modern economic setup where economies of different countries are so integrated and the events in one country can very easily, and within a very short time, affect the economies of many other countries

Specifically, the main objectives of the study were to investigate the nature and strength of the relationship between the Foreign Portfolio Equity Investments and the development of the stock market in Kenya as proxied by the market Capitalization of the NSE, the extent to which Foreign Portfolio Equity Investments impact the market capitalization of the Nairobi Securities Exchange and the direction of the causality relationship between the Foreign Portfolio Equity Investments and the development of the stock Market in Kenya.

In order to achieve its objectives, the study used secondary data from obtained from the CBK and the World Bank. The market capitalization data consisted of the sum total of the market capitalization values for all the companies listed at the NSE at any given month for the period

2004 to 2013 and was collected from the Monthly Economic Review bulletin prepared by the CBK while the FDI data was obtained from the statistics pages of the World Bank website.

The study applied the SPSS software to analyse the data collected. In order to understand the data collected, the study first computed the main descriptive statistics such as the mean, standard deviation, variance and skewness. This computations showed that both the data for MC and FPEI were positively skewed, had big standard deviations values and both the time series were stationary.

Further, through the computation of the Pearson Product Moment Correlation and use of simple linear regression, the study revealed that there was a strong positive correlation between FDIs and Market Capitalization meaning that an increase in FDI was related to an increase in MC and that FDIs significantly determines market capitalization since 56.7% variation in market capitalization can be explained by the variations in FPEI . In addition, in order to establish the nature of the causality between the two variables, the study conducted a cross-correlation test and it was established that there was only one significant cross-correlation at lag zero meaning that neither MC nor FPEI lagged or led the other i.e the values of the FPEI in one year did not affect the market capitalization of the subsequent years and neither did the Market capitalization for one year affect the FPEI values for the subsequent years.

5.3   Discussions

5.3.1   The Nature and Strength of the Relationship Between Market Capitalization and FPEI

According to Pearson Product Moment correlation analysis the correlation coefficient of FPEI and NSE Market Capitalization is 0.753, at 0.05 level of significance. It can be inferred that FPEI has a significant and fairly strong positive correlation with Market capitalization meaning that an increase in the FPEI results in corresponding rise in Market capitalization.

The presence of foreign investors in stock market generate increased activity at the stock market thus improving the functioning of the market. In particular, the participation of foreign investors in the stock markets helps to increase the liquidity of the market, increasing the price-earnings ratio and thus reducing the cost of capital in the economy. The liquidity of the stock market can

thus be said to enhance the allocation of capital and can thus be considered as a critical factor in enhancing the economic growth of a country.

The level participation of the foreign investors in the stock market determines the demand of the shares trading in the stock exchange. With increased participation of the foreign investors, the demand for shares increased and this would lead to an increase in share prices as both the local and foreign investors chasing the finite stocks available in the market. The reverse is true when the foreign investors participation decreases.

Since the market capitalization is a factor the total value of all the shares traded in the stock market, it is then highly dependent on the prices of the individual stocks floated in the market. Consequently, an increase in share prices due to increased participation of foreign investors will lead to increased market capitalization and a decrease in prices due to reduced participation of foreign investors will lead to a decrease in the market capitalization. The results of the study therefore conforms to these expectations of the rules of demand and supply in the stock market.

The results of this study are in tandem with the results of Boubakria et al (2013) who observed that there was a strong positive correlation between the stock market capitalization and FPEI. Further the results agreed with Kim and Yang (2009) who investigated the effect of capital inflows on domestic asset prices in Korea from January 1999 to September 2007 and who found that capital inflows affected the asset prices and consequently the market capitalization. However, other factors such as improved economic performance, monetary expansion and low interest rates could also affect asset prices in emerging markets.They found the influence of capital inflow shocks to be more significant on the stock market, but limited in other parts of the economy. Capital inflow shocks led to an increase in stock prices, and by extension the market capitalization.

The results of the current study also tally with that of Eniekezimene(2013) who concluded that Foreign Portfolio Equity Investment is positively related to capital market growth in Nigeria and also that of Chukwuemeka et al (2012) whose results showed a long term positive relationship between Foreign Portfolio Equity Investment and market capitalization. It also tallies with that

of Sultana and Pardhasaradhi (2012) who established a moderate correlation between stock market of India (Sensex & Nifty) and portfolio investment.

However the current study conflicts with that of Aduda, Masila and Onsongo (2012) who did not find a significant relationship between stock market development and Foreign Portfolio Equity Investment. It also conflicts with that of Pal (2006) who reported that Foreign Portfolio Equity Investment is not related to the stock market of India and did not boost the stock market of India. Further conflict is found with the study of Ekeocha (2008) which established that the FPEI was negatively related to MC.

5.3.2 The impact of Foreign Portfolio Equity Investments on the Market Capitalization of the NSE

The results of the simple linear regression analysis of the FPEI and market capitalization data for the period 2004 to 2013 showed at, 95% confidence FPEI significantly determines the market capitalization with level $r2= .567$ and $\beta1= 0.00002132$. This implies that 56.7% variation in market capitalization can be explained by the variations in FPEI and an increased in FPEI by one unit will lead to an increase of 0.00002132 in the Market capitalization.

The results of this present study disagrees with those of Pramod and Puja (2014), who while examining the dynamics of the relationship between institutional investment flow and stock returns for India, concluded that Foreign Institutional Investors (FIIs) flow do not have any significant impact on market returns.

In addition this study disagrees with Aduda, Masila and Onsongo (2012) whose study sought to investigate the determinants of development in the Nairobi Stock Exchange using secondary data for the period 2005-2009. Among other observations the regression analysis reported no relationship between stock market development and macroeconomic stability - inflation and private capital flows.

However this study agrees with the one done by Luciana, Meurer and Silva (2010) who examined the relationship between stock returns and foreign investment in Brazil and concluded that the inflows of foreign investment boosted the returns from 1995 to 2005. They found a strong contemporaneous correlation and concluded that positive feedback trading played a role, and that the market promptly assimilated the relevant new information that arrived.

The study also agrees with the study by Eniekezimene (2013), which found that Foreign Portfolio Equity Investment has a positive impact on capital market growth with the speed of adjustment from short run to long run as indicated by the ECM-1 having a relatively high value of 66% in absolute terms.

5.3.3   The Nature of Causality Between Foreign Portfolio Equity Investments and the Market Capitalization of the NSE

The nature of causality between FPEI and market capitalization was tested using the cross-correlation techniques in SPPS software. Based on the assumption that the series are not cross correlated and that one of the series is white noise, the cross-correlation test results show that there is only one significant cross-correlation at lag 0 i.e there is no lag between MC and FPEI so the MC and FPEI figures for one variable do not impact the figures of the other variable for the subsequent periods.

In effect, the results indicate that the values of the FPEI in one year did not affect the market capitalization of the subsequent years and neither did the Market capitalization for one year affect the FPEI values for the subsequent years. Consequently, from the study, the activity of foreign investors in equities listed in the NSE, appear not to be impacted by the market capitalization of the NSE for the precious year and neither does the activities of the investors in one year impact on the NSE market capitalization of the subsequent year.

The results of this study agrees with the Ogbuagu and Ewubare (2014), who while analyzing the dynamic effects of capital flow shocks upon stock market developments in Nigeria, employed the use of Vector Auto-regression Model (Granger – Causality Wald Test, Impulse Response Test and Variance Decomposition Test), to achieve their objectives. The result of

their study showed that Net portfolio investment (NPI), among other inflows, does not granger cause Market Capitalization (MC).

These results of the test of causality between FPEI and MC conflicts with the results the findings of Ekeocha (2008) whose study tried to model the long-run determinants of FPI in Nigeria over the period of 1986-2006 converted into quarterly series. The study applied Granger Causality Test and discovered that MC granger causes FPI while FPI does not granger-cause MC implying a unidirectional causality link between FPI and MC, with the causality link flowing from MC to FPI.

In addition, Malik (2013), in an effort to study the role of foreign private investment and foreign remittance in the stock market development of three major South Asian Countries i.e. Pakistan, India and Bangladesh used secondary data maintained by World Bank of 24 years from 1988-2011 and analyzed it using E-view software. The dependent variable is stock market development (Market Capitalization) and the three independent variables are foreign remittance, foreign portfolio investment and FDI inflow. Among other observations, the study established that there is a unidirectional causality from Foreign Portfolio Equity Investment to market capitalization in Pakistan and a bi-directional causality in India. However the study did not find causality in Bangladesh.

5.4   Conclusions

This study analysed the relationship between FDI and market capitalization of the NSE over the ten year period from 2004 to 2013.

5.4.1   The Nature and Strength of the Relationship Between Market Capitalization and FPEI

The study established that the there is a strong, positive correlation between the MC and the FPEI. This means that an increase in MC corresponds with an increase in FPEI and ,although correlation does not imply causation, this strong positive correlation points to a favourable relationship which can be exploited to ensure a mutually beneficial interaction between the government , foreign investors and local investors.

This positive correlation between FPEI and MC implies that the growth in one results to the growth of the other meaning that an increase in FPEI causes and increase in Market Capitalization of the NSE. Since the study used MC as a proxy of the development of the NSE, any positive movements in MC denotes a positive development of the NSE.

The study therefore concludes that the FPEI is a major determinant in the development of the NSE and thus continuous and sustainable efforts should implemented to encourage more foreign investors to invest in the NSE. Such measures should be constantly reviewed to ensure necessary, up-to-date controls are in place to guard the NSE from any shocks from external economies which may affect the flow of FPEIs.

5.4.2 The Impact of Foreign Portfolio Equity Investments on the Market Capitalization of the NSE

This study has shown that FPEI significantly determines the market capitalization since 56.7% of the variation in the market capitalization can be explained by variation in FPEI. The study has also shown that consideration of foreign portfolio flows is important for stock market. Short term capital flows have been growing in developing countries, though the current levels are still low. This is the same situation in Kenya, and this provides room for increased inflows of short term capital. On the impact of portfolio flows on stock market performance, the study concludes that portfolio flows are important in determining market returns as they lead to share price changes. Given that the stock market is liberalised, it is necessary to be cognisant of the implications of this on the stock market performance. Foreign capital is necessary for provision of capital and financing growth of countries such as Kenya, since they reduce the cost of capital and make it available to most firms. However, the stock market can only develop further if these foreign flows are encouraged through proper policies, however the regulations should also ensure that the market is not affected much when there are capital outflows.

5.4.3 The Nature of Causality Between Foreign Portfolio Equity Investments and the Market Capitalization of the NSE

Causality refers to the ability of one variable to impact another variable in subsequent periods of study. Using the cross-correlation analysis, the current study has shown that there is no causality

relationship between FDI and MC in subsequent periods. This was interpreted to mean that the FPEI figures for one period does not impact on the market capitalization figures for subsequent period. Further the MC figures for one period do not impact the FPEIs figure for the subsequent periods.

The study therefore concludes that, for the period under study, the MC and FPEIs impact each other during the same period but they have no impact on each other during the subsequent periods i.e there is no spill-over effect to the subsequent periods.

5.5   Recommendations

FPEI has been noted to flow mostly to developed nations from developing nations. However, there has been a dramatic increase in the magnitude of international flows of portfolio investment from developed countries to emerging markets. This massive flow of international capital can play a useful role in the development by adding to the savings of developing countries in order to increase their pace of investment. Kenya fits well into this category with her wide savings–investment gap.

5.5.1   The nature and strength of the relationship between Market Capitalization and FPEI

Following the strong, positive correlation relationship between MC and FPEI, the study recommends that;

i.   Macro-Economic stability: Monetary authorities should ensure macroeconomic stability prevails, especially in the exchange rate and interest rates as this will reduce uncertainty and improve confidence in the stock market fuelling further participation of the foreign investors.

ii.   Favourable legal and taxation rules: FDI inflow should be encouraged to develop stock market and economy as well and measures should be put in place to ensure continued flow of FPEI into the stock market. The government should ensure that certain regulations such as the recently re-introduced capital gains tax do not unnecessarily interfere with the operations of the stock market as this may make the market less competitive as compared to other markets in the emerging economies.

5.5.2 The Impact of Foreign Portfolio Equity Investments on the Market Capitalization of the NSE

Following the favourable impact of the FPEI on MC demonstrated by the study, the following is recommended;

i. Measures should be put in place to ensure that inflows of short term capital are not disruptive as they lead to appreciation of the currency, making the country uncompetitive, and increase in interest rates leading to high costs of credit and affects investment. Hence, with the growing volume of short term capital flows into the country, focus should be on how well the inflows can be harnessed to support growth, while at the same time ensuring macroeconomic stability.

ii. Improvement of the participation of local investors in the stock market. The capital market regulator, CMA, should increase investor education and awareness campaigns for local investors so that their participation at the stock market can increase. Active participation of local investors is necessary to drive liquidity and bring confidence to the market and this may further attract the foreign investors, creating a mutually beneficial cycle. In addition, increased participation of the local investors will make the stock market to withstand the shock of unexpected foreign portfolio outflows.

5.5.3 The Nature of Causality Between Foreign Portfolio Equity Investments and the Market Capitalization of the NSE

Following the non-discovery of any causality relationship in the available data for FPEI and MC, the study recommends that;

i. Further Research: That further research be conducted in this area covering a much longer period and using different tests such as the granger –causality test. In addition, the research can be modified to study the impact of FPEI on the market capitalization of counters which are preferred by foreign investors and compare the results with movements in market capitalization of counters which receive minimal interest from the foreign investors.

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APPENDIX A: Data Collection Tables

Month	Market Capitalization (Ksh Billions)
Jul-04	281.98
Aug-04	287.39
Sep-04	288.30
Oct-04	297.72
Nov-04	331.27
Dec-04	306.00
Jan-05	321.23
Feb-05	334.85
Mar-05	329.01
Apr-05	335.80
May-05	373.07
Jun-05	420.33
Jul-05	439.73
Aug-05	442.82
Sep-05	449.80
Oct-05	455.00
Nov-05	455.50
Dec-05	462.52
Jan-06	481.29
Feb-06	469.66
Mar-06	484.18
Apr-06	486.78
May-06	614.90
Jun-06	623.20
Jul-06	615.09
Aug-06	668.67
Sep-06	726.78

Oct-06	771.70
Nov-06	806.23
Dec-06	791.58
Jan-07	824.29
Feb-07	723.66
Mar-07	696.92
Apr-07	701.98
May-07	709.69
Jun-07	743.91
Jul-07	780.72
Aug-07	811.23
Sep-07	791.70
Oct-07	745.50
Nov-07	798.15
Dec-07	851.13
Jan-08	775.20
Feb-08	830.65
Mar-08	781.66
Apr-08	907.90
May-08	916.74
Jun-08	1,230.67
Jul-08	1,120.08
Aug-08	1,081.86
Sep-08	972.30
Oct-08	764.90
Nov-08	791.60
Dec-08	853.67
Jan-09	777.45
Feb-09	611.49
Mar-09	688.67
Apr-09	683.03

May-09	693.44
Jun-09	821.78
Jul-09	826.75
Aug-09	785.28
Sep-09	771.63
Oct-09	783.97
Nov-09	825.84
Dec-09	831.83
Jan-10	910.02
Feb-10	922.10
Mar-10	983.12
Apr-10	1,062.00
May-10	1,073.00
Jun-10	1,108.65
Jul-10	1,142.60
Aug-10	1,136.10
Sep-10	1,173.70
Oct-10	1,221.85
Nov-10	1,169.17
Dec-10	1,166.99
Jan-11	1,192.28
Feb-11	1,176.85
Mar-11	1,090.23
Apr-11	1,154.92
May-11	1,144.00
Jun-11	1,121.00
Jul-11	1,050.00
Aug-11	950.41
Sep-11	885.57
Oct-11	927.00
Nov-11	854.68

Dec-11	868.24
Jan-12	880.00
Feb-12	920.00
Mar-12	940.00
Apr-12	985.00
May-12	1,005.19
Jun-12	1,048.72
Jul-12	1,098.90
Aug-12	1,117.39
Sep-12	1,155.99
Oct-12	1,217.09
Nov-12	1,234.47
Dec-12	1,272.00
Jan-13	1,387.81
Feb-13	1,451.01
Mar-13	1,599.80
Apr-13	1,601.93
May-13	1,720.43
Jun-13	1,618.27
Jul-13	1,727.83
Aug-13	1,681.66
Sep-13	1,790.85
Oct-13	1,873.66
Nov-13	1,975.00
Dec-13	1,920.72

Table 6.1: Monthly market capitalization: Source CBK

Year	Market Capitalization (Ksh Billions)
2004	298.78
2005	401.64

Year	Market Capitalization (Ksh Billions)
2006	628.34
2007	764.91
2008	918.94
2009	758.43
2010	1089.11
2011	1034.60
2012	1072.90
2013	1695.75

Table 6.2: Annual Average market capitalization: Source CBK

Year	Foreign Portfolio Equity Investments PI($)
2004	3,220,885.63
2005	3,145,427.85
2006	1,805,249.55
2007	454,264.30
2008	5,022,022.32
2009	2,636,776.91
2010	22,105,898.38
2011	20,122,784.66
2012	25,832,134.01
2013	

Table 6.3: Annual Foreign Portfolio Equity Investments: Source: World Bank