

**EXTERNAL CASH INFLOWS AND STOCK RETURNS OF FIRMS LISTED AT
NAIROBI SECURITIES EXCHANGE, KENYA**

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FULFILLMENT OF THE AWARD OF THE DEGREE MASTER OF BUSINESS
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DECLARATION

This is my own work and has not been previously submitted for an award of a degree in any other institution.

Signature _____ Date _____

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This project has been presented for assessment purposes with my consent as the Supervisor.

Signature _____ Date _____

Dr. Daniel Makori
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DEDICATION

This research is foremost dedicated to my dear wife Mary and sons Gideon, Emmanuel and Junior for their love and continuous support to ensure that I achieve my best. To my loving mum Veronica, brothers and sisters and all my friends who encouraged me to further my education.

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ABBREVIATIONS AND ACRONYMS

ASE	Amman Stock Exchange
DSM:	Domestic Stock Market
EAC	East Africa Community
EASEA	East African Securities Exchanges Association
ECM	Error Correction Model
ED	External Debt
FD:	Foreign Debt
FDI	Foreign Direct Investments
FPI	Foreign Portfolio Investments
GDP	Gross Domestic Product
GFC:	Gross Fixed Capital
IBRD	International Bank for Reconstruction and Development
ISE	India Security Exchange
MDGs	Millennium Development Goals
NASI	Nairobi Securities Exchange All Share Index
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Square
PSM	Pakistan stock market
SMD	Stock Market Development
SSA	Sub-Saharan Africa
TED	Total External Debt
WFE	World Federation Exchange
VAR	Vector Autoregressive
VECM	Vector Error Correction Model

OPERATIONAL DEFINATION OF TERMS

External Cash Inflows	This refers to the amount of money reimbursed by a third party from a foreign national and it encompass foreign direct investment, foreign remittances, external debts and foreign grants.
External Debts	It is a form of financing which is borrowed by a given country from foreign lenders and mostly is the form of tied loans, normally measured as percent of GDP.
Foreign Direct Investment	It refers to an investment that is in form of controlling possession in a business within a country by entity located in another country. It is measured as FDI stock as a percent of GDP.
Foreign Grants	This is non-repayable products or funds given or disbursed by one party, mostly foreign nations, government department, foundation, trust or corporation to a recipient, often (but not always) a nonprofit entity, educational institution, individual or a business. This is measured as a percent of the GDP.
Foreign Remittances	Transfer of cash from foreign workers to their families or other persons within their home countries and is measured as percent of the Gross Domestic Product
Security	It is a fungible and negotiable tool that holds certain kind of monetary value
Monetary Policy	Decisions as well as actions undertaken by Central Bank to ensure that money supply in the economy are coherent with price and growth objectives which have been set by the government.
Stock Returns	This is the determination of a percent rate of return over a measuring period measured in terms of NSE All Share Index
Foreign Portfolio Flows	Securities and other assets passively held by foreign investors.

ABSTRACT

Stock prices at Nairobi Securities Exchange have been decreasing for the last five years and at the same time external cash inflows, including FDI, foreign remittances, external debts and foreign grants, have been fluctuating. A decrease in stock returns has an extreme negative influence on economy as well as individuals' consumers. Further, a collapse in the stock prices has a potential of causing widespread economic disruptions and a decrease in stock prices must always be prevented. It is therefore essential to assess the association between external cash inflows and performance of stock returns. The general objective of this study was to evaluate the effect of external cash inflows on stock returns in NSE Kenya. Specifically the study assessed the effect of foreign direct investments on stock returns of firms listed at NSE; to establish effect of foreign remittances on stock returns of NSE-listed firms; to assess effect of foreign grants on stock returns of NSE-listed firms; and to establish effect of external debts on stock returns of NSE-listed firms. The study was anchored on the free cash flow theory, prospect theory and foreign direct investment theory. This study employed an explanatory research approach. Moreover, the target population was 64 companies quoted in Nairobi Securities Exchange. Since the number of companies is small, a census was conducted, which implies that all the 64 companies were included in the study. This study employed secondary time series data. The study covered duration of 12 years and was collected on annual basis from January 2008 and December 2020. Secondary data on study variables was acquired from NSE, CBK and KNBS. Data extraction checklist was employed to gather secondary data. Statistical software referred to as the Stata version 2014 was deployed to analyze data. Inferential as well as descriptive statistics was deployed to analyze quantitative data. Additionally, descriptive statistics comprised of the frequencies, percentages, mean as well as standard deviation. Moreover, inferential analysis consisted of VECM which was utilized to establish the link between variables. The study carried out diagnostic tests which comprised of unit root test, lag order selection test, normality test, autocorrelation test, Cointegration test and Granger Causality Test. The study discovered that foreign remittance has significant positive effect on stock returns in Nairobi Securities Exchange. In addition, external debts have significant positive effect on stock returns in NSE. The study also established that foreign grants have significant inverse effect on stock returns in NSE. Also, the study discovered that FDI has significant negative effect on the stock returns in NSE. The study recommends that Kenyan government and the policy makers ought to develop monetary and fiscal policies to regulate foreign direct investment inflows into the country. In addition, the government of Kenya should come up with policies geared towards increasing remittance. For instance, the government should come up with a policy to reduce remittance delivery time with remittances being received instantly or at least very quickly in contrast to a lag of many days earlier. Further, the government of Kenya should reduce external debts and ensure that they are within the acceptable IMF recommendations. In addition, the government of Kenya ought to ensure appropriate debt management practices are adopted so as to ensure debts are paid on time and the debt burden is reduced.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Billions of dollars are exchanged in stock market across the world on daily basis. Globally, Stock markets are used by a wide variety of people as their major source of income whereas others after their retirement end up investing in these markets (Zhang & Gong, 2018). Therefore, when stock markets perform poorly, it results to a negative impact on the lives of numerous people and this too affects the national economy. Furthermore, national economy is significantly influenced by the stock market since it has influence on daily activities which include consumption and investments. The most effective measure employed by Central banks across the world to influence the real businesses and the economy is the monetary policy (Borges, Copper& Antonio, 2018).

During financial crisis and recessions, the stock markets tend to perform poorly and debt levels also tend to increase. Economists foresee that industrialized countries now are moving into an epoch that is characterized by higher debt level by the government as well as lower stock market returns. When debt owed to the government is issued for investment purposes, it is anticipated to have an optimistic outcome on the prices of the stock since it should yield future returns. Contrary, when governments issue debt in order to finance present debt it could have a pessimistic outcome on the stock market because it indicates the fiscal budget does not generate enough funds to pay off previously assumed debt (Meme & Muturi, 2016).

Theoretically, evidence shows a causal association between FDI and stock market improvement putting into consideration FDI inflow, advancement in technology and increased job opportunities in majority of the countries. This in turn increases creation of goods and services which finally leads to rise in gross domestic product (GDP). Increase in GDP signifies advancement in economy that positively influences the growth of stock market and hence increasing the price of shares. Compared to other external sources of cash inflows, foreign remittances seem to be steadier causing them to be a reliable financing source for developing countries (Raza & Jawaid, 2014).

External cash inflows comprise of direct foreign investment, external debts, foreign remittances, and external grants. Apart from domestic savings supplementation, foreign direct investment is anticipated to promote technology transfer, so as to introduce recent marketing and management skills and to extend foreign trade and market of the host country (Tan, Galagedera & Maharaj, 2014). Foreign remittances and foreign grants, supplements availability of foreign exchange as well as domestic savings although they are not always project specific (Mazloom, Azarberahman & Azarberahman, 2014). It is expected that foreign remittances, external debts and foreign grants lead to advancement in the stock market' functioning, which leads to improved market capitalization and trading volume as investors of foreign portfolio aim to invest on well - researched methods basis and stock valuation which is realistic (Chen, Chou & Lin, 2019).

In addition, foreign cash inflows are believed that it could assist in attaining a greater liquidity degree at stock markets, to raise price earnings ratios and as a result decrease capital cost for investment (Bazrafshan, 2016). As a result, cost of capital is decreased and stock market which is vibrant can promote latest equity issues. Foreign cash inflows give stakeholders a broad array of assets with differing return level, liquidity as well as risk. It increases assets' selection as well as presence of improved capital markets gives investors additional options, therefore raised liquidity (Khanji & Siam, 2015). Liquid markets can raise capital allocation as well as increase hopes for an economic development which is long-term.

Gathenya (2015) indicate that there exists a meaningful as well as optimistic correlation between external cash inflows as well as market capitalization of NSE. The research found that portfolio flows are fundamental in creating market returns because they lead to alterations of share price. Gachanja and Kosimbei (2018) argue that external equity flows have an important and an optimistic impact on stock markets returns. Rise in stock prices usually attracts investors to DSM. Further, Nyang'oro (2014) indicate that anticipated portfolio flows portrays significant as well as positive correlation to stock market returns, meaning that heighten in anticipated portfolio flows is likely to accelerate market operation since it gives assurance amidst various stakeholders in the market. However, Ochieng, Olweny and Ochere (2019) indicate that the recent stock market instability at the NSE is not statistically influenced by foreign equity flows.

1.1.1 External Cash Inflows

External cash inflows mostly explain financial resources ‘movement into a country but are not restricted to business production, investment or trade. External financial inflows which are well tapped can indeed speed up economic growth without raising public debt level, hence hastening the total economic growth of a country (Omodero & Ekwe, 2017). The supporters of external cash inflows claim that foreign capital adds domestic savings as well as raises total investment and development rates in the host country. Kumar (2018) argues that if capitals are permitted to move unlimited throughout the countries, everybody will benefit. It is anticipated that capital inflow from wealthy countries would be invested in the inferior countries and economic development as well as job opportunities in advancing countries would be supported by international capital mobility. Nevertheless, after independence, greatest number of developing countries never allocated key function for foreign capital in their economic growth. The policy makers then extensively believed that a superior foreign capital inflow would weaken the industrialization which they independently wanted to carry out. In fact, till 1970s, the international private financial system performed only minimal role in financial surpluses recycling to the developing countries (Kumar, 2018). In developing countries, most of capital flows were via official multilateral and bilateral channels. Nonetheless, recently, so as to attain rapid industrialization and development, foreign capital is believed to be an optimistic and an important factor.

Various studies highlight different forms of external cash inflows in different countries. In India, Kumar (2018) indicated that foreign inflows include FDI, Foreign Portfolio Investments (FPI), Commercial loan as well as Official flows and influence behavior of stock market. In South Korea, Singapore and Taiwan, Siddiqui (2014) found that external capital inflows such as foreign direct investments, private portfolio inflows, direct investments, private financial flows and foreign direct investments considerably influence economic development, which plays major role in stock market returns. In Nigeria, Ewubare and Udoh (2018) established that external cash inflows such as of FDI, external debt, migrants’ remittances and Official growth assistance have influence on stock returns of telecommunication companies quoted in stock market. Wafula (2018) investigated on whether external financial inflows influence Kenyan economic growth positive or negative. The study discovered that external financial inflows in

Kenya comprise of FDI, remittances, portfolio equity, borrowing by private sector, donors, philanthropy as well as government external borrowing, and have a considerable impact on economic development.

FDI is an essential portion of effective system and open international economic system as it facilitates development. Over years, FDI has turned to be a significant basis of external private finance for the developing countries. Additionally, it varies from other main kinds of foreign flow of private capital in such a way that it is largely inspired by long-term investor potentials for generating profits in processing actions that they straightly regulate (Phani, 2017). Another external financial inflow is foreign remittances. Foreign remittance involves money transfer to an individual by the foreign worker in their own country. Moreover, money which is sent by immigrants competes with global support as the greatest financial inflows to underdeveloped countries (Kumar, 2018). Remittances of the workers are an important part of global capital flows, more so concerning labor-exporting countries.

Governments borrow from several sources for example the World Bank, IBRD. These include borrowing which is expected to link the difference between savings and investments so as to fund government operations (Omodero & Ekwe, 2017). Njoroge (2015) claim that external debt in Kenya is mostly official, upon which a higher ratio is based on various sources. Accumulation of foreign debt has been increasing over a period of years with debt problem markers rising gradually for the last two decades. Fourth form of external foreign inflow is foreign grants (aid). Foreign grant comprises of finances whose sources are multilateral and bilateral grants, whose nature is concessional and are given the role of encouraging economic growth and recipient countries' social welfare. According to Hossain (2014), foreign grants and aids generate declining returns in Bangladesh due to capacity limit of institutions situated in Bangladeshi to use foreign support effectively.

1.1.2 Stock Returns

Stock return is the determination of a percent rate of return over a measuring period. A return is the change in price of an asset, investment, or project over time, expressed as a percentage change or as a price change (Raza, Jawaid & Afshan, 2015). It is the public market for a company stock trading and offshoots at a price which has been settled; these involve securities

which are registered with a stock exchange and those that traded only privately. Furthermore, stock market consults to the market for safety purposes, in which the governments as well as companies' increase prolonged finance (Phani, 2017). Stock returns are a symbol of stock market as specific or a whole stock. It offers signal concerning future move by investors. The movement is the index and stock price which provides a hint of the close forth-coming tendency of the stock, economy or entire sector. The most significant of an economy is the financial domain, therefore the performance of a stock market acts as a sign of total economy health (Currim, Lim & Zhang, 2018).

The evaluation of an efficient performance of a market is called stock returns. It is a measure of aggregate that gives investors information about the market by exemplifying international markets as well as particular market segments (Njoroge, 2015). Chan, Chan and Leung (2015) denote that performance of a market is a significant instrument to several stakeholders who may be enticed in a particular industry as well as an institution. Some of the parties, which can be enticed in market performance comprise of direct competitors, investors, bond holders and shareholders, regulators, financial markets and credit rating firms.

Stock returns works as a sign of total economy performance in the sense that it helps to assign essential finance required for continuous development of an economy (Wanyoike, 2015). Price of shares as well as other assets are essential portion of changes of economic activity which can effect or be a social mood indicator. Stock market is frequently regarded as primary symbol of development and economic strength of a country. For example, increasing the price of shares, tend to be related with improved business investment (Raza, Jawaid & Afshan, 2015). Share prices too influence the household consumption and their riches. As a result, central banks try to watch on behavior and the control of stock market and generally, on easy performance of functions of financial system.

Traditionally, stock return in Kenya has been measured using NSE 20 SPI. Because it does not entail all shares traded within the market, this index does not accurately measure stock returns (Wanyoike, 2015). The NSE 20 share Index is a price-weighted index based on the average of the top twenty counters on the NSE. Constituent firms are chosen based on their market performance over the study period (Nairobi Securities Exchange, 2018). In 2008, due to the

inadequacy of NSE 20 all share index, NASI was started as a substitute index, with 100 as base value. Additionally, it's a market cap that weighted index comprising of securities on NSE. Its measure as well as attention is thus on entire market capitalization instead of price movements of chosen counters. According to Gachanja and Kosimbei (2018), NSE 20 share index is one of the measures of stock returns.

1.1.3 Nairobi Securities Exchange, Kenya

NSE is among the top African stock Exchange firms located in Kenya. In addition, it was formed in the year 1954 and hence it has been listing debit and equity securities for the last six decades. NSE was demutualized as well as listed in the year 2014 (NSE, 2018). It performs a major role in the economic development in Kenya by supporting investments as well as savings and helping international besides local companies' cost effective capital access. Operations of NSE are within Capital Markets Authority of Kenya jurisdiction. Besides being founder associate of African Security Exchanges association as well as EASEA, NSE is a member of WFE. The mandate of NSE is to offer a trading podium for listing and trading securities. Currently, there are 64 companies recorded in NSE as at 31st December 2018 (NSE, 2018). The market capitalization trends at NSE are shown in Figure 1.1.

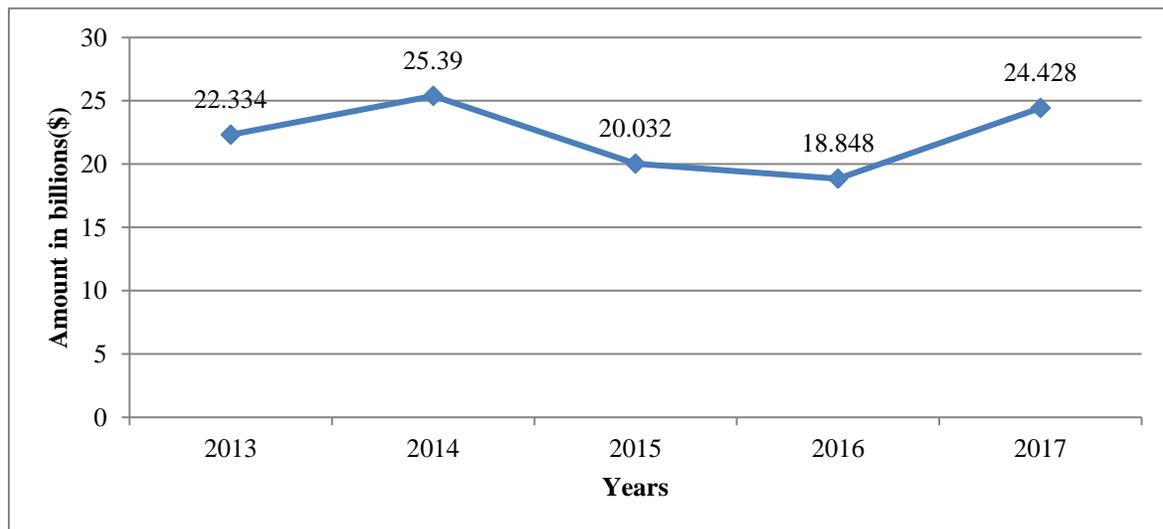


Figure 1. 1: Market Capitalization Trends at NSE

Source: Nairobi Securities Exchange (2018)

Figure 1.1 indicates that in 2016, the NSE had an overall share totaling to 30,346,900 an overall capitalization' market of KES 2,038.75 billion. NSE has been on a bear run in the recent past with greatest stock losing about 31% of their value registered in 2015 (Capital Market Authority, 2018). Sectors which were greatly affected by these losses were banking and insurance sectors. Capital Market Authority (2016), claim that market capitalization reduced by 13.2% in 2016 to Kshs. 1,998 Billion from Kshs. 2,302 billion in 2015. However, in 2017, the Capital Market Authority (2017) stated that market capitalization in NSE raised by 11.35% to Ksh. 2.2 trillion. In 2016, Kenyan stock market listed equities turnover of Kshs. 176.46 Billion. Market capitalization at the NSE has been fluctuating for last five years, 2013 to 2017 as shown in figure 1.1 above. In the year 2013, market capitalization was \$22.334 billion, which increased to \$25.388 in 2014, decreased to \$20.032 billion in 2015, decreased again to \$18.848 billion in 2016, but increased to \$24.428 billion in 2017. The trading volumes at NSE are shown in Figure 1.2.

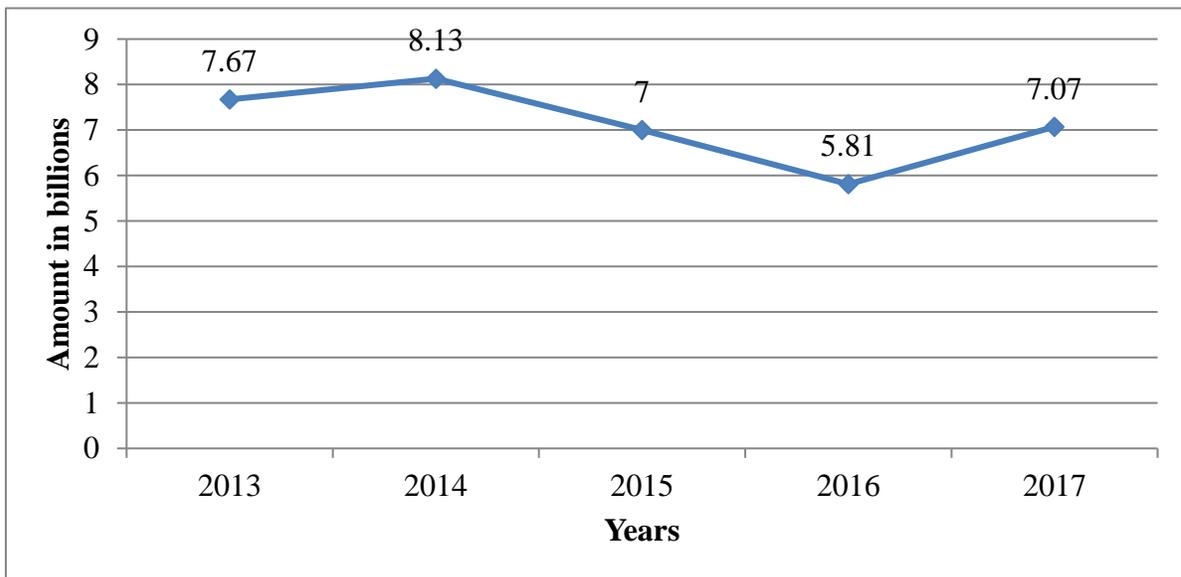


Figure 1. 2: Trading Volumes at NSE

Source: Nairobi Securities Exchange (2018)

Trading volumes at the NSE have been fluctuating over many years. As shown in Figure 1.2, the trading volumes in 2013 was 7.67 billion, increased to 8.13 billion in 2014, decreased to 7.00 billion in 2015, decreased again to 5.81 billion in 2016 and increased to 7.07 billion in 2017. The NSE all Index (NASI) trends at NSE are shown in Figure 1.3.

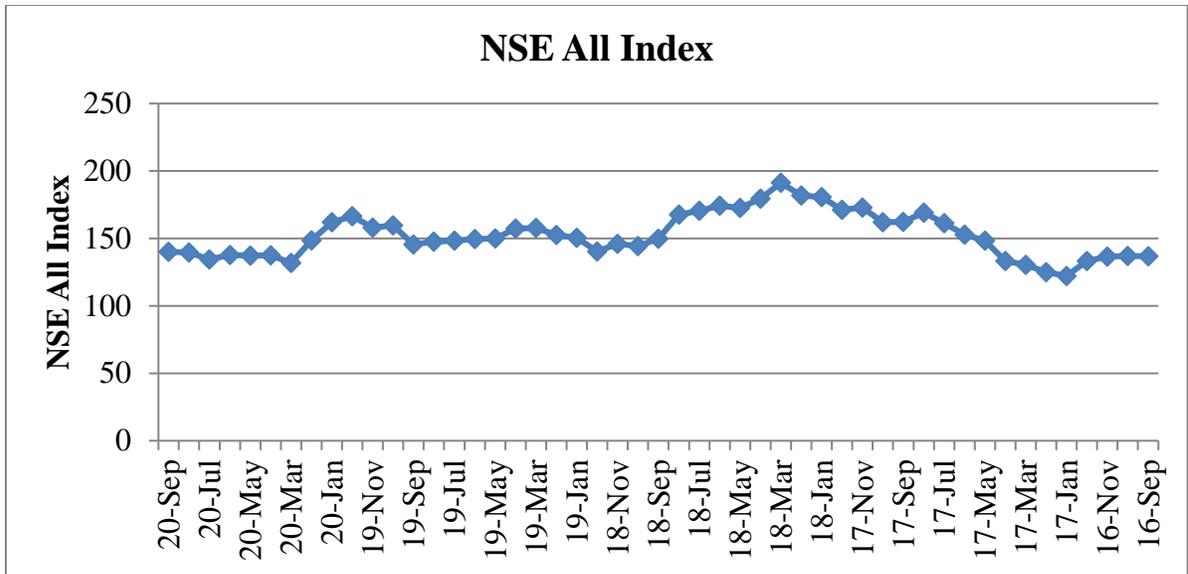


Figure 1. 3: Trends of NSE All Index

Source: Nairobi Securities Exchange (2020)

Figure 1.3 shows that in the year 2016 to 2020, NSE all Index has been fluctuating ranging from 122.23 and 191.23. As depicted in Figure 1.3, NSE all Index increased from 133.34 in December 2016 to 171.2 in December 2017. This then decreased to 140.43 in December 2018, but increased to 166.41 in December 2019, before decreasing to 140.09 in September 2020.

1.2 Statement of the Problem

Stock returns at NSE have been changing. For instance, in 2016 the stock prices in NSE reduced by 8.5 % and in January 2017 they reduced by 6.9% (Changole, 2017). A decrease in stock returns influences the economy as well as individuals’ consumers negatively. Further, a collapse in the stock prices has a potential of causing widespread economic disruptions and a decrease in stock prices must always be prevented. In addition, FDIs in Kenya have been fluctuating over the years. In the end of 2010, Kenya attracted only 12.9 percent of FDI in the East Africa Community (EAC) region while Tanzania and Uganda attracted 30.1 percent and 56.9 percent respectively. In the year 2012, Uganda’s FDI increased by 92.51 percent from \$894 million to \$1.721 billion in 2011, whereas Tanzania obtained \$1.706 billion in 2012, a rise of 38.81 % from \$1.229 billion. In the mean, FDIs in Kenya decreased by 27.04 percent to \$259 million from \$355 million (UNCTAD, 2017). However, foreign remittances in Kenya have been increasing over the years, reaching Ksh. 1.971 billion in 2017 (UNCTAD, 2017).

Several studies have been performed on various forms of external cash inflows as well as stock performance in Kenya. For instance, Njoroge (2015) examined the impact of diaspora remittance on performance stock market at NSE (2008 to 2015); Meme and Muturi (2016) examined the correlation between stock performance and government domestic debt in Kenya (2009 to 2015) and Nyang`oro (2014) researched on influence of foreign portfolio flows on stock market performance at NSE (1996 to 2011). However, while Nyang`oro (2014) used multifactor pricing model, Njoroge (2015) and Meme and Muturi (2016) used a multiple linear regression model. Further, Njoroge (2015) limited his study on diaspora Remittance, Nyang`oro (2014) focused on foreign portfolio flows in general and Meme and Muturi (2016) was limited to government debt as an external inflow. While the three studies focused on Nairobi Securities Exchange, Njoroge (2015) study was conducted between 2008 and 2015, Meme and Muturi (2016) study was conducted between 2009 and 2015, and Nyang`oro (2014) study was carried out between 1996 and 2011. The study strives to examine the impact of external cash inflows on stock returns at NSE, Kenya. This study made use external cash inflows like the direct foreign investment, foreign remittances, external debts as well as foreign grants. In addition, this study will make use of vector error correction model and covered 12 years beginning from January 2008 up to December 2019.

1.3 Objectives of the study

1.3.1 General Objective

General study objective was to assess effect of external cash inflows on stock returns in NSE, Kenya

1.3.2 Specific Objectives

Specific objectives of research were;

- i. To examine effect of foreign direct investment on stock returns at Nairobi Securities Exchange in Kenya.
- ii. To assess effect of foreign remittances on stock returns at Nairobi Securities Exchange in Kenya.
- iii. To evaluate effect of external debt on stock returns at Nairobi Securities Exchange in Kenya.

- iv. To examine effect of foreign grants on stock returns at Nairobi Securities Exchange in Kenya.

1.4 Research Hypothesis

This study tested the below null hypotheses;

- H₀₁.** Foreign direct investment has no statistically significant effect on stock returns at Nairobi Securities Exchange, Kenya.
- H₀₂.** Foreign remittances have no statistically significant effect on stock returns at Nairobi Securities Exchange, Kenya.
- H₀₃.** External debts have no statistically significant effect on stock returns at Nairobi Securities Exchange, Kenya.
- H₀₄.** Foreign grants have no statistically significant effect on stock returns at Nairobi Securities Exchange, Kenya.

1.5 Significance of the Study

The present study may greatly benefit the management of NSE, policy makers within Kenya as well as investors. To the management of NSE, this study provides information concerning how external cash inflows in terms of direct foreign investment, external debts, foreign remittances as well as foreign grants influence stock returns. This information can be employed to establish strategies based on external cash inflows in the country to ensure consistent stock returns in Kenya.

The stock market performs a major task in national economy since it functions as an intercessor between large as well as small stake holders who are seeking to create money in the realm of standard banking institutions. Concerning the policy makers and Capital Markets Authority, this research gives information on the influence of external cash inflows on stock returns which can be employed to make policies to govern and regulate external cash inflows in terms of direct foreign investment, external investment, foreign remittances and foreign grants in an effort to enhance stock return. The policy makers may use the results to formulate rules and regulations and policies concerning trade in the stock market so as to guard stake holders as well as promote investment in the sector.

To other academicians and scholars carrying out similar studies, this investigation generates information which they can utilize as material for research or for identification of research gaps. The research adds extra information to existing knowledge on the influence of external cash inflows on stock returns. Additionally, the on-going study offers basis upon which additional study can be performed on external cash inflows as well as stock returns in other countries situated across the world.

1.6 Scope of the Study

The present study was guided by four elements of external cash inflows within Kenya: direct foreign investment, external debts, foreign remittances and foreign grants. The dependent variable in this research was stock returns in NSE. The study was conducted along all 64 companies listed in NSE. Companies listed in the NSE were used because their data is readily available and because the dependent variable was stock returns. This study covered duration of 12 years and was collected on annual basis from January 2008 to December 2019. This period will be used as it helps in ensuring a large sample size of more than 30. Data was obtained from NSE reports on monthly basis reports and the Central Bank of Kenya.

1.7 Organization of the Study

The research project comprises of five chapters. Chapter one covered the research problem that covers concept of external cash inflows, concept of stock returns and an overview of NSE. The chapter also covers the research problem, research objectives as well as questions, justification, scope as well as study limitations. Moreover, second chapter presents literature review on external cash inflow as well as stock returns. In addition, it comprised of empirical review, theoretical review, knowledge gaps as well as conceptual framework. Last chapter presented techniques and methods which were utilized during collection of data as well as analysis. The chapter consisted of research approach, population study, study's sample size, sampling methods, tools for collecting data, procedures used in collecting data, data analysis as well as ethical considerations. Chapter four covers the study findings as well as the discussions. Chapter five set out summary of study findings, conclusion, recommendations and suggestions for more research.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

This section reviews related literature pertaining to effect of external cash inflows on stock returns. Specifically, the chapter covers theoretical review, empirical review on the relationship between the independent variables and the dependent variable, summary of literature and research gaps and conceptual framework showing the hypothesized association between variables.

2.2 Theoretical Review

This subsection comprises of theoretical review on the effect of external cash inflows (foreign direct investments, foreign remittances, external debts as well as foreign grants) on stock returns. The theories adopted in the research include: Free cash flow theory, prospect theory and foreign direct investment theory.

2.2.1 Free Cash Flow Theory

Jensen (1986) developed the above theory with the purpose of describing the correlation between free cash and role of debt among organizations, factors influencing takeovers as well as effect of diversification programs. Moreover, Jensen (1986) argues that disagreements of personal interest between managers as well as shareholders on payout rules are more so harsh when substantial free cash flow is created by an organization as cooperate management is for the growth of the firm and against dividend payout since they reduce resources that are under their control (Smith & Pennathur, 2019).

Kangarlouei, Hasanzadeh and Motavassel (2014) noted that sales increase was the most useful to firms that lack free flow of cash flows. In addition, free cash flows are correlated with rise in compensation of managers since alterations in compensation are optimistic related to sales increase. To inspire managers to expel the cash instead of wasting it on ineffectiveness of an organizational or investing it at beneath the cost of capital, they ought in increasing dividend payments to shareholders use debt to enhance organizational efficiency and share repurchases and deals with agency conflict. Debt usage was discovered to be more suitable for firms with

few growth prospects and large free cash flows than growing firms with no free cash flows and highly profitable investments (Buus, 2015).

Debt was further suggested to be a substitute dividend since managers are compelled by debt whose holders have lawful recourse on non-payment of dividend. This theory attempted to explain previous puzzling impact on financial restructuring effects. Furthermore, theory of free cash flow foretells that apart from profitable unfinanced investment projects for companies, prices will rise with unpredicted rise in payouts to shareholders also prices will reduce due to less in payments or recent fund requests (Howe *et al.*, 2012).

In this study free cash flow theory was employed to describe impact of foreign remittances, external debt and foreign grants on stock returns at NSE. Leverage-increasing transactions comprise of stock repurchases as well as exchange of preferred stock or debt for similar stock, debt for preferred stock, and income links for preferred stock results to significant optimistic rise in stock prices which is common. On the other hand, most of leverage-decreasing transactions such as the sale of similar stock, interchange of common stock for preferred or debt stock, or else preferred stock for debt as well as the need of convertible preferred or convertible bonds compelling the conversion into a similar result into significant reduction in prices of stock thus leading to decline in stock returns. Takeovers funded with debt or cash will create bigger benefits compared to those completed via exchange of stock as cash or debt are correlated with decrease of free cash flow and increased opportunities.

2.2.2 Foreign Direct Investment Dependency Theory

The above theory was by introduced in 1950 by Prebisch. This theory outlines that FDI lack a positive contribution to the host country' economy but also have pessimistic influence on that particular economy. This symbolized that between developing country and grown economy there is the presence of dependency relationship (Srivastava & Talwar, 2019). The reason to this was that the raw materials of developing countries are exported to developed countries which manufacture raw materials into finished products and eventually sell them to diverse developing nation (Bahri, Nor & Mohd, 2018).

Value addition process raises the cost for raw materials and hence a developing country from their export's earnings would never acquire adequate earnings to cater for their imports

(Seyoum, Wu & Lin, 2015). Moreover, FDI creates strong and complicated equipment since it is an entry of advanced economies into developing countries hence making local industries to be outperforming by abolishing domestic small businesses via the use of higher advertising skills as well as greater technology. FDI is believed to influence the balance of payment challenges of majority of developing countries as profit acquired by multinationals are normally given back to all investing economy. In advancing country, these foreign investors activities normally form imbalance hence the opportunity for economic development is affected (Juliussen & Fløysand, 2010).

In this research, FDI dependency theory was employed to describe effect of FDI on stock returns at NSE. Implication of this theory to the correlation between advancement of stock market as well as FDI is that there exists a negative link between the two. The reason behind this is that greater technologies level initiated in advancing country results to labor savings and this affect domestic labor demand which then extends poverty levels thereby reducing savings hence in terms of size and liquidity it becomes difficult to develop stock market.

2.2.3 Prospect Theory

Prospect theory was established by Tversky as well as Kahneman (1992). This theory indicates that people are involved in decision making based on the capability value of gains and losses instead of final results and people assess these losses and gains by use of some heuristics (Barberis, Mukherjee & Wang, 2016). The theory describes decision making in the following phases. During the first phase which is known as editing, decision results are in order according to some heuristic. Specifically, people choose which result they think is equivalent, set a point of reference and finally consider greater results as gains and lesser ones as losses. Editing phase purposes to ease any framing effect. In addition, it aims to solve isolation effects which is stemming propensity of an individual to frequently separate consecutive likelihood instead of handling them together (Wang *et al.*, 2018).

The process of editing can be considered as composed of combination, coding, segregation, simplification, cancellation and dominances' detection. In the subsequent assessment phase, people act as if they could calculate a utility (value) based on their respective probabilities and possible results, and then select the alternative which is having a greater utility (Ding,

Charoenwong & Seetoh, 2014). Certain investors represent the stock mentally by its past returns' distribution and assess this representation in accordance to prospect theory. The prediction of this framework is that prospect theory of stock historical return distribution in cross-section will be pessimistically associates to the succeeding return of the stock. Large number of investors represent it mentally by its previous returns' distribution more probably for the reason as they view distribution of the previous return better and easy accessible proxy for future return distribution of the stock (Rub & Schelling, 2018).

In line with this study, prospect theory was used to establish stock returns in Nairobi Securities Exchange. If at least some market participants value a stock based on its historical return distribution, they will drive up the prices of stocks with high PT values and drive down the prices of stocks with low PT values, resulting in a negative relationship between historical PT values and future returns. Some stake holders employ a process of two-step when determining the amount of capital to assign to a stock. To begin with, they create a mental stocks' representation. Secondly, they assess this representation to find out if the stock is attractive. Because retail investors are more likely to exhibit the behavior prescribed by prospect theory and institutional investors are less focused on small-cap stocks, the initial PT factor sort is likely to include exposure to small-cap stocks in the top decile. Stocks which have greater values for prospect theory are attractive to certain stakeholders; and these stakeholders in their portfolios tilt towards this stock, making the stocks to earn less subsequent returns and be overvalued.

2.3 Empirical Review

This part sets out empirical review pertaining to influence of FDI, foreign remittances, external debts as well as foreign grants on stock returns.

2.3.1 Foreign Direct Investment and Stock Returns

Rasmus and Mathias (2018) evaluated the effect of FDI on stock returns, Sweden. The intention of carrying out the investigation was to assess the impact of FDI on SR. Independent variable was foreign direct investment while dependent variable was stock returns in Sweden. The study used cross-sectional survey research design. Swedish quarterly data spotted from 1982 to 2017 was used. The investigation revealed that there was no significant association

between the stock returns as well as FDIs, whereas the FDI in the past quarter negatively and significantly influenced stock returns indicating that FDI in the stock market might be regarded as a substitute of short-term. Nevertheless, the researcher failed to address influence of GDP on stock returns which is one of key indicators of FDI in the current research hence findings are not generalizable to the current research. The researcher therefore will examine effect of FDI on stock returns in NSE, Kenya.

Tang (2015) assessed how development of stock market is influenced by FDI among Countries in European Union. The aim of the researcher was to evaluate impact of FDI on SMD. Additionally, the study used a panel data between 1987 and 2012. Descriptive survey design was used. Study results established that higher portfolio investment and FDI stimulated by European Monetary Union have not added to stock market development. The dependent variable for this study was SMD which is different from stock returns. The current study will evaluate the impact of FDI on SR in NSE, Kenya.

Ramirez (2018) determined the effect of FDI on SR liquidity as well as size of 14 stock markets of developing countries from 2007-2016. The major objective was to evaluate impact of FDI on stock returns liquidity. The study adopted cross-sectional survey design. Panel data was deployed in this research. Findings revealed that there exists no significant effect of FDI inflows on liquidity and size of the developing stock markets although there is statistically undesirable concurrent impact of FDI inflows on market index returns. The study had liquidity and size of the stock market being dependent variable while the on-going study will use stock returns as the dependent variable hence the study findings cannot be generalized to on-going research.

Ali *et al.* (2014) studied on influence of FDI on stock returns among advancing countries. The independent variable was FDI while dependent variable was stock returns on developing countries. Further cross-section survey design was adopted. Results showed that occurrence of long-term optimistic correlation between FDI and stock returns within Argentina, Brazil, Turkey and Thailand. However, this study did not show the impact of GDP on stock returns which is among the key indicators of foreign direct investment hence the research findings cannot be generalized to the current research.

Malik (2013) examined the impact of FDI on Pakistan stock market (PSM). Their study was based on secondary annual data from 1985-2011. Dependent variable was SMD and independent variables were FPI, foreign remittance as well as FDI inflow. Econometric techniques were used to establish the correlation between SMD and FDI. The study established a superior causal impact between the advancement of the entire market capitalization and inflow of FDI. The outcome indicates that FDI had positive impact on PSM. The target population was Pakistan stock market whereas the present studies will emphasize on Nairobi Securities Exchange. Variation in target population makes it impulsive to generalize the results to the present research. Further, the dependent variables between the two studies vary hence findings cannot be generalized. This study evaluated the influence of FDI on stock returns in NSE, Kenya.

Additionally, Muhammad, Hooi and Rukhsana (2013) assessed on whether FDI influences Pakistan stock market returns. Moreover, the purpose of this research was to assess whether FDI influences stock market returns. Dependent variable was stock market returns while independent variable was FDI. The research adopted descriptive research approach. Moreover, the study discovered that FDI has significant influence on stock market returns. Furthermore, it was also established that income, domestic savings as well as inflation are also macroeconomic variables which affect stock market returns growth. Nevertheless, the study failed to assess impact of gross domestic product stock market return therefore study findings cannot be applied to the current research. The current research therefore seeks to evaluate whether FDI influences stock returns in NSE, Kenya.

Agbloyor, Abor and Komla (2013) analyzed the influence of FDI inflows on SMD by testing an instrumental variable panel regression on 16 African nations. The purpose of conducting the research was to assess how FDI inflow influences SMD. Dependent variable was SMD while the independent variable was FDI inflows. The study adopted descriptive survey design. Findings revealed an unequivocal and highly significant two-way causality between FDI inflows and growth of Stock Market. It was found that foreign investors are attracted by a stock market which is moderately well developed as such a market is seen as a symbol, of openness of a country' authorities, of vitality and of a market friendly environment. FDI inflows also promote stock market development, since this capital is likely to increase capitalization and

liquidity of local stock market when the firm under investigation is registered on domestic market. However, stock markets in different countries vary in terms of development it is therefore unwise to apply the study findings to present research. The current study will examine the impact of FDI on SR in Nairobi Securities Exchange, Kenya.

Sekhri and Haque (2015) examined the impact of FDI on SR at ISE. The purpose of conducting the study was to establish the impact of FDI on SR. Dependent variable was stock returns while independent variable was FDI. Panel data between 2000 and 2015 was employed during the study. Moreover, the study adopted cross-sectional survey design. It was revealed that there exists significant correlation between FDI as well as stock returns at ISE. Outcome also revealed that FDI flow has made a way for stock market in India because of the advancement in technology, usage and knowledge, which results to higher efficient industry. Nevertheless, the research failed to show the influence of GDP on stock returns therefore findings cannot be applicable to this research. The current research will be limited to FDI and stock returns in Nairobi Securities Exchange, Kenya.

Abubakar and Yunusa (2018) studied the impact of FDI on SMD within Nigeria. Moreover, the study examined impact of FDI development on SMD. In this research, independent study variable was FDI while dependent variable was stock market development. The study adopted descriptive survey design. Panel data of 1981 to 2016 was used during the study. Findings revealed that FDI has an optimistic as well as insignificant statistical effect on SMD. Gross domestic savings and exchange rate exert statistically significant and an optimistic effect on SMD whereas the rate of inflation has insignificant inverse effect on stock market development. Dependent variable for this study was SMD which differs from stock returns therefore findings are not applicable. Therefore, the present study will evaluate whether FDI influences stock returns in NSE, Kenya.

In Nigeria, Omodero and Ekwe (2016) investigated the effect of FDI on stock market performances from 1985 to 2014. Additionally, the aim of carrying out the investigation was to assess impact of FDI on performances of stock market. Independent variable was FDI while the dependent variable was performances of stock market within Nigeria. Cross-sectional survey design was deployed. The research established that FDI has negative and insignificant influence on an economy as well as macroeconomic factors which affects stock market

performance. However, this study was limited to stock market performance within Nigeria while this study will only focus on stock returns therefore the study results are not applicable in this study. This study therefore will assess impact of FDI on SR in NSE, Kenya.

In Nigeria, Oseni and Enilolobo (2011) evaluated impact of SMD and FDI on economic development between 1980 and 2009. This study evaluated the effect of stock market growth and FDI on economic development. The independent variables were stock market growth and FDI while the dependent variable was economic development in Nigeria. Descriptive survey design was used. Econometric methods which included co-integration, Unit root test as well as error correction method were the statistical instruments used in data analysis. Findings indicated cyclical interchange for stock market development and FDI. The dependent variable was economic development while current study will use stock returns as the dependent variable hence the results cannot be generalized furthermore the study was carried out in Nigeria which varies with Kenya in Terms of geographical boundaries. The present study will assess the impact of FDI on SR in NSE, Kenya.

Njane (2017) examined the effect of FDI on SMD within Kenya. The main study objective was to assess effect of FDI on SMD. Additionally, independent study variable was FDI whereas dependent variable was stock market growth in Kenya. Moreover, secondary data was gathered annually for 30 years between 1987 and 2016. Descriptive research approach is utilized in this research. The research found that FDI inflows, interest rates, economic growth inflation as well as exchange rates were statistically insignificant contributing factors to Kenyan stock market growth. This study used descriptive research approach whereas this study will employ explanatory research design. Each study design has its own limitations therefore results are not generalizable to this research because of differences in study designs. The current research therefore aims to assess effect of FDI on stock returns in NSE, Kenya.

2.3.2 Foreign Remittances and Stock Returns

Banga and Sahu (2017) determined the impact of foreign remittances on stock returns in developing nations. The aim of carrying out this study was to evaluate impact analysis of remittances of poverty remittances in advancing countries at two levels. The independent variable was foreign remittances while dependent variable was stock returns in developing

countries. The researcher adopted descriptive survey design. To start with, it estimates the effect of poverty remittances among 77 advancing countries; Secondly, different analyses are conducted for 29 advancing countries as well as 21 developing countries in Asia, which have remittances of 5% or more share in GDP. The outcome of the study continuously indicates that remittances significantly decrease poverty among recipient countries. However, the outcome is more reliable to those countries which have remittances higher than 5% of GDP thus leading to improvement in stock returns. Nevertheless, this study was limited to Asian countries and not Kenya. Different countries have different levels of economic development hence findings from one country cannot be generalized to another country. The current study therefore will evaluate the influence of foreign remittances on stock returns in NSE, Kenya.

Zieseimer (2016) developed an open economy model to analyze impact of remittance on economic growth by use of 2 channels: human capital modes well as physical capital channel. Moreover, the aim of this research was to assess impact analysis of foreign remittances on economic growth. Independent variable was foreign remittances while the dependent variable was economic development. The study deployed cross-sectional survey design. Moreover, this paper estimated for two channels, two variations of an open economy model using general technique of moments with autocorrelation correction. Moreover, data comprised of pooled data gathered from countries that got remittance in 2016. The research found the below findings: Remittances was found to have the highest impact on countries' savings with low per capita income while remittances were seen to having an optimistic correlation with GDP' stable -state level. The implication of these outcomes is that, remittances will raise the growth not just through rise in literacy levels but through rise in investments as well. Different countries have varying per capita income as well as GDP stable- state level. The current study will establish the influence of foreign remittance on stock returns in NSE, Kenya.

Malik (2013) studied on the effect of foreign remittance in SMD of 3 the major Countries in South Asia that is India, Pakistan and lastly Bangladesh. This study determined the influence foreign remittances on growth of stock market. The independent variable was foreign remittances while the dependent variable was growth stock market. Longitudinal research design was adopted during the study. E-view software is used to analyze secondary data which was preserved by World Bank for 24 years between 1988 and 2011. The research established

that foreign remittance has significant as well as optimistic impact on SMD. The study adopted longitudinal research design whereas the current research will use explanatory research design. Since each of the research design has short comings, the results cannot be generalized to the present research. The current study will examine impact of foreign remittance on stock returns in NSE, Kenya.

Manyonga (2014) evaluated the impact of foreign remittances on developing countries' economic growth. Additionally, the main objective was to assess impact foreign remittances on developing countries' economic advancement. Independent variable was foreign remittances while dependent variable was economic growth of developing countries. Descriptive research approach was utilized. The research revealed that foreign remittances enable households' migrants to develop their assets, both fixed and liquid assets, increasing access to investment opportunity and financial services. In the Philippines and Mexico, the study established that foreign remittance inflows are related with a higher assets accumulation in farm equipment, higher levels of self-employment as well as rise in investments by small businesses in migrant-sending localities. Further, the study found that remittances can increase self-employment' access and raise the probability of recipients investing in micro business, adding to the development of financial systems in homeland country. Explanatory research design will be adopted in this study hence results are not applicable to this research due to variations in research approach. Moreover, study aimed at assessing the effect of foreign remittance on stock returns in NSE.

Misati and Kamau (2018) analyzed the correlation between foreign remittances and financial growth through the use of autoregressive distributed technique centered on periodical data collected in Kenya between 2006 and 2016. The main study objective was to assess correlation between foreign remittances and financial growth. Independent variable was foreign remittances while the dependent variable was financial growth in Kenya. Results portray a superior positive association between foreign remittances and all indicators of financial growth which are five in number in long run equations. The study further established that greater levels of foreign remittances create chances for bank accounts opening, retrieving financial systems and increasing savings for receivers as well as revealing the unbanked to present as well as recent financial results. Further, this study found that utilization of international remittance

interchange by use of phone technology decreases the charges by eradicating necessity for visible branches as well as staffs to go for walk-in clients that overshadows traditional remittance business models apart from proving safety and convenience to the remittance actors. As a result of difference in institutional structures between banking sector and Nairobi Securities Exchange, the results in the study are not applicable to Kenya. Therefore, current research will assess influence of foreign remittance on stock returns in Nairobi Securities Exchange, Kenya.

Zakir and Khan (2013) examined on influence of foreign remittances on stock returns in Bangladesh. The research evaluated the impact of foreign remittances on SR in Bangladesh. Independent variable was foreign remittances while the dependent variable was stock returns in Bangladesh. Descriptive research design was utilized in the research. Panel data obtained from 1972 to 2010 was used in the study. Vector Autoregressive (VAR) method was used and the empirical outcome found that a one per cent rise in foreign remittances inflows results to rise in the rate inflation with 2.48 per cent thus resulting to decline in stock returns. This study used descriptive research approach whereas the on-going study will employ explanatory research approach hence results are not applicable in this research due to differences in study designs. The specific concern of the current research will be on effect of foreign remittance on stock returns in NSE, Kenya.

Karikari *et al.* (2016) assessed the relation between foreign remittance and stock returns in NSE. Additionally, the aim of carrying out this research was to evaluate the effect of foreign remittance on SR in NSE. Independent variable was foreign remittances while the dependent variable was stock returns in NSE Kenya. Descriptive research design was deployed during the research. Results found an optimistic correlation between financial intermediation and foreign remittances by claiming that the relocation of immigrant in surplus of consumption expenditures has a probability to be reserved therefore permitting recipient persons the chance to be initiated to financial services and products resulting to increased stock returns. This study deployed descriptive survey approach whereas this study will employ explanatory research approach. Each research approach has its own limitation hence it is unwise to generalize the. The on-going research will be limited on foreign remittance and SR in NSE.

Anghel, Matloob and Randazzo (2015) studied on effect of foreign remittance on stock returns in Asia countries. The purpose of this study was to assess the effect of foreign remittance on SR of countries in Asia. Independent variable was foreign remittances while dependent variable was stock returns of countries in Asia. The research employed cross-sectional study design. The research revealed that foreign remittance result to improvement in stock returns. Developed countries like Asian countries receive higher foreign remittance as compared to developing countries like Kenya therefore results are not generalizable to this research. The on-going will assess the link between foreign remittance and SR in NSE, Kenya.

Haruna, Aborb and Kwadzogah (2017) investigated the impact of foreign remittance on SMD in a bigger panel of developing countries. The main objective was to assess impact of foreign remittance on stock market growth in developing countries. Independent variable was foreign remittances while dependent variable was stock market growth. The study used two phases, that is impulse response and least squares functions to explain on remittance-bank-stock market relationship. The study revealed that remittances encourage development of banking sector in countries that acquire less remittance, although not in economies that acquire greater remittance. Additionally, the study also found a bi-causal pessimistic bond between remittances which are in countries with advanced banking systems as well as stock market. In countries with less remittance receivers, remittances reduce growth of stock market; nevertheless, within countries with dependent remittance, remittances promote growth of stock market. Additionally, growth of stock market encourages remittance inflows in countries with dependent remittance, whereas hindering it in countries with less remittance recipient. Nevertheless, the study was limited to the banking sector while the current research will focus on registered companies in the Nairobi Securities Exchange.

Njoroge (2015) assessed the effect of foreign remittances on the role of stock market at NSE. The main research objective was to assess the link between foreign remittance and NSE. Independent variable was foreign remittances while the dependent variable was stock market at NSE. The research employed descriptive research design. The investigation showed that foreign remittance has significant and superior optimistic effect on stock market operation. Rise of foreign remittance significantly increase the stock market performance. In addition, the research noted that interest rate in lending, inflation as well as exchange rates have significant

pessimistic impact on performance of stock market. Nevertheless, due to variation in research designs, it is unwise to generalize the results. The current study will use an explanatory research design

2.3.3 External Debts and Stock Returns

Dereje (2013) studied the influence of FD on economic advancement of selected largely indebted under privileged selected countries in Africa via debt overhang and also debt crowding out effect. Additionally, the purpose of this study was to examine how foreign debt influences economic development. Independent variable was foreign debt whereas dependent variable was economic development. Cross-sectional survey design was adopted. This was conducted using data for eight highly indebted underprivileged countries in Africa from 1991 to 2010. The outcome from the study revealed that economic growth is influenced by foreign debt via debt crowding out effect as opposed to debt overhang. More so, the study revealed the chosen countries are avoiding paying (servicing) higher than 95% of their increased debt. The dependent variable was economic development which differs from stock returns hence findings are not generalizable. Specifically, this study will assess impact of ED on SR in Nairobi Securities Exchange, Kenya.

Habimana (2015) studied on the correlation between foreign debt and stock returns, Rwanda Security exchange. Moreover, the aim of carrying out this research was to evaluate the impact of foreign debt on SR in Rwanda. Foreign debt was the independent variable while dependent variable was stock returns in Rwanda Security exchange. This study adopted qualitative analysis method. The study found that high level of external debts leads to unexpected inflation levels with very huge peaks thus resulting to decline in stock returns. However, the study was limited to Rwanda Security Exchange thus its outcome should not be generalized to the present study due to variations in macro-economic policies and institutional framework between the two states. The current research specifically sought to determine impact of ED on SR in NSE, Kenya.

In Chad, Kouladoum (2018) analyzed on the impact of foreign debt on stock returns. The main study objective was to evaluate whether foreign debt influences stock returns. Independent variable was foreign debt while dependent variable was SR in chad. This study adopted

qualitative analysis method. The survey used a panel data from the 1975- 2014. Generalized technique of moment was adopted during the study. The results revealed that foreign debt significantly and positively influence the real rate of exchange with 5% significant level. Furthermore, the study found that servicing of external debt influences significantly and negatively real rate of exchange thus leading to decline in stock returns. The study was limited to stock returns in Chad, therefore, its outcome cannot be generalized to current study because of difference in the level of economic advancement.

Brzozowski and Siwińska (2016) assessed the impact of foreign debt on stock returns in forty-eight developing nations. Moreover, the reason for conducting this research was to assess effect of foreign debt on stock returns in developing countries. The independent variable was foreign debt while dependent variable was stock returns in developing countries. Additionally, the study deployed panel data from 1970 to 2012. Descriptive research design was employed. The research indicated that public foreign debt obstructs access of private sector to bond market and external loan. By contrast, private debt' stock in financial markets at international levels applies a positive effect on public foreign debt from each source excluding other private creditors. The study also revealed the issue of bank crises, openness of capital account and economic development rate to be amid macroeconomic variables which have a significant effect on both private and public external debts. However, due to variation in study designs the study findings cannot be generalized. Moreover, this study employed descriptive research approach while this study will employ explanatory research approach. The on-going research will examine the impact of external debt on stock returns in Nairobi security exchange.

Mahmoud (2015) assessed the function of foreign debt on stock returns within Mauritania. The main purpose of this study was to examine the impact of foreign debt on SR. The independent variable was foreign debt while dependent variable was stock returns within Mauritania. It applies several econometrics methods which include, OLS, unit root test, Johansen Co-Integration Test. OLS tests show a positive correlation between ED as well as GDP consequently resulting to improvement in stock returns. The Johansen Co-Integration Test showed an undesirable correlation between ED and GDP. The study was performed in Mauritania which differs in terms of economic environment and geographical boundaries with

that of Kenya hence results cannot be generalized. This study specifically will examine impact of ED on stock returns in NSE, Kenya.

Senadza, Fiagbe and Korsi (2018) studied the impact of FD on stock returns within Sub-Saharan Africa. The purpose of conducting this research was to assess the impact of foreign debt on stock returns in SSA in Africa. Moreover, foreign debt was independent variable while dependent variable was stock returns in Sub-Saharan Africa. The research used longitudinal research approach. The paper used yearly data for 39 countries in SSA starting between 1990 and 2013 and uses the System Generalized Methods of Moments approximation method. The study revealed that FD negative influences stock returns as the funds were diverted to projects that give inadequate returns to pay the debt consequently resulting to decline in stock returns. Due to differences in study design, it's unwise to generalize the study results. The on-going study therefore will establish the influence of ED on stock returns in NSE, Kenya.

Sami and Ada (2018) examined the relationship between ED by government and economic development, encouraged by consistent by rise in Oman's foreign debt to fund its yearly budget. The main study objective was to investigate influence of ED on economic growth. Additionally, foreign debt was independent variable while dependent variable was economic growth. The study employed descriptive survey design. Moreover, time series data from 1990~2015 were gathered from Central Bank of Oman and World Bank. The research adopted Autoregressive Distributed Lag cointegration technique to describe error relationship method to find out the dynamic nature of short-run of foreign debt as well as economic development. The study established significant and a pessimistic impact of FD on economic development. Additionally, GFC in verifying increase performance in Oman was found to be optimistically significant. Economic growth is different from stock returns (dependent variable) therefore the study findings are not applicable due to disparity in dependent variable. The current research specifically will establish the influence of ED on stock returns in NSE, Kenya.

Farhana and Chowdhury (2014) assessed the effect of ED on economic development in Bangladesh. The key objective was to assess whether ED influences economic development in Bangladesh. Foreign debt was independent variable while dependent variable was economic development in Bangladesh. Cross-sectional survey design was deployed. The yearly data series from 1972-2010 was used. The research adopted Auto- Regressive Distributive Lag

model to assess the association of debt and development. Results found a significant unfavorable impact of debt on development in Bangladesh. Moreover, foreign debt service in Bangladesh is a great problem for the nation and it causes the GDP to reduce. The study focused on economic development in Bangladesh while the current study will focus on stock returns (dependent variable) hence findings cannot be applied. The on-going study therefore emphasizes on impact of external debt on stock returns in Nairobi stock exchange.

Nwaohaet *al.* (2017) employed error correction model (ECM) to conduct an analysis on effect of TED on Nigerian economy proxies by GDP from 1980-2015. Additionally, the research purpose was to assess the effect of TED on economic advancement. Independent variable was total external debt while the dependent variable was economic development in Nigeria. Data including TED as well as GDP were gathered from Nigerian Central Bank statistical bulletin. The outcome of the finding indicated that the overall foreign debt exerts significant and negative effect on GDP. This means that, as the overall foreign debt rises, GDP also reduces and the vice versa. Due to difference in institutional frameworks and economic growth level, it is unwise to apply the outcome to the current research.

Ndemange (2018) examined the effect of foreign debt on Kenyan GDP from 1980-2014. The main study objective was to evaluate influence of foreign debt on GDP in Kenya. Moreover, foreign debt was the independent variable while dependent variable was GDP growth. Findings obtained from regression analysis discovered that external public debt has pessimistic impact on GDP hence offering provision that a rise in ED establishes a tension on economic development. Increased debt servicing results from increased external borrowing, resulting in the nation's resources being used to service external loans. This study used gross domestic production as its dependent variable. Hence, its outcome cannot be generalized to the current research as a result of difference in indicators of stock returns. The current study therefore focuses on influence of external debt on stock returns in Nairobi stock exchange.

2.3.4 Foreign Grants and Stock Returns

In USA, Dalgaard and Tarp (2014) examined the correlation between foreign grants and stock returns. The purpose of this research was to evaluate the effect of foreign grants on stock returns. Moreover, independent variable was foreign grants while dependent variable was stock

returns in USA. The research adopted descriptive research design. The research revealed that foreign grants have significant as well as positive influence on stock returns. The positive correlation between aid as well as the stock returns reveals that, although the effects are small, receiving foreign grant makes a developing country more appealing to investors abroad thus resulting to improvement in stock returns. However, due to variation in study designs and economic environment, it's imprudent to generalize the study findings.

Ekanayake (2010) studied on the relationship between external donation and economic growth of developing countries. Moreover, study's purpose was to evaluate impact of external grants on developing countries' economic development. Independent variable was external grants while the dependent variable was the economic development of developing countries. Descriptive survey design was deployed. The research used yearly data on 85 developing countries including Asia, Latin America, Africa as well as Caribbean from 1980-2009. The study revealed that external donation has varied influence on economic development in countries that are developing. The researcher targeted on different countries with different institutional frameworks hence results are not generalizable to this research. The current research will be limited to impact of external grants on stock returns in NSE.

Mossie (2014) examined the impact of aid on domestic private investment (DPI) in countries within Eastern Africa. The aim of carrying out this research was to evaluate influence of aid on domestic private investment in countries within Eastern Africa. The independent variable was aid while the dependent variable was domestic private investment in countries within Eastern Africa. The study adopted Dynamic OLS technique, and a panel data covering between 1971 and 2012 was used. The findings clearly showed that aid has significant pessimistic effect at panel and also at the level of a country (excluding Kenya) however when it intermingled with FDI it portrays significantly optimistic outcome. In addition, its intermingling with policy variables indicates significant and negative impacts. Nevertheless, both interactions at the personal country level portrays mixed outcome. The dependent variable for this study was private investment while on-going study will focus on stock returns as the dependent variable hence the study findings cannot be generalized.

Ouattara (2016) analyzed the impacts of foreign aids on major fiscal aggregates within Senegal. The purpose of carrying out this investigation was to determine influence of foreign

aid on major fiscal aggregates within Senegal. The independent variable was foreign aid while the dependent variable was major fiscal aggregates within Senegal. The study used data from 1980- 2014. The researcher determined three major results of this research. First, greater support flows close to 41 percent, are deployed to FD and 20 percent of resources that government own are meant for debt servicing. Additionally, effect of support flows on domestic spending is not significant, and eventually debt servicing has positive impact on domestic spending. The study proposes that debt decrease could develop a policy tool which is more successful than acquiring extra loans. Since the study was conducted in Senegal, it is therefore imprudent to generalize results to presented study because of variation in unit of observation as well as analysis.

Dalgaard and Tar (2014) studied impact of external grants on economic development in low income countries. Moreover, the aim of this research was to evaluate effect of external grants on economic advancement in low income countries. The independent variable was external donations while the dependent variable was economic growth in countries with low income. Additionally, the research employed cross-sectional study design. The research revealed that foreign grants encourage countries with low income to establish institutional capacity and governance systems that stimulate private investment development thus led to enhancement in stock returns. As a result of differences in level of economic development in developing countries, results cannot be generalized to the on-going study.

Addison, Mavrotas and McGillivray (2015) evaluated the impact of external grants on SR in Africa from 1960 to 2012. Specifically, the researcher examined the impact of external grants on SR. Moreover, the independent variable was external grants while dependent variable was stock returns. During the research cross-sectional research design was employed. The researchers highly emphasize on tremendous reduction in support over previous period which will impact Africans dwelling in poverty as well as the African whole economy. Due to decrease in aid, MDGs will be enormously difficult if not unattainable. The results revealed that foreign aid does encourage development and decreases poverty resulting to improvement in stock returns. Moreover, it positively influences aggregates of public sector, resulting to greater public expenditure and to reduce borrowing. However, it is obvious that MGDs cannot be attained with increase in aid alone rather there is also a need to explore other sources of

innovative finance development. The study employed cross-sectional research approach whereas this research will employ explanatory research approach; results are however not applicable to Kenya because every research design has short comings. The current study focuses on the influence of foreign grants on stock returns.

Karras (2016) examined the association between growth in per capita GDP and foreign aid. Moreover, the study sought to assess the impact of foreign aid on GDP growth. Independent variable was foreign aid while dependent variable was GDP growth. The study used yearly data over a period from 1960-2017 for a sample of 71 developing countries which receive aid. The study established that foreign aid has permanent, positive as well as and statistically significant impact on economic growth. Moreover, permanent rise in foreign aid by \$20 per person causes permanent improvement in increase rate of real GDP per capita by 0.16 %. The study used GDP as the dependent variable which differ from stock returns hence results are not generalized to this study.

2.4 Summary of Literature and Research Gaps

Various researches have been conducted on effect of direct foreign investment, foreign remittances, external foreign grants and foreign debts on stock returns. Nevertheless, these studies were performed in different institutions, countries as well as sectors and by use of diverse study populations and research designs. Therefore, results cannot be employed in this study.

Table 2. 1: Summary of Literature and Research Gaps

Author	Study	Study findings	Research gaps	How the Study Addressed the Gaps
FDI and Performance of Stock Market				
Rasmus & Mathias (2018)	The impact of FDI on SR in Sweden.	The study noted that there was no superior contemporaneous correlation between stock returns and FDIs	Nevertheless, the study failed to address the impact of GDP on stock returns which is one of the key indicators of FDI in the current research hence the findings are not applicable to the on-going research	This study measured FDI, as a percent of the Gross Domestic Product
Malik (2013)	Effect of FDI on PSM	The investigation found that there is significant correlation between FDI as well as Pakistan stock market	The study' target population was Pakistan stock market. Variation in target population makes it impulsive to generalize the results to the present research	This study was conducted among firms listed at NSE, Kenya
Abubakar & Yunusa (2018)	Influence of FDI on Nigerian stock market growth	The study revealed that FDI has an optimistic and statistically insignificant influence on stock market growth	The dependent variable for this study was SMD which vary from stock returns hence study findings are not generalizable	The dependent variable in this study was stock returns
Foreign Remittances and Stock Market Performance				

Malik (2013)	Effect of foreign remittance in the stock market advancement of three main South Asian Countries	The research found that foreign remittance has significant positive effect on stock market development.	This study adopted longitudinal research approach whereas this study will use explanatory research approach. Since each of the research design has short comings, the results cannot be generalized to the present research.	The study used explanatory research design
Zakir & Khan (2013)	Effect of foreign remittances on stock returns in Bangladesh.	Findings revealed that foreign remittances results to deterioration in stock returns	Because of variation in unit of observation, the results are not generalizable to the current study.	The current research was on effect of foreign remittance on SR in NSE, Kenya.
Misati & Kamau (2018)	The association between foreign remittance as well as financial development in banking sector in Kenya	The research found a positive correlation between foreign remittance and financial development	This study focused on the banking sector which differs from stock market therefore findings are not applicable.	This study evaluated the effect of foreign remittance on stock returns in Nairobi Securities Exchange, Kenya
External Debts and Stock Market Performance				
Habimana (2015)	Effect of external debt on stock return in Rwanda Security exchange	The study found that high level of external debts leads to unpredictable inflation levels with very huge peaks thus	However, the study was limited to Rwanda Security Exchange thus, its outcome should not be applied to the present research due to differences in macro-economic	The study specifically sought to evaluate the effect of ED on SR in NSE, Kenya

		resulting to decline in stock returns.	policies as well as institutional framework between two states.	
Kouladoum (2018)	Effect of foreign debt on stock returns in Chad.	Foreign debt has significant impact on stock returns	The research failed to show influence of debt as a percent of GDP on stock returns therefore findings are not generalizable to this study.	The study sought to examine the effect of ED on SR in Nairobi security exchange
Nwaoha <i>et al.</i> (2017)	Effect of foreign debts on GDP in Nigeria	The study found that ED has significant impact on GDP	Due to difference in institutional frameworks and economic growth level, it is unwise to apply outcome to this study.	The study investigated effect of ED on SR in NSE.
Ndemange (2018)	The effect of ED on GDP in Kenya	Findings discovered that foreign debt has significant impact on GDP	This research used gross domestic production as its dependent variable. Hence, its outcome cannot be generalized to the current research as a result of difference in indicators of stock returns.	The current research sought to evaluate the effect of ED on SR in NSE
Foreign Grants and Stock Market Performance				
Addison, Mavrotas & McGillivray (2015)	The influence of external grants on stock returns in Africa	The research found that foreign grants have significant effect of stock returns	The study employed cross-sectional research approach whereas this research will utilize explanatory research approach; results cannot be applied to Kenya because every research design has short comings.	The study investigated the influence of foreign grants on stock returns in Nairobi security exchange

Dalgaard & Tar (2014)	Impact of external grants on developing countries' economic growth	Foreign grants have significant influence on economic advancement.	Due to variation in level of economic advancement in developing countries, the results cannot be generalized to the present study.	The study aimed at assessing effect of foreign grants on SR in Nairobi security exchange
Ouattara (2016)	The effect of foreign grants on key fiscal aggregates in Senegal.	The study revealed that foreign grants has significant impact on fiscal aggregates in Senegal	Since the study was conducted in Senegal, it is therefore imprudent to apply results to the present study because of variation in unit of observation as well as analysis.	This study evaluated the effect of foreign grants on stock returns in NSE.

Source: Empirical Literature Review (2013-2018)

2.5 Conceptual Framework

Conceptual framework is the diagrammatic presentation of correlation between dependent and independent study variables. In the on-going research, independent variables are FDI, foreign remittances, external debts and foreign grants. The dependent variable is stock returns at NSE. Hypothesized correlation between independent and dependent variable are as indicated in Figure 2.1.

Independent Variables

Dependent Variable

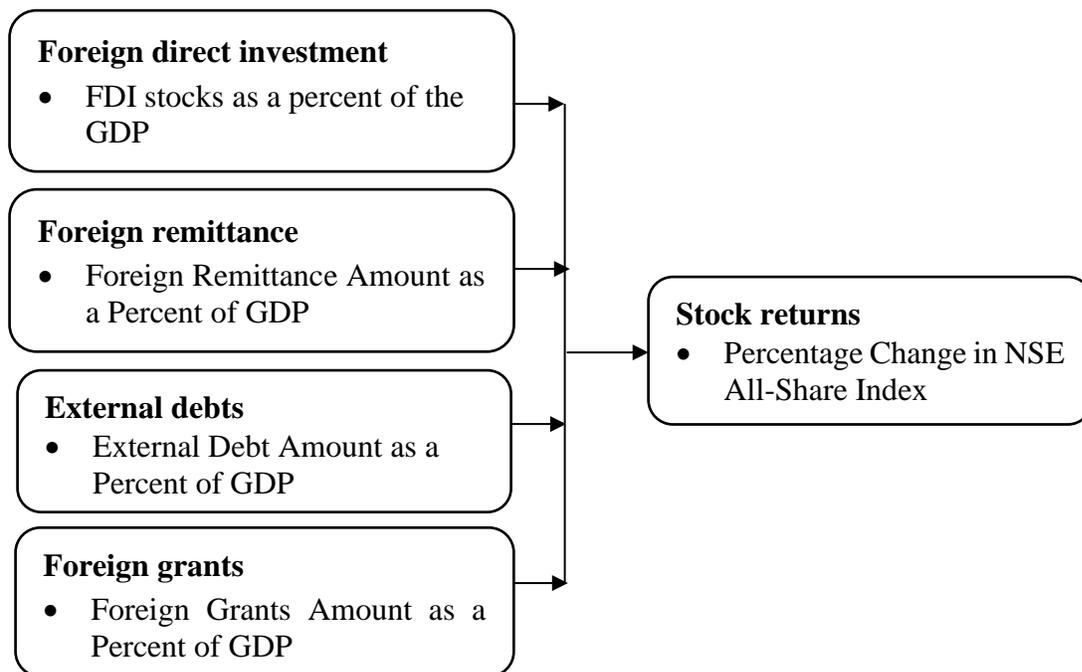


Figure 2. 1: Conceptual Framework

Source: Author (2021)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section covers research methodology that researcher used to address the research hypotheses. It involved describing the research design, target population, sampling design, data collection instruments, data collection procedure, data analysis and presentation, diagnostic tests as well as ethical considerations.

3.2 Research Design

Research design is the total methods researchers choose to incorporate the different study components in a logical and coherent way, thus, making sure that they effectively handle research problem. Generally, it comprises blueprint for data gathering, measurement as well as analysis (Wilson, 2010). This research used an explanatory research approach. The study is carried out so as to determine the nature and extent of cause-and-impact relationships. Explanatory research is normally structured with an objective which is clearly outlined of identifying associations as well as causal relationships among different variables. Furthermore, explanatory research can be carried out so as to examine effects of particular changes on several processes and present norms (Singpurwalla, 2013). Explanatory research emphasizes on analysis of a particular situation to describe the patterns of correlation between the variables. This study design was the most suitable as the research strives to analyze effect of foreign cash inflows on SR in NSE in Kenya.

3.3 Target Population

It refers to the whole collection of objects or persons to which studies are attracted in generalizing results (Bryman & Cramer, 2012). Collis and Hussey (2014) claim that target population refers to the entire group of individuals/objects with common physical attributes. In this research target population was companies listed in NSE. The NSE (2018) indicates that 64 companies are registered in Nairobi Securities Exchange (see Appendix I).

3.4 Sampling Design

Creswell (2014) indicates that a sample size should be adequate and capable of providing adequate information about a target population. The researcher focused on all registered companies in NSE, which are 64 in number. Therefore, since the number is small, a census was conducted, which implies that all the 64 companies were included in the study. Census is a survey method used in case the entire population is involved in data collection process (Riley, 2013). The study adopted a Complete Enumeration Survey (Census) since the target population is small. The method was used because the data on external cash flow (direct foreign investment, foreign remittances, external debts and foreign grants) is not distributed across panels. Therefore, an average figure on stock returns in NSE was obtained on annual basis.

3.5 Data Collection Instruments

This study employed time series data. It provides a dataset in which entities' behavior is viewed over time. Secondary data refers to the data which has been gathered from other sources and is easily available (Russell, 2013). The study covered duration of 13 years and was collected on annual basis from January 2008 and December 2020. Secondary data on stock returns, measured in terms of Nairobi All Share Index (NASI), was used in this research and was obtained from the NSE. In addition, data on foreign direct investment, foreign remittances, external debts and foreign grants was acquired from KNBS and CBK.

Data extraction checklist (Appendix II as well as Appendix III) was employed to gather secondary data. Additionally, the role of data extraction checklist is to offer direct reviewers concerning the kind of appropriate information that can be obtained from secondary sources (Bryman & Cramer, 2012). In appendix II, the data extraction tool comprised of 5 columns to cover time period (Year), foreign direct investment, foreign remittances, external debts, foreign grants and GDP.

3.6 Data Collection Procedure

Research procedure refers to a process of collecting as well as measuring information on variables, in a recognized systematic way which allows a person to answer a given research questions, test hypotheses as well as evaluate the results (Bhattacharjee, 2012). Before data collection, an approval letter from Graduate School as well as permit of conducting the research from NACOSTI

was obtained by the researcher as requirements for data collection. This survey made use of information which is publicly available. The study acquired raw data on foreign direct investment, foreign remittances, external debts and foreign grants from KNBS and CBK. However, data on stock returns was obtained at a charge from NSE as it is not publicly available.

3.7 Data Analysis and Presentation

Secondary time series data is in quantitative form. The data was collected from 64 companies and for a period of 12 years (January 2009 and December 2018). Statistical software referred to as the Stata version 2014, was deployed to gather as well as analyze quantitative data. The analysis of quantitative data was centered on inferential as well as descriptive statistics. Moreover, descriptive statistics emphasized on computation of percentage, frequencies, mean and standard deviation. Trend analysis was used to indicate the distribution of data across years. Trend analysis refers to a statistical method and procedure that is used in showing the movement of an observed data over a specified period of time (Bryman & Cramer, 2012).

The study used Vector Autoregression in testing for the relationship between variables. The VAR integrated model includes multiple time series and is fairly a useful forecasting tool (Bryman & Cramer, 2012). VAR model entails multiple independent variables therefore has more than one equation (See equation 3,4,5 and 6). Additionally, each equation deploys as its explanatory variables lags of variables and likely deterministic trend (Bryman, 2013). Time series models for VAR are typically centered on deploying VAR to stationary series with earlier disparity to original series therefore due to that reason there is regularly a likelihood of information getting lost concerning association among integrated series.

Therefore, one solution is differencing series so as to make them static but at the cost of disregarding essential (“long run”) association between levels. To test the trustworthiness of regressions levels is a better solution (“cointegration”). Normal approach is to deploy Johansen’s approach for testing the existence of cointegration, if it does then a VECM, which combines differences and levels, can be estimated rather than VAR in levels.

3.7.1 Empirical Model

This research involves multivariate time series which is an economic methodology where the time series y_{1t} depends on the lags of itself and the lags of another series y_{2t} (Creswell, 2014). In this case the main methods of analysis were either Vector Autoregression (VAR) or Vector Error Correction Model (VECM) depending on whether the series has co-integration or not. Both VAR and VECM are used in time series data and have been used by other studies focusing on stock returns. For instance, Serem, Saina and Serem (2020) used VAR and VECM to assess the association between macroeconomic factors and stock market prices in NSE. If variables have co-integration which implies that the variables co-move towards a long-run equilibrium, then VECM was applied otherwise VAR would be used (Russell, 2013). VAR is considered to be a forecasting algorithm that is utilized when at least two-time series variables influence each other. In addition, the association between the variables is bi-directional. In this study, there may be a bi-directional association between external cash inflows and stock market performance.

The standard VAR model where $k = 1$ applied

$$y_t = A_0 + A_1 y_{t-1} + U_t \dots\dots\dots (1)$$

Where y_t is vector of dependent variable

A_0 is vector of constant

A_1 is matrix of coefficients of the variables at lags

U_t is vector of white noise

y_{t-1} is vector of the variables at lags

In this case there are five variables, that is;

Stock Returns (denoted SR) Foreign Direct Investment (denoted by FDI), Foreign Remittances (denoted by FR), External Debts denoted as ED, and Foreign Grants denoted as FG. In this case therefore the above equation looked like;

$$\begin{pmatrix} y_{1t} \\ y_{2t} \\ y_{3t} \\ y_{4t} \end{pmatrix} = \begin{pmatrix} \beta_{10} \\ \beta_{20} \\ \beta_{30} \\ \beta_{40} \end{pmatrix} + \begin{pmatrix} \beta_{11} & \alpha_{11} & \theta_{11} & \Omega_{11} \\ \alpha_{21} & \beta_{21} & \theta_{21} & \Omega_{21} \\ \theta_{31} & \beta_{31} & \alpha_{31} & \Omega_{31} \\ \Omega_{41} & \beta_{41} & \alpha_{41} & \theta_{41} \end{pmatrix} \begin{pmatrix} y_{1t-1} \\ y_{2t-1} \\ y_{3t-1} \\ y_{4t-1} \end{pmatrix} + \begin{pmatrix} U_{1t} \\ U_{2t} \\ U_{3t} \\ U_{4t} \end{pmatrix} \dots\dots\dots (2)$$

The first system

$$y_{1t} (FDI) = \beta_{10} + \beta_{11} y_{1t-1}(FDI) + \alpha_{11} y_{2t-1}(FR) + \theta_{11} y_{3t-1}(ED) + \theta_{11} y_{3t-1}(FG) + U_{1t} \dots (3)$$

The second system

$$y_{2t} (FR) = \beta_{20} + \alpha_{21} y_{2t-1}(FR) + \beta_{21} y_{1t-1}(FDI) + \theta_{21} y_{3t-1}(ED) + \theta_{11} y_{3t-1}(FG) + U_{2t} \dots (4)$$

The third system

$$y_{3t} (ED) = \beta_{30} + \theta_{31} y_{3t-1}(ED) + \beta_{31} y_{1t-1}(FDI) + \alpha_{31} y_{2t-1}(FR) + \theta_{11} y_{3t-1}(FG) + U_{3t} \dots (5)$$

The fourth system

$$y_{4t} (FG) = \beta_{40} + \theta_{41} y_{4t-1}(FG) + \beta_{41} y_{1t-1}(ED) + \alpha_{41} y_{2t-1}(FDI) + \theta_{11} y_{4t-1}(FR) + U_{4t} \dots (6)$$

The first step is to find out if the variables are constant, if they are not, make them constant then choose the number of lags using information criteria and check for co-integration. If the variables co-integrate use VECM otherwise VAR model was employed.

3.7.1 Operationalization and Measurement of Study Variables

The current study had foreign direct investment, foreign remittances, external debts and foreign grants that denote independent study variables whereas the dependent study variable was stock returns at NSE. The operationalization of study variables is summarized in Table 3.1.

Table 3. 1:Operationalization of Variables

Type of Variable	Variable	Operationalization	Measurement	Hypothesized direction	Scale of Measurement
Dependent	Stock Returns	It is the calculation of percent rate of return over a measurement period	Percentage Change in NSE All-Share Index $= \frac{\text{Change in NASI} * 100}{\text{Base Year NASI}}$	Positive/Negative	Ratio
Independent Variable	Foreign direct investment	An investment which is in form of regulatory ownership in a	FDI stocks as a percent of the GDP $= \frac{FDI \text{ stocks} * 100}{GDP}$	Positive/Negative	Ratio

		business within a country by an entity located in another country			
Foreign remittance	A transfer of money from foreign workers to their families or any other persons in their home countries	Foreign Remittance Amount as a Percent of GDP $= \frac{\text{Foreign Remittance Amount}}{GDP}$	Positive/Negative	Ratio	
External debts	A form of financing which is borrowed from foreign lenders by a country and mostly is in the form of tied loans	ED Amount as a Percent of GDP $= \frac{\text{External Debt Amount} *}{GDP}$	Positive/Negative	Ratio	
Foreign grants	Non-repayable Products or funds given or disbursed by one party, mostly foreign nations, government department, foundation, trust or corporation to a receiver, often (but not always) a nonprofit entity,	Foreign Grants Amount as a Percent of GDP $= \frac{\text{Foreign Grants Amount}}{GDP}$	Positive/Negative	Ratio	

		business, educational institution, or an individual.			
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Source: Researcher (2021)

3.8 Diagnostic Tests

Time series analysis tests that were performed on the model comprise of normality test, Heteroscedasticity Test, Autocorrelation Test, Unit Root Test, Granger Causality Test and Cointegration Test.

3.8.1 Cointegration Test

Co-integration is normally considered one of the statistical properties of a collection of time series variables (Wilson, 2010). The study used Johansen test to test co-integration. Johansen test of co-integration allows for testing unrestricted and also restricted versions of co-integrating vector(s) as well as adjustment parameters' speed. On the presence of co-integration association between variables, a VECM which avoids random selection of exogenous and endogenous will employed. The results of the test will determine whether to run a VAR or VECM model.

3.8.2 Unit Root Test

Data stationarity was tested using ADF. This test was adopted since it is not subjected to autocorrelation effects. The study variables were assumed to have long run relationship in case of unit-root which requires first-variation for stationary. Therefore, co-integration test was conducted by the researcher. There was supposition of short run effect on the model in case of stationarity at all levels after ADF test was performed on exogenous data (Creswell, 2014).

3.8.3 Autocorrelation Test

Autocorrelation results to bias as well as false estimations. Serial correlation indicates presence of correlation between stochastic random error terms of continuous periods (Bhattacharjee, 2012). The research deployed Breusch-Godfrey/Langrage Multiplier test for testing autocorrelation. This test is used in a regression model for testing autocorrelations errors. The test uses residuals from

the model being preferred for regression analysis as well as deriving test statistics. According to the null hypothesis there is absence of serial correlation.

3.8.4 Heteroscedasticity Test

When carrying out regression analysis, especially variance analysis, it is important to put in to consideration heteroscedasticity, because it can lead to invalid statistical tests on the level of significance that have an assumption that the modelling error are neither uniform nor correlated therefore resulting to the variances do not change with the modelled effect (Singpurwalla, 2013). For instance, while the ordinary least squares estimator does not reveal any biasness in heteroscedasticity presence; it is not efficient for it ensures underestimation of the true variance as well the covariance. Heteroscedasticity was tested using Cook-Weisberg test. Tests reveal that there is equality in the error variance versus alternative that error variances are multiplicative function of either one or more variables.

3.8.5 Lag Selection Test

As indicated by Liew (2014) Akaike's information criterion (AIC) is a powerful criterion to put into consideration in a study as compared to other standard criteria because of its significance in the sample size of not more than 60. Since the number of observations in this study are less than 60, the stud used AIC in the lag length selection. AIC is superior than other criteria like Schwarz Information Criterion or Hannan-Quinn Criterion scenario of small sample (below sixty observations), in the way that they reduce the likelihood of under estimation while increasing likelihood of recovering exact lag length.

3.8.6 Normality Test

Null hypothesis in Shapiro Wilk Test is that a population is distributed normally, hereafter, if p value is below the selected alpha value, then null hypotheses are discarded. These indicate that the data which have been tested is not gotten from population which is not distributed normally. Or else, if p.value is higher than alpha value, it means data is gotten from a population which normally distributed (Bryman & Cramer, 2012).

3.8.7 Granger Causality Test

This is a statistical hypothesis test used to examine if one time series can be used to predict another. Granger causality is a method for determining whether two variables in a time series are causally related (Bryman, 2013). The method is a probabilistic account of causality that finds patterns of correlation using empirical data sets. Although not identical, causality is closely related to the concept of cause-and-effect. If X is the cause of Y or Y is the cause of X, the variable X is causal to the variable Y.

3.9 Ethical Considerations

The study used secondary data that was available to the public. The Capital Market Authority, as the regulator of the capital market, requires the Nairobi Securities Exchange to compile data on stock returns. The researcher used secondary data during this study. Besides that, the researcher obtained NASI data from the NSE, which was used for learning reasons only. The rest of the data on external cash inflows was obtained from KNBS and CBK. Further, the researcher adhered to owners' ethical consideration when using the secondary data. Furthermore, researcher acknowledged the effort of other academicians, scholars and writers so as to provide evidence that supported the assertions and claims in ownership of this research.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter entails data analysis, presentation and interpretation of findings as regards the study objective. The general study objective was to assess effect of external cash inflows on stock returns in NSE, Kenya. The study also examined impact of FDI, foreign remittances, external debts and foreign grants on stock returns at NSE. The first section comprises descriptive statistics, followed by trend analysis, diagnostic tests, unit root test and inferential statistics and regression analysis. Findings are depicted in figures and tables.

4.2 Descriptive Analysis

This part comprised of computation of standard deviation, mean, maximum and minimum of the variables. In this study, descriptive statistics included percentage, standard deviation, frequencies and mean. This covered the dependent variable (stock returns in Nairobi Securities Exchange), the independent variables (FDI, foreign remittances, external debts and foreign grants).

Table 4. 1:Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
NASI	52	.3426923	3.66606	-8.76	7.56
FR	52	.5408462	.182943	.093	.892
ED	52	6.354212	2.312314	.123	9.238
FG	52	2.417923	.8483719	.191	4.102
FDI	52	.3414423	.2345498	.039	.892

Source: Research Data (2021)

The results, as shown in Table 4.1, show that the average percentage change in NSE All-Share Index was 0.3426923 percent and the standard deviation was 3.66606 percent for the period between 2008 and 2020. The maximum percentage change in NSE All-Share Index was -8.76 percent and the maximum was 7.56 percent. The results also indicated that the average foreign remittance as a percent of the GDP was 0.5408462 percent and the standard deviation was 0.182943 percent for the period between 2008 and 2020. The minimum foreign remittance was 0.093 percent and the maximum foreign remittance was 0.892 percent.

In addition, the average external debt as a percent of the GDP was 6.354212 percent and the standard deviation was 2.312314 percent for the period between 2008 and 2020. The minimum external debt was 0.123 percent and maximum was 9.238 percent. Further, the average foreign grant as a percent of the GDP was 2.417923 and the standard deviation was 0.8483719 percent for the period between 2008 and 2020. The minimum foreign grant, as a percent of the GDP, was 0.191 percent and the maximum was 4.102 percent. The results also show that the average FDI as percent of the GDP was 0.3414423 percent and the standard deviation was 0.2345498 percent for the period between 2008 and 2020. The maximum FDI as percent of the GDP was 0.039 and the minimum was 0.892 percent.

4.3 Trend Analysis

4.3.1 Trend Analysis of Stock Returns

Stock returns were measured in terms of percentage change in NSE All-Share Index. Figure 4.1 shows the trend of the percentage Change in NSE All-Share Index for the period ranging from the first quarter of 2008 and the last quarter of 2020.

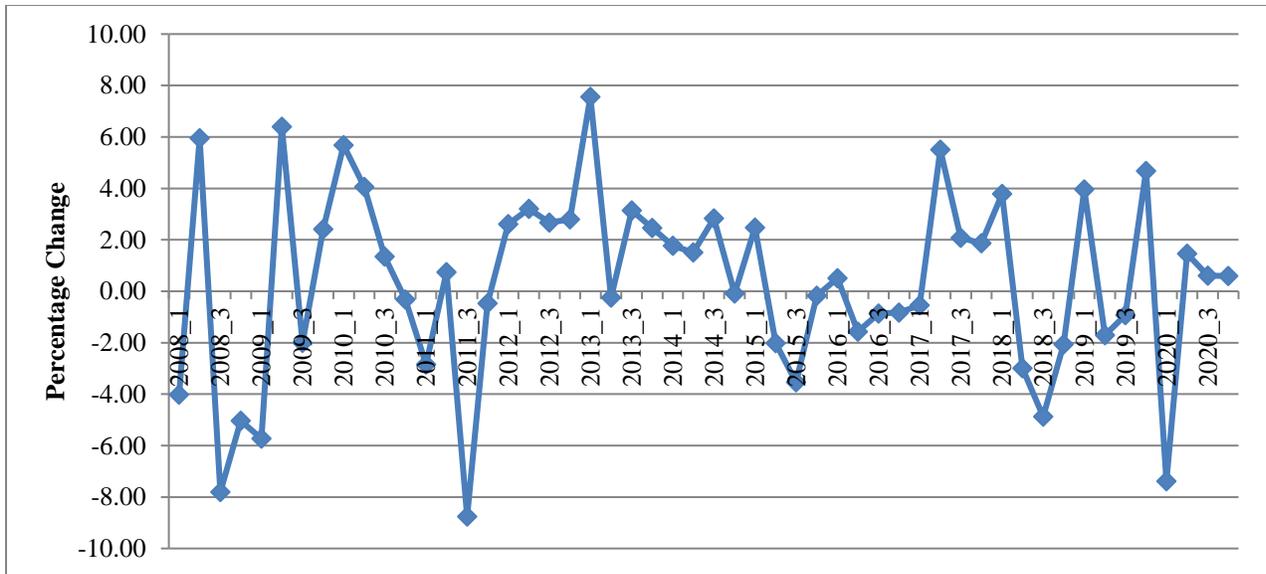


Figure 4. 1: Trend of Percentage Change in NSE All-Share (2008-2020)

Source: Research Data (2021)

From the findings in Figure 4.1, the percentage change in NSE All-Share Index has been fluctuating during the study period. The high percentage change in NSE All-Share Index was 7.56 percent in the first quarter of 2013, followed by 6.40 percent in the second quarter of 2009 and 5.95% in the second quarter of 2008. The lowest percentage change in NSE All-Share Index was -8.76 percent in third quarter of 2011 followed by -7.81 percent in third quarter of 2008 and -7.38 percent in first quarter of 2020.

4.3.2 Trend Analysis of Foreign Direct Investment

Foreign direct investment was measured in terms of a percent of the Gross Domestic Product, as shown in Figure 4.2.

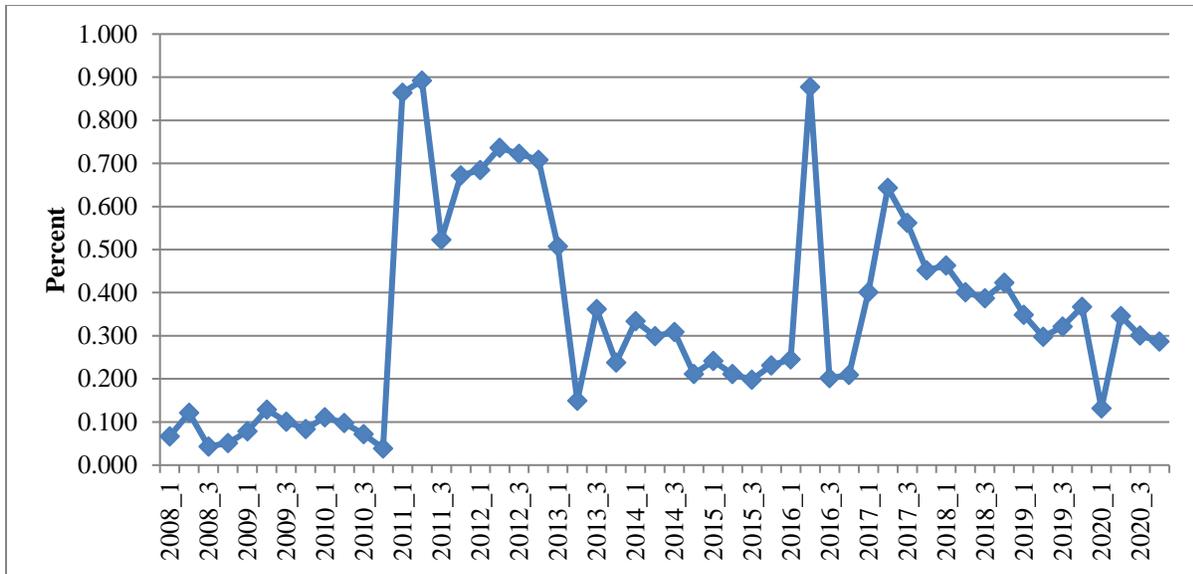


Figure 4. 2: Foreign Direct Investment Stock (2008-2020)

Source: Research Data (2021)

Figure 4.2 shows trend of FDI stock for period between the first quarter of 2008 and the fourth quarter of 2020. The FDI, as a percent of the GDP was between 0.121 percent and 0.039 percent for the period between the first quarter of 2008 and fourth quarter of 2010. However, this increased to drastically to 0.892 in second quarter of 2011. This figure decreased steadily to 0.149 percent in the second quarter of 2013, which later increased to 0.877 percent in second quarter of 2016. The FDI, as a percent of the GDP then decreased to 0.301 percent in the fourth quarter of 2020.

4.3.3 Trend Analysis of Foreign Grants

Foreign grants were measured as a percent of GDP as shown in Figure 4.3.

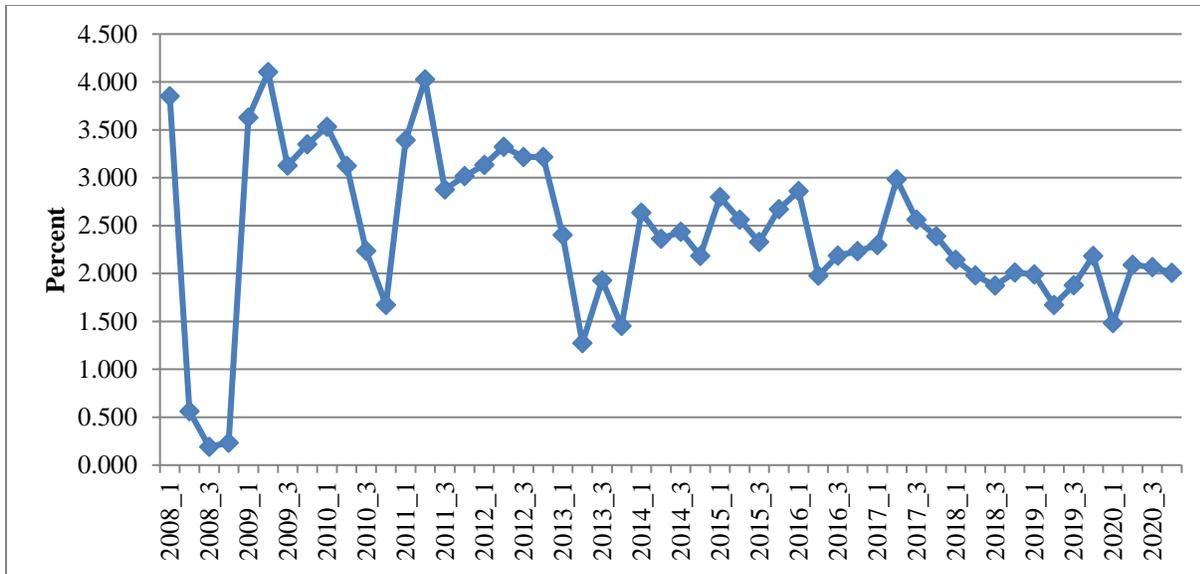


Figure 4. 3: Trend of Foreign Grants (2008-2020)

Source: Research Data (2021)

Figure 4.3 shows the trend of the foreign grants, as a percent of GDP, for the period between 2008 and 2020. The foreign grants decreased from 3.850percent in the first quarter of 2008 to 0.191 percent in third quarter of 2008. The figure then increased steadily to 4.102 percent in second quarter of 2009 before decreasing to 1.672 percent in fourth quarter in 2010. The figure then decreased steadily to 1.273 percent in second quarter in 2013. After increasing to 2.983 percent in second quarter of 2017, the foreign grants decreased to 2.009 percent in fourth quarter of 2020.

4.3.4 Trend Analysis of External Debt

The external debt was measured as a percent of the Gross Domestic Product and Figure 4.4 shows its trend.

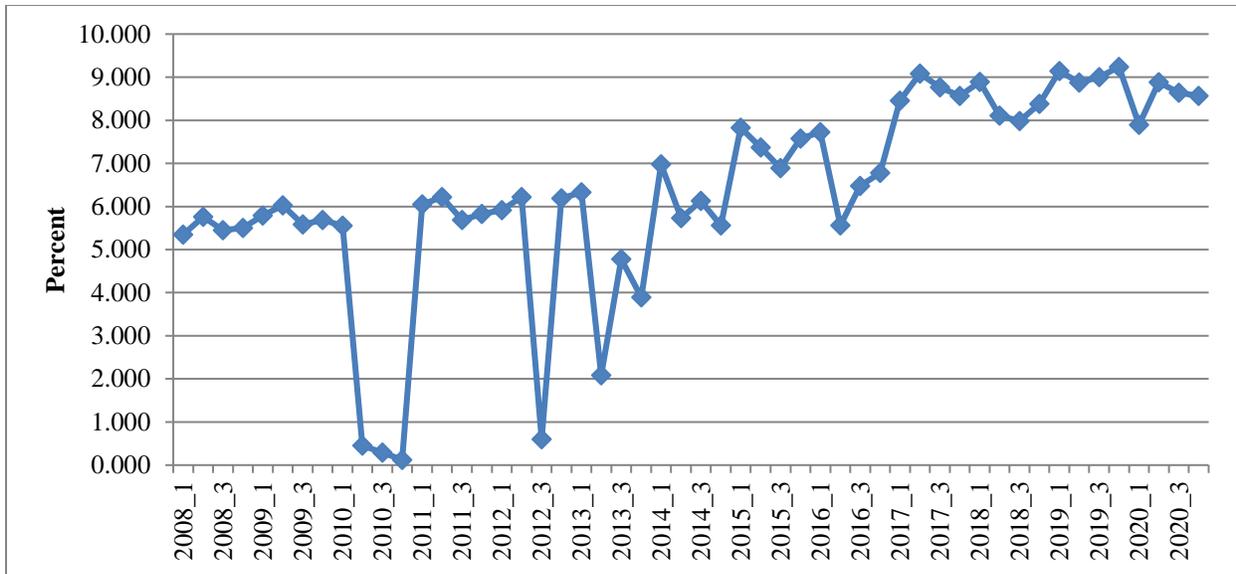


Figure 4. 4: Trend of External Debt (2008-2020)

Source: Research Data (2021)

The external debt in Kenya, as a percent of the GDP, has generally increased from the 2008 to 2019. From the findings, the external debt increased from 5.555 percent in the fourth quarter of 2009 to 0.123 percent in the fourth quarter of 2010. The figure increased to 6.219 percent in the second quarter of 2012 before decreasing to 0.602 the third quarter of 2012 before increasing to 6.330 percent in the first quarter of 2013. The figure then increased steadily to 9.238 percent in fourth quarter of 2019 before decreasing to 8.562 percent in the fourth quarter of 2020.

4.3.5 Trend Analysis of Foreign Remittance

Foreign remittance was measured as a percent of the GDP as shown in Figure 4.5.

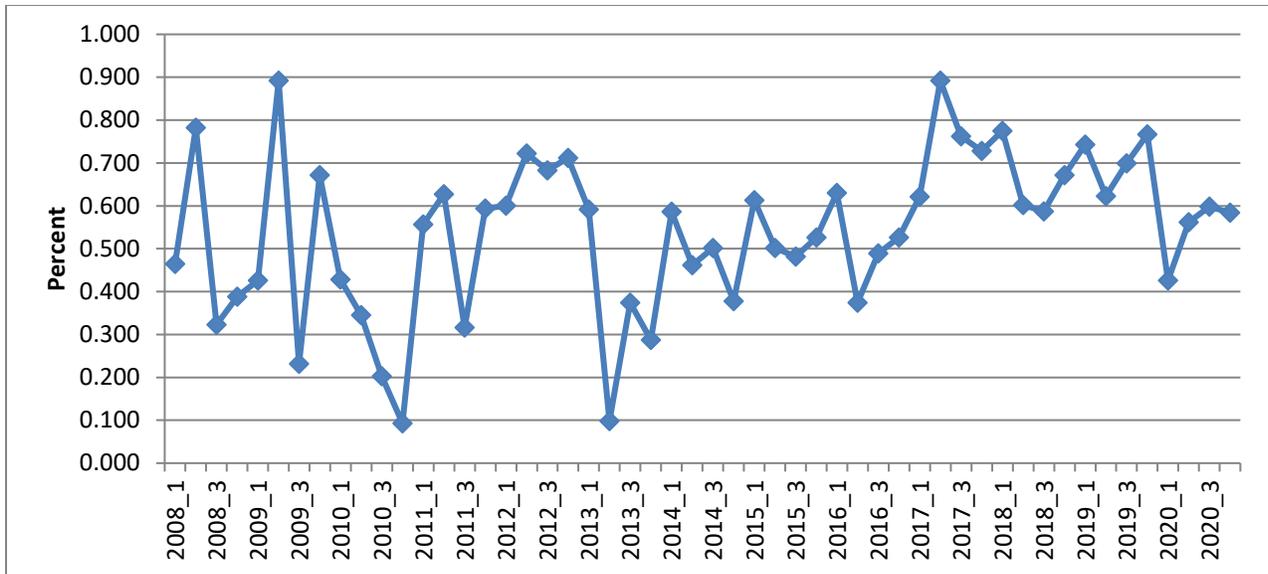


Figure 4. 5: Trend of Foreign Remittance (2008-2020)

Source: Research Data (2021)

The foreign remittance, as shown in Figure 4.5, increased from 0.465 percent in first quarter of 2008 to 0.782 percent in second quarter before decreasing to 0.323 percent in third quarter. It then increased to 0.892 percent in second quarter of 2009 and decreased to 0.093 percent in the fourth quarter of 2010. This figure then increased to 0.712 percent in the third quarter of 2012 and decreased to 0.098 percent in second quarter of 2013. This figure then increased to 0.892 percent in third quarter of 2013. It then decreased steadily to 0.426 percent in the first quarter of 2020.

4.4 Diagnostic Tests

Diagnostic tests are important in ensuring that the data meets the requirements for running the co-integration analysis and VAR models in order to avoid spurious results. The results of the diagnostic tests are presented in the subsequent sections.

4.4.1 Normality Test

One of the conditions required in the regression analysis is that there is linear association between study variables to be used in regression analysis. To test whether this is the case or not, there are a number of tests that can be used (Bhattacharjee, 2012). The current study focused on Shapiro-Wilk W normality test. The null hypothesis assumes that data is obtained from normal population. This

hypothesis is tested against null hypothesis which indicates that, the data is not normally distributed. To reject, or failing to accept null hypothesis is usually based on p.value. Moreover, if p.value obtained is greater than 0.05 at 95% confidence interval, null hypothesis is accepted. The conclusion therefore is; the data is obtained from a population with normal distribution. Normality test findings are given in Table 4.2.

Table 4. 2:Shapiro-Wild Test for Normality of Data

Variable	Obs	w	v	z	Prob>z
NASI	52	0.97854	1.041	0.086	0.46562
FR	52	0.98166	0.890	-0.250	0.59859
ED	52	0.96006	1.129	1.089	0.13672
FG	52	0.96620	1.640	1.057	0.14529
FDI	52	0.95895	1.102	1.098	0.09322

P.values of variables were above significance level of 0.05. NSE All-Share Index had a p-value of 0.46562, foreign direct investment had p-value of 0.59859, foreign remittances had a p.value of 0.13672, external debts had a p.value of 0.14529 and foreign grants had a p.value of 0.09322. This implies that data was normally distributed.

4.4.2 Autocorrelation Test

The validity of modeling assumptions that are commonly used in application of regression like models to observed data sequence is assessed through use of the Breusch–Godfrey test. Specifically, the test determines presence of serial correlation that is excluded from the suggested model structure and its presence would have led to wrong conclusions (Bryman, 2013). The null hypothesis in this concept was that serial correlation is lacking therefore if P-value is not less than significance level, it implies lack of serial correlation. Moreover, results of autocorrelation test are given in Table 4.3.

Table 4. 3: Breusch-Godfrey Langrage Multiplier Test

Lags(p)	chi2	Df	Prob>chi2
1	1.422	1	0.2331

Source: Research Data (2021)

Table 4.3 shows that the p-value (0.2331) is greater than the significance level (0.05) and therefore the null hypothesis is not rejected. Therefore, there is lack of serial correlation among research variables.

4.4.3 Heteroscedasticity Test

Homoscedasticity indicates a situation whereby all the values in independent variables have common error term. If the error term varies across all the independent variables, then it indicates presence of heteroscedasticity. Violation of the assumption has an effect on the degree, since it increases as heteroscedasticity increases (Creswell, 2014). The error variance of the null hypothesis is tested by Breusch-Pagan/Cook-Weisberg. It tests equality in all null hypotheses as compared to the alternative hypothesis which is a multiplicative factor of one or many variables. If P value is greater than significance level (0.05) then it implies that data lacks heteroscedasticity. Results are given in Table 4.4.

Table 4. 4: Breusch-Pagan/Cook-Weisberg Test

Ho: Constant variance			
Variables: fitted values of NASI			
Chi2(1)	=	1.97	
Prob>chi2	=	0.1608	

Source: Research Data (2021)

The findings in Table 4.4 indicate that the p.value (0.1608) was not less than 0.05. This means that null hypothesis of constant variance is not rejected. This shows there was constant variance and hence the data lacked heteroscedasticity.

4.4.4 Unit Root Test

The research adopted ADF for testing stationarity of the data. The null hypothesis is that the variables are stationary or they got no unit root and hence if p-value is not more than 0.05 (significance level), variables are not stationary (Collis & Hussey, 2014). The null hypothesis for the ADF unit root test is that unit root is not present in the variables. The results were as presented in Table 4.4.

Table 4. 5: Augmented Dickey Fuller unit root test

Variable	No of obs	Test Statistic	p-value for z(t)	Interpooled Dickey-Fuller		
				1 percent critical value	5 percent critical value	10 percent critical value
NASI	52	-7.000	0.000	-3.579	-2.929	-2.600
FR	52	-5.514	0.000	-3.579	-2.929	-2.600
ED	52	-3.086	0.027	-3.579	-2.929	-2.600
FG	52	-4.383	0.003	-3.579	-2.929	-2.600
FDI	52	-3.605	0.006	-3.579	-2.929	-2.600

Source: Research Data (2021)

The p-values for the variables external debt, foreign grants, FDI and stock returns (percentage change in NSE All-Share Index) were greater than significance level of 0.05. Hence the null hypotheses that the variables are stationery were not rejected. This implies that the variables external debt, foreign grants, foreign direct investment, stock returns (percentage change in NSE All-Share Index) had no unit root.

4.4.5 Cointegration Test

Co-integration is normally considered one of the statistical properties of a collection of time series variables (Wilson, 2010). The study used Johansen test to test co-integration. Johansen test of co-integration allows for testing unrestricted and also restricted versions of co-integrating vector(s) as well as adjustment parameters' speed. On the presence of co-integration association between variables, a VECM which avoids random selection of exogenous and endogenous will employed. The results of the test determine whether to run a VAR or VECM model. Results are given in Table 4.5.

Table 4. 6: Johansen Test for Cointegration

Trend Constant				Number of obs = 50	
Sample: 2008q3 – 2020q4				Lags = 2	
Maximum rank	parms	LL	eigenvalue	Trace statistic	5% critical value
0	30	-210.83974	.	77.8298	68.52
1	39	-193.18179	0.50654	42.5139*	47.21
2	46	-185.17635	0.27401	26.5030	29.68
3	51	-178.86889	0.22299	13.8881	15.41
4	54	-173.94308	0.17884	4.0365	3.76
5.	55	-171.92484	0.07756		

Source: Research Data (2021)

Null hypothesis is that there is no co-integration in the data set. If trace statistic is greater than 5% critical value, null hypothesis is rejected. From the results presented in Table 4.5, the trace statistic in the first rank, which is 0 (42.5139) was greater than critical value of 47.21 and hence null hypothesis was rejected which implied there is co-integration. The results further show there is one co-integration as the trace statistic for Rank 1 (34.4670) was greater than the critical value (29.68). This implies that vector error correction model should be used instead of Vector auto-regression model. According to Wilson (2010), vector error correction model is preferred when there is co-integration.

4.4.6 Granger Causality Test

Since some of the data was found to have a unit root, the Engel Granger test was used to test for co-integration. A variable X is causal to variable Y if X is the cause of Y or Y is the cause of X. The results were depicted in Table 4.7.

Table 4. 7:Granger Causality Test

Equation	Excluded	Chi2	df	Prob>chi2
NASI	FR	.37651	2	0.828
NASI	ED	.074	2	0.964
NASI	FG	9.9529	2	0.007
NASI	FDI	.09678	2	0.953
NASI	ALL	11.715	2	0.164
FR	NASI	6.62464	2	0.044
FR	ED	.50623	2	0.776
FR	FG	4.4054	2	0.111
FR	FDI	2.2265	2	0.328
FR	ALL	26.889	2	0.001
ED	NASI	5.4262	2	0.066
ED	FR	1.59898	2	0.452
ED	FG	4.2973	2	0.117
ED	FDI	.65134	2	0.722
ED	ALL	14.305	2	0.074
FG	NASI	8.2717	2	0.016
FG	FR	1.163	2	0.559
FG	ED	1.3182	2	0.517
FG	FDI	.38181	2	0.826
FG	ALL	21.846	2	0.005
FDI	NASI	5.4566	2	0.065
FDI	FR	3.2903	2	0.193
FDI	ED	.18556	2	0.911
FDI	FG	.40315	2	0.817
FDI	ALL	9.3112	2	0.317

Source: Research Data (2021)

The results as shown in Table 4.7, show that foreign remittance does not granger cause stock returns (NSE All-Share Index) in Kenya (p-value=0.828). In addition, stock returns (NSE All-Share Index) granger causes foreign remittance (p-value=0.044). The findings also show that external debts do not granger cause stock returns (NSE All-Share Index) in Kenya (p-value=0.964). In addition, stock returns (NSE All-Share Index) do not granger cause external debts (p-value=0.066). The findings imply that external debts are not causal to stock returns and stock return is not causal to external debts.

The results also show that foreign grants granger causes stock returns (NSE All-Share Index) in Kenya (p-value=0.007). In addition, stock returns (NSE All-Share Index) do not granger cause

foreign grants (p-value=0.559). This implies that foreign grants are causal to stock returns, but stock returns are not causal to foreign grants.

Further, the results show that FDI does not granger cause stock returns (NSE All-Share Index) in Kenya (p-value=0.953). Also, stock returns (NSE All-Share Index) do not granger cause FDI (p-value=0.065). This shows that FDI is not causal to stock returns and stock return is not causal to foreign direct investment.

4.4.7 Lag Selection Test

As indicated by Liew (2014) Akaike's information criterion (AIC) is a powerful criterion to put into consideration in a study as compared to other standard criteria because of its significance in the sample size of not more than 60. Since the number of observations in this study are less than 60, the study used AIC in the lag length selection. AIC is superior than other criteria like Schwarz Information Criterion or Hannan-Quinn Criterion scenario of small sample (below sixty observations), in the way that they reduce the likelihood of under estimation while increasing likelihood of recovering exact lag length. The results are as shown in Table 4.6.

Table 4. 8: Lag Selection Test

Sample: 2008q4-2020q4					Number of obs = 49			
Lag	LL	LR	df	P	FPE	AIC	HQIC	SBIC
0	-238.067		25		0.014006	9.9211	9.99434	10.1141
1	-184.474	107.19	25	0.000	0.004387*	8.75403*	9.19347*	9.91228*
2	-161.747	45.452	25	0.007	0.004973	8.84684	9.65248	10.9703
3	-137.216	49.063*	25	0.003	0.00552	8.86595	10.0378	11.9546

Source: Research Data (2021)

the study utilized two lags because the Akaike's information criterion (AIC) choses two lags, as indicated by “*” in the output.

4.5 Hypothesis Testing

Occurrence of cointegration between study variables shows that variables under examination have long-term relationship. Hence, the VECM model was used and results were as presented in Table 4.9.

Table 4. 9: Vector Error Correction Model

Cointegrating equations							
Equation	Parms	Chi2	p>chi2				
_ce1	4	28.01771	0.0000				
Identification: beta is exactly identified Johansen normalization restriction imposed							
_ce1	beta	Coef.	Std. Err	z	p>z	[95% conf. Interval]	
	NASI	1					
	FR	26.9342	5.376339	5.01	0.000	16.39676	37.47163
	ED	-1.141663	.394998	-2.89	0.004	-1.915844	-.367808
	FG	-2.568733	.8674604	-2.96	0.003	-4.268924	-.8685416
	FDI	-3.017078	3.185067	-0.95	0.344	-9.259695	3.22554
	_cons	-.5676901					

Source: Research Data (2021)

The VECM model was as follows:

$$NASI = -0.5676901 + 26.9342FR - 1.141663ED - 2.568733FG - 3.017078FDI$$

The results in Table 4.7 show that foreign remittance, as a percent of the Gross Domestic Product, has significant positive effect on stock returns in firms listed at NSE as indicated by a regression coefficient of 26.9342%. P-value (0.000) was below 0.05 (significance level) and therefore the effect was significant. This denotes that 1% rise in foreign remittance would lead to 26.9342 percent increase in stock returns in firms listed at NSE. These findings conform to Ziesemer (2016) discoveries that foreign remittance had significant positive influence on stock returns. Additionally, Malik (2013) argued that foreign remittance had a significant effect on stock market development in India, Pakistan and Bangladesh.

In addition, the results established that ED have significant negative effect on stock returns in firms listed at NSE as indicated by a regression coefficient of -1.41663. P-value (0.004) was below 0.05 (significance level) and hence the effect was significant. This denotes that one percent increase in ED will result to 1.41663 decrease in stock returns in firms listed at NSE. These findings differ with Dereje (2013) discoveries that FD has an inverse effect on stock returns in Africa. Further, the findings differ with Habimana (2015) findings that FD has significant inverse effect on stock returns of firms quoted at Rwanda Security Exchange.

Results indicates that foreign grants have significant negative effect on stock returns in firms listed at NSE as indicated by regression coefficient of -2.568733. P-value (0.003) was below 0.05 and thus the effect was significant. This implies that 1 percent increase in foreign grants will lead to a 2.568733 decrease in stock returns in firms listed at NSE. These findings differ with Dalgaard and Tarp (2014) findings that foreign grants have significant as well as positive influence on stock returns. The results also differ with Mossie (2014) discoveries that foreign grants have positive effect on firms' stock returns among East Africa countries.

Further, the results show that FDI has negative but insignificant effect on the stock returns of NSE-listed firms as indicated by regression coefficient of -3.017078. P.value (0.344) was less than significance level (0.05) and hence the effect was significant. Findings disagree with Malik (2013) discoveries that FDI inflows have significant positive effect on stock returns on Pakistan. In addition, these findings disagree with Muhammad, Hooi and Rukhsana (2013) findings that FDI has significant positive influence on stock market returns.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study's summary, conclusion, and recommendations are presented in this chapter in accordance with the study's objectives. The chapter presents a summary of descriptive and inferential findings, followed by conclusion, recommendations for policy and practice, contribution to knowledge and suggestions for further studies.

5.2 Summary of the Findings

This section covers summary of study findings. It covers the effect of foreign direct investment, foreign remittances, external debts as well as foreign grants on stock returns.

5.2.1 Foreign Direct Investment and Stock Returns

The study established that FDI, as a percent of the GDP has an inverse but insignificant effect on the stock returns of NSE-quoted firms. Moreover, this shows that increasing foreign direct investment would not significantly affect stock returns. However, if foreign investors suffocate domestic producers and monopolize the market, this can have negative impact on local businesses. Large outflows of investor profits or excessive input imports could potentially harm the host country's payment balance. Domestic savings in a country contribute to development of that country's stock market because as the saving rate rises, people have more idle money to invest, so they invest in the stock markets, and as a result of this, more capital money flows through the stock markets.

5.2.2 Foreign Remittances and Stock Returns

The study found that foreign remittance, as a percent of the GDP, has positive and significant effect on stock returns of NSE-listed firms. This implies that increasing foreign remittance would increase stock returns. Remittances, unlike other forms of external financing, are more stable, hence making them reliable source of finance for developing economies. This is because remittances are person to person transfers that are well targeted to the recipients needs and do not

suffer from governance issues that can plague official aid transfers. They are less vulnerable to bureaucratic bottlenecks as well as corruption because they are sent directly to the recipient.

As a result, remittance inflows to Africa are now roughly equal to official development assistance. As a result, diaspora remittances have emerged as key driver of Kenyan economic growth, rivaling only tourism, horticulture, and tea export as a major source of foreign exchange. Remittances have fueled economic growth and improved the economic and social well-being of both direct and indirect recipients. Remittances have grown in importance as a source of developing countries' external finance, and their importance cannot therefore be overstated, even if remittances benefits for development are dependent on broader economic as well as political context.

5.2.3 External Debts and Stock Returns

The study revealed that external debts, as a percent of the GDP have a positive and significant effect on stock returns of NSE-listed firms. This implies that increasing ED would lead to decrease in stock returns. To ensure development and stability in the economy, developing countries most of the times seek external debts to meet their financial needs. Most of the times, governments take loans to finance public goods and services that improve financial well-being. Debts play important role in national economy and in the development of the economy. External debts can be utilized to develop infrastructure including roads, railway and air infrastructure, which are key in ensuring efficiency in the production and transportation of goods. An improvement in infrastructure has an effect on performance of NSE-listed firms, which in turn affects stock returns. In addition, an improvement in telecommunication infrastructure through external debts leads to an improvement in communication between staff in an organization and between an organization and customers (adverts, promotions), which in turn improves performance and hence an increase in stock returns. However, while external debt can lead to an improvement in the delivery of public services, poor management of money obtained from external debts can be a burden that can slow economy progress and hence negatively affect stock returns.

5.2.4 Foreign Grants and Stock Returns

The study discovered that foreign grants have negative significant influence on stock returns of NSE-listed firms. This implies that increasing foreign grants would not significantly decrease stock returns of firms listed at NSE. Foreign aid represents important source of finance in Kenya, where

it supplements narrow export earnings, low savings, and thin tax bases. Donor community has recently become strict about fiscal discipline and sound policies, causing donor funds freezing for governments that do not meet aid requirements. However, with high degree of high unemployment, indebtedness, absolute poverty and also poor economic performance, foreign grants most of the times do not achieve their intended purpose. Also, foreign grants are specific to programmes including education programmes, which do not have a direct effect on stock market returns.

5.3 Conclusion

The study concludes that foreign remittance, as a percent of the GDP, has positive and significant effect on stock returns of NSE-listed firms. This implies that an increase in foreign remittance would lead to increase in stock returns, measured percentage change in NSE All-Share Index, in NSE. Foreign remittances have the ability to have a positive impact on the economies of receiving countries while also serving as a development tool. Remittances influence investments, consumption, savings, growth and income distribution, which in turn influences stock returns.

In addition, the research concludes that external debts, as a percent of the GDP have significant negative impact on stock returns of NSE-listed firms. This shows that increase in external debts leads to significant increase in stock returns of NSE-listed firms. Borrowings from international organizations and other countries account for the majority of foreign loans and they play a key role in improving cash flow, which in turn improves stock returns.

The study further concludes that foreign grants have negative and significant effect on stock returns of firms listed at NSE. This shows that an improvement in foreign grants would lead to a significant effect on stock returns of NSE-listed firms. Donations of money, goods, or services from one country to another, also known as foreign grants, have an effect cash flow in the currently and hence affect stock returns.

Also, the study concludes that foreign direct investment, as a percent of the GDP has a negative and insignificant effect on stock returns of NSE-listed firms. This implies that an increase in foreign direct investment would lead to an insignificant decrease in stock returns, measured percentage change in NSE All-Share Index, in Nairobi Securities Exchange. This is contrary to the

argument that increased FDI leads to increased manufacturing technologies, which boosts output and GDP. Increased GDP boosts stock prices, which boosts returns.

5.4 Recommendations

The study established that FDI has negative but insignificant effect on NSE-listed firms' stock returns. However, Kenyan government and the policy makers should develop monetary and fiscal policies to regulate foreign direct investment inflows into the country. While the key role of policy recommendation is to attract exportation oriented FDI in industrial sector the FDI inflows do not go directly to the firms listed in the NSE and may increase competition in the sectors thus reducing stock returns.

The researcher discovered that foreign remittance has significant and positive influence on stock returns. The study recommends that Kenyan government should come up with policies geared towards increasing remittance. For instance, the government should develop a policy to reduce delivery time with remittances being obtained instantly or quickly contrary to a lag of numerous days earlier. Further, the Central Bank of Kenya should establish formal links with rise financial institutions abroad to encourage Kenyans to transfer through formal channels.

The study discovered that external debts have negative and significant impact on stock returns. High levels of external debt lead to an increase in taxation and hence may negatively affect stock returns. Moreover, the study therefore recommends that Kenyan government should reduce external debts and ensure that they are within the acceptable IMF recommendations. In addition, the government should ensure that appropriate debt management practices are adopted so as to ensure that debts are paid on time and the debt burden is reduced.

The study found that foreign grants have negative significant influence on stock returns of NSE-quoted firms. Thus, the study hence recommends that the Kenya government should seek to reduce dependence on foreign grants and ensure efficient collection of taxes as well as widen the tax base so as to increase revenue.

5.5 Contribution to the Knowledge

The study contributes to existing body of knowledge as it shows that external cash inflows have an effect on stock returns of firms listed at Nairobi Securities Exchange, Kenya. It shows that

foreign remittances, external debts and foreign grants have an effect on stock returns of firms listed at Nairobi Securities Exchange. The findings support the free cash flow theory by showing that foreign remittances, external debt and foreign grants affect stock returns. In addition, the findings are contrary to the foreign direct investment dependency theory by showing that foreign direct investment led to an improvement in employment and adoption of technology leading to an improvement in stock returns.

5.6 Limitations of the Study

The key problem expected in on-going study was acquiring data on stock performance for the study period (2008-2020). Data on share prices and market returns is unavailable at Capital Market Authority and Nairobi Securities Exchange websites. Even though Nairobi Securities Exchange presents data on share price index, the data available is only for two days. The Capital Market Authority also presents data on share prices per companies registered in NSE, but the data available is only for one day. However, one can obtain data on share price index from NSE at a fee. The researcher therefore bought data from NSE beginning from January 2008 up-to December 2020. The consistency of the number of the 64 listed companies in NSE might not be feasible as the number of listed companies kept on changing within the period under study.

5.7 Suggestions for Further Studies

This study focused on the effect of external cash inflows on stock returns in NSE, Kenya. The research covered period of 12 years and hence further studies need to be conducted to cover more than 30 years. The study measured stock returns in terms of percentage change in NSE All-Share Index. As such, further studies can be carried out on effect of external cash inflows on stock returns measured in terms of NSE share index. The study recommends further research on other factors influencing the stock returns of firms listed at NSE.

REFERENCES

- Abubakar, M. I & Yunusa, U. D. (2018). Foreign Direct Investment and Stock Market Development in Nigeria. *IOSR Journal of Economics and Finance*, 9(2), 79-85
- Addison, T., Mavrotas, G. & McGillivray, M. (2015). Aid to Africa: An Unfinished Agenda. *Journal of International Development*, 17(3), 989-1001
- Agbloyor, E. K., Abor, J.A. & Komla, C. (2013). Exploring the Causality Links Between Financial Markets and Foreign Direct Investment in Africa. *Research in International Business and Finance* 28 (2), 118-134
- Ali, S., Mehmet, S. & Gokcen, O. (2014). The impact of foreign direct investment inflows on the performance of economic growth: evidence from selected developing countries. *Economic Computation & Economic Cybernetics Studies & Research* 48(2), 383-396
- Anghel, R. G., Matloob, P. & Randazzo, T. (2015). Migrants' Remittances: Channeling Globalization. *Discussion Paper No. 9516*
- Bahri, E. N. A., Nor, A. H. S., & Mohd Nor, N. H. H. (2018). The Role of Financial Development on Foreign Direct Investment in Asean-5 Countries: Panel Cointegration with Cross-Sectional Dependency Analysis. *Asian Academy of Management Journal of Accounting & Finance*, 14(1), 1–23.
- Banga, R. & Sahu, K. P. (2017). *Impact of Remittances on Poverty in Developing Countries*. Retrieved from <https://www.econ-jobs.com>
- Barberis, N., Mukherjee, A. & Wang, B. (2016). *Prospect Theory and Stock Returns: An Empirical*. Retrieved from <http://dx.doi.org/10.2139/ssrn.2528149>
- Bazrafshan, E., Kandelousi, A.S., & Hooy, C.W. (2016). The Impact of Earnings Management on the Extent of Disclosure and True Financial Performance: Evidence from Listed Firms in Hong Kong. *The British Accounting Review*, 48(2), 206-219

- Bhattacharjee, A. (2012). *Social Science Research: Principles, Methods, and Practices*. New York: Free Press.
- Borges, M. R., Coppe, P. & Antonio, B. F. (2018). The Relevance of Excess Cash to Explain Financial Performance and Stock Returns in Brazilian Listed Firms. *Advances in Scientific & Applied Accounting*, 11(2), 351–369.
- Bryman, A. & Cramer, D. (2012). *Quantitative Data Analysis with SPSS Release 8 for Windows*. New York: Routledge.
- Bryman, A. (2013). Integrating quantitative and qualitative research: how is it done? *Qualitative research*, 6(1), 97 – 113.
- Brzozowski, M. & Siwińska, G. J. (2016). The Interplay between Public and Private External Debt Stocks. *International Finance*, 19(2), 311-332
- Buus, T. (2015). A General Free Cash Flow Theory of Capital Structure.” *Journal of Business Economics & Management* 16 (3): 675–695.
- Capital Markets Authority (2018). *Annual Report & 2017 Financial Statements*. Retrieved from <http://www.cmaannualreport.or.ke/>
- Chan, L. H., Chan, K. C., & Leung, W. K. (2015). Institutional Interventions and Performance of Futures Markets in China. *Emerging Markets Finance & Trade*, 41(5), 43–55.
- Changole, A. (2017). *Kenyan Stocks, World’s Worst This Year, Set to Fall Further*. Retrieved from <https://www.bloomberg.com>.
- Chen, Y. W., Chou, R. K., & Lin, C. B. (2019). Investor sentiment, SEO market timing, and stock price performance. *Journal of Empirical Finance*, 51, 28–43
- Collis, J. & Hussey, R. (2014). *Business Research: A Practical Guide for Undergraduate and Postgraduate Students* 4th Ed. New York: Palgrave Macmillan.
- Creswell, J.W. (2014). *Research design. Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks CA: Sage.

- Currim, I.S, Lim, J. & Zhang, Y. (2018). Effect of Analysts' Earnings Pressure on Marketing Spending and Stock Market Performance. *Journal of the Academy of Marketing Science*, 46(3):431-452.
- Dalgaard, C. J., H.& Tarp, H. (2014). On the Empirics of Foreign Aid and Growth. *The Economic Journal*, 114(496), 191-216.
- Dereje, A.E. (2013). *The Effect of External Debt on Economic Growth*. Retrieved from <http://www.diva-portal.org/smash/get/diva2:664110/FULLTEXT01.pdf>
- Ekanayake, M. & Chatrna, D. (2010). The Effect of Foreign Aid on Economic Growth in Developing Countries. *Journal of International Business and Cultural Studies*, 1(1), 1-12
- Ewubare, D. B. & Udoh, F. O. (2018). External Capital Inflows and Telecommunication Sector in Nigeria. *International Journal of Research and Innovation in Social Science*, 2(10), 88-102.
- Farhana, P. & Chowdhury, M.N. (2014). Impact of Foreign Debt on Growth in Bangladesh: An Econometrics Analysis. *International Journal of Developing and Emerging Economics*, 2(4), 1-24.
- Gachanja, S. N., & Kosimbei, G. (2018). Dynamic Linkage between Foreign Equity Flows and Stock Market Returns at the Nairobi Securities Exchange. *The Strategic Journal of Business and Change Management*, 5(3), 201 – 215.
- Gathenya, J. M. (2015). *Impact of foreign portfolio equity investments on the market capitalization of the Nairobi Securities Exchange (2004-2013)*. Retrieved from <http://erepo.usiu.ac.ke>
- Habimana, A. (2015). *The Effects of External Debt Burden on Capital Accumulation. A Case Study of Rwanda*. Retrieved from <https://pdfs.semanticscholar.org>
- Haruna, I., Aborb, J. & Kwadzogah H.S. (2017). Remittances, Banks and Stock Markets: Panel Evidence from Developing Countries. *Research in International Business and Finance*, 42(1), 1413-1427

- Hossain, B. (2014). The Effect of Foreign Aid on the Economic Growth of Bangladesh. *Journal of Economics and Development Studies*, 2(2), 93-105.
- Juliussen, S., & Fløysand, A. (2010). Foreign direct investment, local conditions and development: Crossing from dependency to progress in peripheral Kuressaare, Estonia. *Norwegian Journal of Geography*, 64(3), 142–151.
- Kangarlouei, S. J., Hasanzadeh, A., & Motavassel, M. (2014). Life-Cycle Theory, Free Cash Flow and Dividend Policy in Firms Listed in Tehran Stock Exchange. *Journal of Commerce & Accounting Research*, 3(1), 1–7
- Karikari, N., Mensah, S. & Harvey, S. (2016), Do remittances promote financial development in Africa. *Springerplus*, 5(1011), 1-21.
- Karras, G. (2016). Foreign Aid and Long-Run Economic Growth: Empirical Evidence for A Panel of Developing Countries. *Journal of International Development*, 18(7), 15–28.
- Khanji, I. M. & Siam, A. Z. (2015). The Effect of Cash Flow on Share Price of the Jordanian Commercial Banks Listed in Amman Stock Exchange. *International Journal of Economics and Finance*, 7(5), 109-115.
- Kothari, C. R. (2012). *Research methodology: Methods and techniques*. New Delhi: New Age International (P) Limited Publishers.
- Kouladoum, J. (2018). *External Debts and Real Exchange Rates in Developing Countries: Evidence from Chad*. Retrieved from <https://mpa.ub.uni-muenchen.de>
- Kumar, A. (2018). *The Impact of Foreign Investment Inflow on the Behavior of Stock Market (With Special Reference to National Stock Exchange's Sectoral Indices): An Analysis*. Retrieved from <https://shodhgangotri.inflibnet.ac.in>
- Liew, V. (2014). Which Lag Selection Criteria Should We Employ?. *Economics Bulletin*, 3, 1-9.
- Mahmoud, L.O.M. (2015). The Role of External Debt on Economic Growth: Evidence from Mauritania. *International Journal of Economics & Management Sciences*, 4(6), 240-251

- Malik, I.A. S. (2013). Foreign direct investment and stock market development in Pakistan. *Journal of International Trade Law and Policy*, 12(3), 226- 242
- Manyonga, K. L. (2014). *The Impacts of Remittances on Developing Countries*. Retrieved from <http://www.europarl.europa.eu>
- Mazloom, A., Azarberahman, A., & Azarberahman, J. (2014). The Association between Various Earnings and Cash Flow Measures of Firm Performance and Stock Returns: Some Iranian Evidence. *International Journal of Accounting and Financial Reporting*, 3(1), 24-41.
- Meme, F.K. & Muturi, W. (2016). The Relationship between Government Domestic Debt and Stock Performance in Kenya. *International Journal of Social Sciences*, 2(11), 1035-1057.
- Misati, R. & Kamau, A. (2018). Do Migrant Remittances Matter for Financial Development In Kenya? *Working Paper*, 08(18), 1-8.
- Mossie, T.D. (2014). *Effects of Foreign Aid on Domestic Private Investment Growth*. Retrieved from <https://pdfs.semanticscholar.org>
- Muhammad, S., Hooi, H.L. & Rukhsana, K. (2013). The Impact of Foreign Direct Investment on Stock Market Development: Evidence from Pakistan. *Economic Research Journal*, 26(1), 17-32.
- Nairobi Securities Exchange (2018). *Annual Report and Financial Statements*. Retrieved from <https://www.nse.co.ke>
- Ndemange, N.F. (2018). *The Impact of External Debt Servicing on Capital Formation and Gross Domestic Product in Kenya*. Retrieved from <https://ir-library.ku.ac.ke>
- Njane, R. (2017). *The Effect of Foreign Direct Investment on Stock Market Development in Kenya*. Retrieved from <http://erepository.uonbi.ac.ke/>
- Njoroge, W. M. (2015). *Effect of Diaspora Remittance on Stock Market Performance at the Nairobi Securities Exchange*. Retrieved from <http://erepository.uonbi.ac.ke/>

- Nwaoha, W. C., Ejem, C.A., Chukwudinma, C. & Nwabeke, C. E. (2017). An Error Correction Model Analysis of the Effect of Total External Debt on the Nigerian Economy. *International Journal of Economics and Financial Research*, 3(8), 119-129
- Nyang`oro, O. (2014). *Foreign Portfolio Flows and Stock Market Performance in Kenya: Case of Nairobi Securities Exchange*. Retrieved from erepository.uonbi.ac.ke
- Ochieng, I. L., Olweny, T. O & Ochere, G. O. (2019). Effect of foreign equity flows on stock market volatility in Kenya Empirical evidence at Nairobi Securities Exchange. *Journal of Finance and Investment Analysis, Science press*, 8(3), 1-5.
- Omodero, C. O. & Ekwe, M.C. (2017). Impact of Foreign Direct Investment (FDI) On the Stock Market Performances in Nigeria (1985-2014). *Applied Finance and Accounting*, 3(1), 36-49.
- Oseni, I. O., & Enilolobo, O. S. (2011). Effect of foreign direct investment and stock market development on economic growth in Nigeria (1980-2009). *European Journal of Business and Management*, 3(12), 43-58
- Ouattara, B. (2016). Foreign Aid and Government Fiscal Behavior in Developing Countries: Panel data evidence. *Economic Modeling*, 23(2), 506-514
- Phani, B. V. (2017). FDI Inflow, Stock Market Performance and Exchange Rate: Indian Scenario. *International Journal of Accounting and Financial Reporting*, 7(2), 148-176.
- Ramirez, L. (2018). *Relation between Inward FDI Flows and Stock Market Development: Evidence from Emerging Economies*. Retrieved from <https://scholarsarchive.library.albany.edu>
- Rasmus, M. & Mathias, P. (2018). *The Impact of Foreign Direct Investment on the Stock Market Development in Sweden*. Retrieved from <https://core.ac.uk/download/pdf/152598260.pdf>
- Raza, S., Jawaid, S.T. & Afshan, S. (2015). Is stock market sensitive to foreign capital inflows and economic growth? Evidence from Pakistan. *Journal of Chinese Economic and Foreign Trade Studies*, 8(3), 142-164.

- Rub, J. & Schelling, S. (2018). Multi Cumulative Prospect Theory and the Demand for CliquetStyle Guarantees. *Journal of Risk & Insurance*, 85(4), 1103–1125
- Russell, R.B. (2013). *Social research method: qualitative and quantitative approaches*. Los Angeles: SAGE Publications.
- Sahu, P.K. (2013). *Research Methodology: A Guide for Researchers in Agricultural Science, Social Science and other Related Fields*. New Delhi: Tata McGraw Hill.
- Sami, K. A. & Ada, M.S. (2018). External Debt and Economic Growth: The Case of Emerging Economy. *Journal of Economic Integration*, 33(1), 1141-1157
- Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research Methods for Business Students* 6th Ed. London: Pearson Education Limited.
- Sekhri, V. & Hague, M. (2015). Impact of Foreign Investments on Indian Stock Market: An Empirical Study. *Asian Journal of Research in Banking and Finance*, 5(6), 168-185
- Senadza, B., Fiagbe, A. & Korsi, Q. P. (2018). The Effect of External Debt on Economic Growth in Sub-Saharan Africa. *International Journal of Business and Economic Sciences Applied Research*, 11(1), 61-69
- Serem, C.K., Saina, E. & Serem, A. (2020). Cointegrating Relationship between Macroeconomic Variables and Stock Market Prices in Nairobi Securities Exchange. *Journal of Global Economics*, 8(2), 1-5
- Seyoum, M., Wu, R., & Lin, J. (2015). Foreign Direct Investment and Economic Growth: The Case of Developing African Economies. *Social Indicators Research*, 122(1), 45–64
- Siddiqui, K. (2014). Flows of Foreign Capital into Developing Countries: A Critical Review. *Journal of International Business and Economics*, 2(1), 29-39.
- Singpurwalla, D. (2013). *A handbook of Statistics: An overview of statistics*. New York: Free Press.

- Smith, D. D. & Pennathur, A. K. (2019). Signaling Versus Free Cash Flow Theory: What Does Earnings Management Reveal About Dividend Initiation? *Journal of Accounting, Auditing & Finance*, 34(2), 284–308
- Srivastava, S., & Talwar, S. (2019). Decrypting the Dependency Relationship between the Triad of Foreign Direct Investment, Economic Growth and Human Development. *Journal of Developing Areas*, 54(2), 1–14.
- Tan, P.P., Galagedera, D.U., & Maharaj, E.A. (2014). A Wavelet Based Investigation of Long Memory in Stock Returns. *Statistical Mechanics and its Applications*, 391(7), 2330-2341.
- Tang, D. (2015). Has the Foreign Direct Investment Boosted Economic Growth in the European Union Countries? *Journal of International and Global Economic Studies*, 8(1), 21-50.
- UNCTAD (2017). *World Investment Report, Transnational Corporations, Extractive Industries and Development*. Retrieved from http://unctad.org/en/PublicationsLibrary/wir2015_en.pdf
- Wafula, J. B. (2018). *Effect of external financial inflows on economic growth in Kenya*. Retrieved from <http://41.89.49.13:8080/xmlui>
- Wang, Z., Fung, R. Y., Li, Y. L., & Pu, Y. (2018). An integrated decision-making approach for designing and selecting product concepts based on QFD and cumulative prospect theory. *International Journal of Production Research*, 56(5), 2003–2018.
- Wanyoike, M. N. (2015). *Effect of diaspora remittance on stock market performance at the Nairobi Securities Exchange*. Retrieved from <http://erepository.uonbi.ac.ke>
- Wilson, J. (2010). *Essentials of Business Research: A Guide to Doing Your Research Project*. New York: Sage Publications.
- Zakir, S. & Khan, S. I. (2013). The Effects of Remittances on Inflation: Evidence from Bangladesh. *Journal of Economics and Business Research*, 19(2), 1-16

Zhang, Y., & Gong, Y. (2018). Stock Return or Sales Growth? Multiple Performance Feedback and Strategic Investments Under Securities Analysts' Earnings Pressure. *Journal of Management Studies (John Wiley & Sons, Inc.)*, 55(8), 1356–1385

APPENDICES

Appendix I: Approval Letter from KU



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 4th February, 2021

TO: Jackson Mutua Kilaka
C/o Accounting and Finance Dept.

REF: D53/CTY/PT/38373/2016

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 27th January, 2021 approved your Research Project Proposal for the M.B.A Degree Entitled, "**External Cash Inflows and Stock Returns of Firms Listed at the Nairobi Securities Exchange, Kenya**".

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

ELIJAH MUTUA
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Accounting and Finance.

Supervisors:

1. Dr. Daniel Makori
C/o Department of Accounting and Finance
Kenyatta University

EM/Inn

Appendix II: Research Permit from NACOSTI

 <p>REPUBLIC OF KENYA</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>
Ref No: 989208	Date of Issue: 09/March/2021
RESEARCH LICENSE	
	
<p>This is to Certify that Mr.. Jackson Mutua Kilaka of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: "External Cash Inflows and Stock Returns of Firms Listed at the Nairobi Securities Exchange, Kenya" for the period ending : 09/March/2022.</p>	
License No: NACOSTI/P/21/9331	
989208	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code
	
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	

Appendix III: List of Firms Listed at NSE

Agricultural

- 1 Kakuzi Plc
- 2 Eaagads Ltd
- 3 The Limuru Tea Co. Ltd
- 4 Kapchorua Tea Co. Plc
- 5 Williamson Tea Kenya Ltd
- 6 Sasini Plc

Automobiles & Accessories

- 7 Car & General (K) Ltd

Banking

- 8 BK Group Plc
- 9 ABSA Bank Kenya Plc
- 10 Equity Group Holdings Plc
- 11 Diamond Trust Bank Kenya Ltd
- 12 I&M Holding Plc
- 13 HF Group Plc
- 14 KCB Group Plc
- 15 National Bank of Kenya Ltd
- 16 Stanbic Holdings Plc
- 17 NIC Group Plc
- 18 The Co-operative Bank of Kenya Ltd
- 19 Standard Chartered Bank Kenya Ltd

Commercial and Services

- 20 Eveready (East Africa) Ltd
- 21 Deacons (East Africa) Plc AIMS
- 22 Kenya Airways Ltd
- 23 Express Kenya Ltd AIMS
- 24 Nairobi Business Ventures Ltd
- 25 Longhorn Publishers Plc AIMS
- 26 Nation Media Group Ltd
- 27 Standard Group Plc
- 28 Sameer Africa Plc
- 29 TPS Eastern Africa Ltd
- 30 WPP Scangroup Plc

- 31 Uchumi Supermarket Plc

Construction & Allied

- 32 ARM Cement Plc
- 33 Crown Paints Kenya Plc
- 34 Bamburi Cement Ltd
- 35 E.A.Portland Cement Co. Ltd
- 36 E.A.Cables Ltd

Energy & Petroleum

- 37 Kenya Power & Lighting Co Ltd
- 38 KenGen Co. Plc
- 39 Total Kenya Ltd
- 40 Umeme Ltd

Insurance

- 41 CIC Insurance Ltd
- 42 Britam Holdings Plc
- 43 Kenya Re Insurance Ltd
- 44 Jubilee Holdings Ltd
- 45 Sanlam Kenya Plc
- 46 Liberty Kenya Holdings Ltd

Investment

- 47 Centum Investment Co Plc
- 48 Kurwitu Ventures Ltd
- 49 Home Africa Ltd
- 50 Trans-Century Plc
- 51 Olympia Capital Holdings Ltd

Investment Services

- 52 Nairobi Securities Exchange Plc

Manufacturing & Allied

- 53 B.O.C Kenya Plc
- 54 British American Tobacco Kenya Plc
- 55 Carbacid Investments Ltd
- 56 Flame Tree Group Holdings Ltd
- 57 East Africa Breweries Ltd
- 58 Kenya Orchards Ltd
- 59 Unga Group Ltd
- 60 Mumias Sugar Co. Ltd

TelecommunicatioN

- 62 Safaricom Plc

Exchange Traded Funds

- 63 New Gold

Real Estate Investment Trusr

- 64 Stanlib Fahari

Source: Nairobi Securities Exchange (2018)

Appendix IV: Data Extraction Checklist for External Cash Inflows

Year	Quarters	Annual Foreign remittance	Annual External debts	Annual Foreign grants	Annual Foreign direct investments	Annual GDP
2008	Quarter One					
2008	Quarter Two					
2008	Quarter Three					
2008	Quarter Four					
2009	Quarter One					
2009	Quarter Two					
2009	Quarter Three					
2009	Quarter Four					
2010	Quarter One					
2010	Quarter Two					
2010	Quarter Three					
2010	Quarter Four					
2011	Quarter One					
2011	Quarter Two					
2011	Quarter Three					
2011	Quarter Four					
2012	Quarter One					
2012	Quarter Two					
2012	Quarter Three					
2012	Quarter Four					
2013	Quarter One					
2013	Quarter Two					
2013	Quarter Three					
2013	Quarter Four					
2014	Quarter One					
2014	Quarter Two					

2014	Quarter Three					
2014	Quarter Four					
2015	Quarter One					
2015	Quarter Two					
2015	Quarter Three					
2015	Quarter Four					
2016	Quarter One					
2016	Quarter Two					
2016	Quarter Three					
2016	Quarter Four					
2017	Quarter One					
2017	Quarter Two					
2017	Quarter Three					
2017	Quarter Four					
2018	Quarter One					
2018	Quarter Two					
2018	Quarter Three					
2018	Quarter Four					
2019	Quarter One					
2019	Quarter Two					
2019	Quarter Three					
2019	Quarter Four					
2020	Quarter One					
2020	Quarter Two					
2020	Quarter Three					
2020	Quarter Four					

Appendix V: Data Extraction Checklist for NASI

Year	Quarters	NSE all-share index	Percentage Change in NSE All-Share Index
2008	Quarter One		
2008	Quarter Two		
2008	Quarter Three		
2008	Quarter Four		
2009	Quarter One		
2009	Quarter Two		
2009	Quarter Three		
2009	Quarter Four		
2010	Quarter One		
2010	Quarter Two		
2010	Quarter Three		
2010	Quarter Four		
2011	Quarter One		
2011	Quarter Two		
2011	Quarter Three		
2011	Quarter Four		
2012	Quarter One		
2012	Quarter Two		
2012	Quarter Three		
2012	Quarter Four		
2013	Quarter One		
2013	Quarter Two		
2013	Quarter Three		
2013	Quarter Four		
2014	Quarter One		
2014	Quarter Two		
2014	Quarter Three		
2014	Quarter Four		
2015	Quarter One		
2015	Quarter Two		
2015	Quarter Three		
2015	Quarter Four		
2016	Quarter One		
2016	Quarter Two		
2016	Quarter Three		
2016	Quarter Four		
2017	Quarter One		
2017	Quarter Two		

2017	Quarter Three		
2017	Quarter Four		
2018	Quarter One		
2018	Quarter Two		
2018	Quarter Three		
2018	Quarter Four		
2019	Quarter One		
2019	Quarter Two		
2019	Quarter Three		
2019	Quarter Four		
2020	Quarter One		
2020	Quarter Two		
2020	Quarter Three		
2020	Quarter Four		
2008	Quarter One		
2008	Quarter Two		
2008	Quarter Three		
2008	Quarter Four		
2009	Quarter One		
2009	Quarter Two		
2009	Quarter Three		
2009	Quarter Four		
2010	Quarter One		
2010	Quarter Two		
2010	Quarter Three		
2010	Quarter Four		
2011	Quarter One		
2011	Quarter Two		
2011	Quarter Three		
2011	Quarter Four		
2012	Quarter One		
2012	Quarter Two		
2012	Quarter Three		
2012	Quarter Four		
2013	Quarter One		
2013	Quarter Two		
2013	Quarter Three		
2013	Quarter Four		
2014	Quarter One		
2014	Quarter Two		
2014	Quarter Three		

2014	Quarter Four		
2015	Quarter One		
2015	Quarter Two		
2015	Quarter Three		
2015	Quarter Four		
2016	Quarter One		
2016	Quarter Two		
2016	Quarter Three		
2016	Quarter Four		
2017	Quarter One		
2017	Quarter Two		
2017	Quarter Three		
2017	Quarter Four		
2018	Quarter One		
2018	Quarter Two		
2018	Quarter Three		
2018	Quarter Four		
2019	Quarter One		
2019	Quarter Two		
2019	Quarter Three		
2019	Quarter Four		
2020	Quarter One		
2020	Quarter Two		
2020	Quarter Three		
2020	Quarter Four		

Appendix VI: Original STATA Output

```
. tsset date
      time variable: date, 2008q1 to 2020q4
      delta: 1 quarter
```

```
. summarize NASA FR ED FG FDI
```

Variable	Obs	Mean	Std. Dev.	Min	Max
NASA	52	.3426923	3.66606	-8.76	7.56
FR	52	.5408462	.182943	.093	.892
ED	52	6.354212	2.312314	.123	9.238
FG	52	2.417923	.8483719	.191	4.102
FDI	52	.3414423	.2345498	.039	.892

```
. swilk NASA FR ED FG FDI
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
NASA	52	0.97854	1.041	0.086	0.46562
FR	52	0.98166	0.890	-0.250	0.59859
ED	52	0.96006	1.129	1.089	0.13672
FG	52	0.96620	1.640	1.057	0.14529
FDI	52	0.95895	1.102	1.098	0.09322

```
. regress NASA FR ED FG FDI
```

Source	SS	df	MS	Number of obs =	52
Model	263.933539	4	65.9833848	F(4, 47) =	7.36
Residual	421.506284	47	8.96821881	Prob > F =	0.0001
				R-squared =	0.3851
				Adj R-squared =	0.3327
Total	685.439823	51	13.4399965	Root MSE =	2.9947

NASA	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
FR	16.8057	3.432765	4.90	0.000	9.899865	23.71153
ED	-.8824909	.2502699	-3.53	0.001	-1.385969	-.3790128
FG	.0981764	.5540867	0.18	0.860	-1.016502	1.212855
FDI	-1.352091	2.034463	-0.66	0.510	-5.444901	2.74072
_cons	-2.914792	1.763343	-1.65	0.105	-6.462181	.6325958

```
. hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of NASA

chi2(1) = 1.97

Prob > chi2 = 0.1608

```
. estat bgodfrey
```

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
1	1.422	1	0.2331

H0: no serial correlation

		Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
NASA							
	NASA						
	L1.	.0630187	.1745688	0.36	0.718	-.2791299	.4051673
	L2.	.1687353	.1820838	0.93	0.354	-.1881424	.525613
	FR						
	L1.	-2.998942	4.89066	-0.61	0.540	-12.58446	6.586576
	L2.	.4383665	4.788558	0.09	0.927	-8.947036	9.823769
	ED						
	L1.	.0871584	.3612553	0.24	0.809	-.620889	.7952058
	L2.	-.0719411	.3468791	-0.21	0.836	-.7518117	.6079295
	FG						
	L1.	2.217187	.7027955	3.15	0.002	.8397328	3.594641
	L2.	-1.077756	.7707364	-1.40	0.162	-2.588371	.4328598
	FDI						
	L1.	-.5145234	2.793531	-0.18	0.854	-5.989744	4.960698
	L2.	.8339505	2.683493	0.31	0.756	-4.425599	6.0935
	_cons	-1.278988	2.394822	-0.53	0.593	-5.972753	3.414776
FR							
	NASA						
	L1.	-.0180711	.0076097	-2.37	0.018	-.0329859	-.0031563
	L2.	-.0005541	.0079373	-0.07	0.944	-.016111	.0150027
	FR						
	L1.	.1685052	.2131916	0.79	0.429	-.2493426	.586353
	L2.	.1846507	.2087408	0.88	0.376	-.2244737	.5937751
	ED						
	L1.	.0053316	.0157477	0.34	0.735	-.0255333	.0361965
	L2.	.0068313	.015121	0.45	0.651	-.0228053	.0364679
	FG						
	L1.	.0488898	.030636	1.60	0.111	-.0111556	.1089351
	L2.	-.064905	.0335976	-1.93	0.053	-.1307551	.0009451
	FDI						
	L1.	.1540784	.1217744	1.27	0.206	-.0845951	.3927519
	L2.	-.0050978	.1169777	-0.04	0.965	-.2343698	.2241742
	_cons	.2669554	.1043941	2.56	0.011	.0623468	.471564

ED						
NASA						
L1.	-.1863618	.083236	-2.24	0.025	-.3495013	-.0232223
L2.	.0019151	.0868192	0.02	0.982	-.1682473	.1720776
FR						
L1.	2.720046	2.331911	1.17	0.243	-1.850415	7.290507
L2.	-1.567129	2.283227	-0.69	0.492	-6.042173	2.907914
ED						
L1.	.3756931	.1722498	2.18	0.029	.0380897	.7132964
L2.	.224443	.1653951	1.36	0.175	-.0997254	.5486114
FG						
L1.	-.5381118	.3350992	-1.61	0.108	-1.194894	.1186705
L2.	-.1681327	.367494	-0.46	0.647	-.8884077	.5521422
FDI						
L1.	.6752196	1.331981	0.51	0.612	-1.935415	3.285854
L2.	.3088833	1.279513	0.24	0.809	-2.198917	2.816683
_cons	3.410248	1.141873	2.99	0.003	1.172219	5.648277

FG						
NASA						
L1.	-.0544011	.0274972	-1.98	0.048	-.1082946	-.0005075
L2.	-.0412109	.0286809	-1.44	0.151	-.0974245	.0150027
FR						
L1.	-.7306576	.7703525	-0.95	0.343	-2.240521	.7792057
L2.	-.2480485	.75427	-0.33	0.742	-1.72639	1.230293
ED						
L1.	-.0653305	.0569031	-1.15	0.251	-.1768586	.0461976
L2.	.0239493	.0546387	0.44	0.661	-.0831405	.1310391
FG						
L1.	.7348063	.1107009	6.64	0.000	.5178366	.951776
L2.	-.1575111	.1214026	-1.30	0.194	-.3954558	.0804335
FDI						
L1.	.2651972	.4400232	0.60	0.547	-.5972325	1.127627
L2.	-.1892253	.4226905	-0.45	0.654	-1.017683	.6392327
_cons	1.850307	.3772205	4.91	0.000	1.110969	2.589646

FDI							
NASA							
L1.	-.0211948	.0093693	-2.26	0.024	-.0395582	-.0028314	
L2.	.0117574	.0097726	1.20	0.229	-.0073965	.0309113	
FR							
L1.	.288719	.2624858	1.10	0.271	-.2257437	.8031817	
L2.	-.416611	.2570059	-1.62	0.105	-.9203333	.0871113	
ED							
L1.	-.0073906	.0193889	-0.38	0.703	-.0453921	.0306109	
L2.	-.000782	.0186173	-0.04	0.966	-.0372713	.0357072	
FG							
L1.	.010785	.0377196	0.29	0.775	-.0631441	.0847141	
L2.	.0157184	.0413661	0.38	0.704	-.0653575	.0967944	
FDI							
L1.	.4967343	.1499311	3.31	0.001	.2028746	.7905939	
L2.	.1559482	.1440253	1.08	0.279	-.1263362	.4382326	
_cons	.1857499	.1285321	1.45	0.148	-.0661683	.4376682	

. vargranger

Granger causality Wald tests

Equation	Excluded	chi2	df	Prob > chi2
NASA	FR	.37651	2	0.828
NASA	ED	.074	2	0.964
NASA	FG	9.9529	2	0.007
NASA	FDI	.09678	2	0.953
NASA	ALL	11.715	8	0.164
FR	NASA	6.2464	2	0.044
FR	ED	.50623	2	0.776
FR	FG	4.4054	2	0.111
FR	FDI	2.2265	2	0.328
FR	ALL	26.889	8	0.001
ED	NASA	5.4262	2	0.066
ED	FR	1.5898	2	0.452
ED	FG	4.2973	2	0.117
ED	FDI	.65134	2	0.722
ED	ALL	14.305	8	0.074
FG	NASA	8.2717	2	0.016
FG	FR	1.163	2	0.559
FG	ED	1.3182	2	0.517
FG	FDI	.38181	2	0.826
FG	ALL	21.846	8	0.005
FDI	NASA	5.4566	2	0.065
FDI	FR	3.2903	2	0.193
FDI	ED	.18556	2	0.911
FDI	FG	.40315	2	0.817
FDI	ALL	9.3112	8	0.317

```
. varsoc NASA FR ED FG FDI, maxlag(3)
```

Selection-order criteria

Sample: 2008q4 - 2020q4

Number of obs = 49

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-238.067				.014006	9.9211	9.99434	10.1141
1	-184.474	107.19	25	0.000	.004387*	8.75403*	9.19347*	9.91228*
2	-161.747	45.452	25	0.007	.004973	8.84684	9.65248	10.9703
3	-137.216	49.063*	25	0.003	.00552	8.86595	10.0378	11.9546

Endogenous: NASA FR ED FG FDI

Exogenous: _cons

```
. vec NASA FR ED FG FDI, trend(constant) lags(1)
```

Vector error-correction model

Sample: 2008q2 - 2020q4

No. of obs = 51

AIC = 10.12247

Log likelihood = -244.123

HQIC = 10.32512

Det(Sigma_ml) = .0098929

SBIC = 10.65278

Equation	Parms	RMSE	R-sq	chi2	P>chi2
D_NASA	2	3.61378	0.5197	53.01152	0.0000
D_FR	2	.155629	0.5442	58.50447	0.0000
D_ED	2	1.89285	0.0365	1.856645	0.3952
D_FG	2	.849603	0.0515	2.658158	0.2647
D_FDI	2	.206911	0.0468	2.405253	0.3004

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	

D_NASA						
_ce1						
L1.	-.6017218	.0826688	-7.28	0.000	-.7637496	-.439694
_cons	-.0030539	.5061931	-0.01	0.995	-.9951741	.9890663

D_FR						
_ce1						
L1.	-.0272284	.0035602	-7.65	0.000	-.0342062	-.0202506
_cons	-.0018952	.0217994	-0.09	0.931	-.0446213	.0408309

D_ED						
_ce1						
L1.	-.0580941	.0433007	-1.34	0.180	-.142962	.0267737
_cons	.0540565	.2651368	0.20	0.838	-.465602	.5737151

D_FG						
_ce1						
L1.	-.0311338	.0194355	-1.60	0.109	-.0692266	.0069591
_cons	-.040933	.1190064	-0.34	0.731	-.2741814	.1923153

D_FDI						
_ce1						
L1.	-.0073069	.0047333	-1.54	0.123	-.016584	.0019702
_cons	.003179	.0289827	0.11	0.913	-.053626	.059984

Cointegrating equations

Equation	Parms	chi2	P>chi2

_ce1	4	28.01771	0.0000

Identification: beta is exactly identified

Johansen normalization restriction imposed

beta	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	

_ce1						
NASA	1	.	.	.	.	.
FR	26.9342	5.376339	5.01	0.000	16.39676	37.47163
ED	-1.141663	.394998	-2.89	0.004	-1.915844	-.3674808
FG	-2.568733	.8674604	-2.96	0.003	-4.268924	-.8685416
FDI	-3.017078	3.185067	-0.95	0.344	-9.259695	3.22554
_cons	-.5676901	.	.	.	.	.

