EFFECT OF FOREIGN PORTFOLIO FLOWS ON THE GROWTH OF CAPITAL MARKET IN KENYA

BY

CAVIN OLUOCH OJIJO

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, FACULTY OF BUSINESS, UNIVERSITY OF NAIROBI

November 2023

DECLARATION

I declare that this project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

Signature: Date: 21 November 2023 Cavin Oluoch Ojijo D61/37865/2020

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

Dangeh 21/11/2023 Signature..

Prof. Cyrus Iraya

Department of Finance and Accounting

Faculty of Business

University of Nairobi.

ACKNOWLEDGEMENTS

I extend my deepest gratitude to God for His unwavering guidance and provision throughout this academic journey. His constant presence and blessings have been my source of strength, ensuring that there was never a moment of lack or want. I am truly grateful for His divine intervention that sustained me through every challenge encountered during this study.

I also want to express my appreciation to my mum, siblings, and my spouse for their unwavering love, encouragement, and support. Their constant belief in me has been my driving force, and I am truly blessed to have such a loving family and a supportive life partner.

A special appreciation goes to my supervisor, Professor Iraya, whose guidance and expertise have been invaluable. Your mentorship and encouragement have played a crucial role in shaping this project. I am grateful for the time, knowledge, and dedication you have shared with me.

DEDICATIONS

This project is dedicated to my beloved mother, Mrs. Serphina Ojijo, my supportive spouse, Mrs. Oluoch, my siblings, extended family, and all my friends for whose unwavering support, encouragement, and heartfelt prayers played a pivotal role in the successful completion of this research work. May God bless each of you abundantly.

TABLE OF CONTENTS

DECLARA	TION	ii
ACKNOW	LEDGEMENTS	iii
DEDICATI	ONS	iv
LIST OF A	BBREVIATIONS AND ACRONYMS	vii
LIST OF T	ABLES	viii
LIST OF F	GURES	ix
ABSTRAC	Γ	X
CHAPTER	ONE: INTRODUCTION	
1.1 Bao	kground of the Study	
1.1.1	Foreign Portfolio Flows	
1.1.2	The Capital Market Growth	
1.1.3	Foreign Portfolio Flows and the Growth of the Capital Markets	5
1.1.4	Capital Market in Kenya	6
1.2 Res	search Problem	6
1.3 Res	search Objective	
1.4 Val	ue of the Study	
CHAPTER	TWO: LITERATURE REVIEW	
2.1 Intr	oduction	
2.2 The	coretical Review	
2.2.1	Efficient Market Hypothesis	
2.2.2	Arbitrage Pricing Theory	
2.2.3	McKinnon-Shaw Hypothesis	
2.3 Det	erminants of Capital Market Growth	
2.3.1	Foreign Portfolio Flows	
2.3.2	Market Capitalization	
2.3.3	Political and Economic Stability	
2.3.4	Global Crises	
2.3.5	Technological Advancement	
2.4 Em	pirical Studies	
2.4.1	International Studies	17
2.4.2	Local Studies	

2.5	Conceptual Framework	19
2.6	Literature Review Summary	
CHAP	FER THREE: RESEARCH METHODOLOGY	21
3.1	Introduction	21
3.2	Research Design	
3.3	Data Collection	
3.4	Data Analysis	22
3.4	.1 Diagnostic Tests	
3.4	.2 Analytical Model	
3.4	.3 Significance Test	
CHAP	FER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	24
4.1	Introduction	24
4.2	Descriptive Statistics	24
4.2	.1 Analysis of Foreign Portfolio Flows and Market Capitalization	25
4.3	Diagnostic Tests	
4.3	.1 Stationarity Test	
4.4	Data Analysis	
4.4	.1 Regression Analysis	
4.5	Significance Test	
4.6	Findings Interpretation	30
CHAP	FER 5: SUMMARY, CONCLUSION AND RECOMMENDATION	NS 31
5.1	Introduction	
5.2	Summary	
5.3	Limitations of the Study	
5.4	Conclusion and Recommendations	33
Refere	nces	

LIST OF ABBREVIATIONS AND ACRONYMS

ADF - Augmented Dickey-Fuller

APT – Arbitrage Pricing Theory (APT)

- CAPM Capital Asset Pricing Model
- CBR Central Bank Rate
- CDS Central Securities Depositories
- CMA Capital Markets Authority
- EMH Efficient Market Hypothesis
- FDI Foreign Direct Investments
- FPF Foreign Portfolio Flows
- FPI Foreign Portfolio Investments
- FSAP Financial Sector Assessment Program
- GARCH Generalized Autoregressive Conditional Heteroscedasticity
- IMF -- International Monetary Fund
- MSCI Morgan Stanley Capital International
- MSH McKinnon-Shaw Hypothesis
- NSE Nairobi Securities Exchange
- ROA Return on Asset
- U.S. United States
- VECM Vector Error Correction Model

LIST OF TABLES

Table 1: Descriptive Statistics Results	25
Table 2: Stationarity Test (ADF Result)	27
Table 3: Regression Analysis Summary Output	28

LIST OF FIGURES

Figure 1: Conceptual framework showing the relationship between FPFs and capital man	rket
growth	19
Figure 2: Trend Analysis of Net Foreign Portfolio Flows and Market Capitalization	26

ABSTRACT

This comprehensive study investigates the intricate relationship between foreign portfolio flows and the growth of Kenya's capital market. Employing a robust descriptive research design, the investigation methodically evaluates the negative relationship between FPFs and the growth of the capital market, leveraging a blend of qualitative and quantitative data. Secondary data sources, including market data, scholarly papers, and government publications, were collected over the period from 2013 to 2022. The analysis, encompassing diagnostic test applying ADF test for stationarity and significance tests using the coefficient of determination (R-squared), provided a comprehensive understanding of the examined variables. The findings unearth a statistically significant negative correlation between FPFs and the growth of Kenya's capital market, challenging assumptions of a straightforward association. This finding prompts a paradigm shift in policymaking, urging authorities and market players to acknowledge and navigate the complexities of this relationship. Furthermore, the study recommends the integration of macroeconomic stability factors with FPFs, such as foreign exchange rates and the CBR, as a strategic approach to mitigate adverse effects and foster favorable relationship that lead to capital market expansion. In recognizing the multifaceted nature of the financial markets, the study highlights the influence of microeconomic factors, such as the CBR and foreign exchange rates, in mediating the negative impact of FPFs. It underscores the importance of a comprehensive awareness of these factors for informed decision-making. The implications of this research extend to the policymaking arena and market strategies, emphasizing the need for a holistic understanding that surpasses the variables considered in this study. As a contribution to existing literature, this study sheds light on the intricate association between FPFs and the growth of Kenya's capital market. However, it also underscores the existence of unidentified determinants influencing the dynamics of the capital market, highlighting the need for ongoing research to explore these complexities further. Future studies in this field are encouraged to refine the treatment of FPF data, differentiate between inflows and outflows, and extend the temporal scope to encompass longer-term trends and sudden changes in the dynamic characteristics of financial markets. In navigating Kenya's financial landscape, such insights are essential for making informed decisions and fostering sustainable capital market growth.

Keywords: Foreign Portfolio Flows, Capital Market Growth, Financial Markets, Macroeconomic Stability, Central Bank Rate, Foreign Exchange Rates..

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The interdependence of FPFs and the growth of the capital market is a critical and significant subject that has attracted the interest of policymakers and scholars. As the world continues to experience harsh economic conditions emanating from geopolitical conflicts and COVID-19 recovery, capital markets in developing worlds have become essential in accumulating savings through FPFs. According to Makina (2019), stock markets in developing economies attract FPFs to infuse much-needed capital into these economies and mobilize savings from foreign investors. This is because FPFs, consisting of non-resident investors' investments in bonds, stocks, and other financial assets, have a significant impact on the growth and operation of capital markets in emerging economies. The relationship between the two variables is a two-way relationship in which the flow of foreign capital affects the stability, liquidity, and efficiency of the capital market, while the performance of the capital market affects the country's attractiveness to foreign investors (Makina, 2019; Ochenge, 2020). Understanding this interaction is critical for making informed financial decisions regarding regulatory frameworks and investment policies.

Several anchoring theories support the relationship between FPFs and capital market growth. According to the Efficient Market Hypothesis, coined by Eugine Fama in 1970, asset prices in the capital market reflect all accessible information (Degutis & Novickytė, 2014). From this perspective, foreign investors bring additional information and trading activity to a local stock market, which can help correct mispricing and enhance market liquidity and stability. The McKinnon-Shaw hypothesis developed in 1973 illustrates the adverse impact of financial repression on consumption, savings, and investment (Orji et al., 2015). The theory posits that restricting foreign currency transactions and interest rate ceilings are among the factors of financial repression (Orji et al., 2015), suggesting that discouraging foreign capital inflow has negative consequences on economic development and, subsequently, capital market growth. APT, devised by Stephen Rose, suggests that factors constituting systemic risk influence asset prices or values (Kumar, 2016). When foreign investors bring in capital, the risk profile of the local market may change positively

because "investors always prefer more wealth to less wealth with certainty" (Kumar, 2016). As a result, the presence of FPFs may attract more local and foreign investors, boosting liquidity and reducing idiosyncratic risks, making the market less risky for investors.

Exploring the interaction between the FPFs and the Kenyan capital market expansion is compelling and necessary as the country seeks to expand its capital market and economy. Considering the country's strategic location as a gateway to East Africa and the most stable democracy in the region, the country is an appealing market for international investors eager to profit from the region's economic boom (U.S. Embassy Kenya, 2023). However, Kenya's capital market is still in its early stages, with opportunities for improvement in terms of transparency, liquidity, and attracting global investors. According to Standard Chartered (2022), capital markets in African countries, including Kenya, have multiple CSDs, leading to increased fragmentation and negatively impacting liquidity, which is a challenge for foreign investors. Therefore, policymakers, market participants, and scholars must understand the impact of FPFs on the local capital market. This will provide insights into how Kenya might leverage foreign investments to stimulate capital market expansion while addressing potential risks and constraints associated with such flows.

1.1.1 Foreign Portfolio Flows

FPFs have a significant influence on capital market expansion. According to Waliu and Oludayol (2020), FPFs are investments in a country's financial assets, such as shares, bonds, and stocks made by non-resident individuals, institutional investors, or foreign companies to make a profit. IMF (2020) defines FPFs as essential funding sources for emerging market corporations and sovereigns as they assist in diversifying and expanding the emerging market assets' investor base, minimize the cost of funding, and enhance economic growth and development. Similarly, a study recognizes FPFs as an influx of investment from non-resident investors into local stock markets with a long-term impact on the market due to their contribution to reducing volatility and enhancing market efficiency (Kartal et al., 2022). Drawing on these sources, FPFs are investments in a country's financial assets, such as bonds, shares, and stocks, made by non-resident

individuals, institutional investors, or foreign companies for profit. These investments are critical for diversifying and expanding emerging market assets, lowering funding costs, boosting economic growth and development, and improving market efficiency while lowering volatility.

It is worth investigating various research issues related to the concept of FPFs. Firstly, the impact of FPFs on the volatility and stability of the host country's financial market is a primary concern. According to research by a number of scholars, overreliance on FPFs can lead to significant risk as increasing global economic challenges due to geopolitical events, trade disputes, and pandemics can lead to stricter global financial conditions, leading to greater fluctuation of FPFs (IMF, 2020). Consequently, investors and policymakers are keen to learn if relying on foreign capital inflows contributes to market disruptions or improves market efficiency in times of economic crises. In addition, the relationship between FPFs and economic growth is a critical concern, particularly in emerging economies such as Kenya (Adeola & Aziakpono, 2022). Examining whether FPF promotes economic growth in emerging economies or creates hazards, such as financial crisis vulnerability, is essential in developing successful economic policies. These issues necessitate empirical research to shed light on the implications and factors of FPF in the Kenyan setting.

In the past, scholars have employed various quantitative methods to define and measure FPFs as a variable. Tracking the net inflow or outflow of foreign investments into a country's stock and bond markets and their impact on stock returns, price, and returns is a common operationalization (Kartal et al., 2022). Although FPFs provide essential foreign investments, especially to developing countries, they are different from FDI. Encouraging FPFs is a simpler approach than obtaining additional FDI because portfolio investments are often more liquid and less involved in day-to-day business activities (Makoni, 2020). Another research indicates that FPFs can be measured through an econometric approach that tests how foreign investors respond to unconventional monetary policy announcements (Cardozo-Alvarado et al., 2023). In this case, the foreign investor appetite is influenced by announcements' signaling, market liquidity, and portfolio balancing (Cardozo-Alvarado et al., 2023).

al., 2023). These modes of operationalization are critical for measuring the impact of foreign portfolio movements on capital market dynamics and the economy as a whole.

1.1.2 The Capital Market Growth

Capital market growth involves the expansion and development of a financial market where various instruments, such as stocks, bonds, and other securities, are traded. The World Bank (2022) defines capital markets as critical financial infrastructure that enable the trading of diverse assets, such as government bonds, derivatives, and corporate financing instruments, to promote economic growth, financial stability, and innovation. Growth in the capital market refers to the expansion and development of the stock exchange fueled by a favorable macroeconomic environment, increased foreign investor participation, enhanced market infrastructure, enhanced investor education, and robust legal and regulatory framework (Bitok et al., 2014). William (1966) suggests that capital market growth involves improving and growing the financial institutions' functions and pursuing policies encouraging and allocating savings efficiently, internationally and domestically. Deriving from these sources, capital market growth entails expanding and improving the stock exchange due to favorable economic factors, foreign capital inflow, better market infrastructure, investor education, and robust legal and regulatory systems to strengthen financial institutions and efficiently use savings on a global scale.

The capital market growth is a critical component of a country's economic development and global financial stability. Various research topics and domains are relevant for comprehending and enhancing this concept, particularly in the current context of economic difficulties and geopolitical tensions. For instance, understanding the factors that impact capital market growth in the context of emerging economies, such as Kenya, is critical. Researchers may investigate the effect of FPFs, economic policies, and global economic conditions on capital market growth. Another important research topic is the link between capital market growth and economic development to investigate whether a strong and expanded capital market has a positive impact on the country's economic growth and income distribution. Finally, it is worthwhile to investigate the influence of market growth on investor protection, financial stability, and transparency to understand how to manage the rapidly expanding capital market, maintain investor trust, and limit systemic risks. Other researchers operationalize the growth of the capital market using a variety of

quantitative measurements. Tracking the growth of the capital market using a variety of quantitative measurements. Tracking the growth in market capitalization, which refers to the entire value of all publicly traded securities in the market, is a common operationalization (Adnan & Hasan, 2021). Researchers also track changes in trading volumes, which signal increased or reduced market activity. The number of publicly traded companies and initial public offerings (IPOs) can be used to measure market growth. As part of the FSAP program, the World Bank (2022) operationalizes capital market growth by analyzing specific country's regulatory frameworks and supervisory programs to ensure they improve investor protection, market liquidity, and financial stability. The operationalization of the growth of the capital market often incorporates quantitative metrics that represent the market's size, activity, and diversity, as well as its accessibility and efficiency.

1.1.3 Foreign Portfolio Flows and the Growth of the Capital Markets

In theory, there is a complex and multi-dimensional connection between FPFs and capital market growth. On the one hand, FPFs have a favorable impact on capital market growth as foreign investments provide the market with liquidity, diversification, and stability (Evans, 2002). According to APT theory, increased foreign investor participation can lead to high trading volumes and a broader range of investment products since this participation enhances the risk profile in the market (Kumar, 2016). This is supported by empirical research indicating that FPFs influence stock markets by decreasing volatility and increasing efficiency because "stock market indices usually increase when foreign portfolio inflows surge" (Kartal et al., 2022). FPFs have a significant impact on capital market growth, especially on the stock market, as supported by empirical research indicating their potential to reduce volatility and increase efficiency.

The link between FPFs and capital market growth is not one-directional, as various events and conditions can modify it. According to the IMF (2022), relying on FPFs may lead to

adverse outcomes because foreign financing is vulnerable to increasing uncertainty in the contemporary global economy. An empirical study conducted in Nigeria indicates that foreign portfolio investment inflows require a conducive business environment in the stock market to support foreign investment (Onyeisi et al., 2016). Therefore, the link between FPFs and capital market growth is dependent on various factors and varies across settings.

1.1.4 Capital Market in Kenya

Kenya's capital market is an essential constituent of the country's financial system, playing a pivotal role in promoting economic growth and development. NSE is the major trading platform for various financial instruments, such as equities and bonds, while also encouraging investment in the Kenyan economic sector. Kenya's capital market has experienced significant growth over the years, with an increasing number of companies listed, a broader range of financial products offered, and higher trade volumes (NSE, 2023). For instance, the capital market in Kenya has recently experienced increased investments by local and foreign investors, necessitating regulations to protect borrowers, depositors, and investors (CMA, 2023). Besides, Kenya's strategic location in East Africa, combined with its reasonably well-developed financial infrastructure, has made the country a favorable destination for foreign investors looking for investment opportunities in the region (U.S. Embassy Kenya, 2023). The growth of Kenya's capital market reflects the country's efforts to raise long-term funds for firms and government, allowing infrastructure construction, business expansion, and economic success. CMA is the market regulator undertaking different initiatives, such as using technology to improve investor protection (CMA, 2023). In essence, Kenya's thriving capital market, as overseen by the CMA, exemplifies the nation's commitment to fostering economic growth, investment, and robust financial regulation underpinned by a dynamic NSE.

1.2 Research Problem

Considering the intricate link between FPFs and capital market growth, studying the interaction between these variables is critical. FPFs have the potential to have a substantial

impact on a country's capital market operations and growth. As discussed earlier, these flows can impact market growth in adverse or positive ways. Understanding this link is critical for policymakers, investors, and researchers because it reveals how to leverage foreign investments to promote capital market expansion while avoiding the risks and obstacles associated with FPFs. Researching these variables together helps develop a comprehensive understanding of how FPFs affect the vitality and stability of Kenya's capital market.

Concerns about the capital market growth in Kenya have surfaced due to the recent global and local developments affecting the NSE. Kenya's economy continues to suffer from different shocks, including geopolitical tensions, regional drought, and exchange rate volatility, as the Kenyan shilling is depreciating against the United States Dollar (Onyango, 2023). These shocks are causing a ripple effect on the Kenyan capital markets as the markets recorded negative returns and a decline of the MSCI index to 27.7 percent during the second quarter of 2023 (CGNT, 2023). With the depreciating Kenya Shilling and global crises, Kenya's stock market is losing foreign investors, with foreign investment decreasing to 30.1 percent and cash out of \$14.3 million from the stock exchange (Ngila, 2023). As a result, conducting research to examine the relationship between FPFs and the capital markets is essential to help understand the seriousness of the issues at hand, including determining how fleeing foreign investors will affect the markets. In addition, understanding the relationship would help devise effective measures to improve the capital markets in Kenya to benefit local investors and Kenyans at large. For instance, a vibrant capital market can improve access to funding for local businesses, allowing them to expand, create jobs, and contribute to economic development. An enhanced capital market has a good knock-on effect on Kenyans' well-being and prosperity.

The empirical study of the relationship between FPFs and capital market expansion presents conflicting results in both domestic and international studies. Some international studies imply that FPFs have a favorable impact on capital market growth, particularly in the short term (Jusoh et al., 2020; Omorokunwa, 2018), while others claim that they have a detrimental impact on capital market growth (Chhimwal & Bapat, 2020; Danila et al.,

2023). Local studies in Kenya reveal a varied impact of FPFs on the capital market, with some demonstrating a beneficial impact on market liquidity and returns and others finding no meaningful effect (Koskei, 2017; Ochenge et al., 2020; Oyucho et al., 2023). As a result, the research gap in the empirical review is the lack of consensus and clear patterns on the relationship between FPFs and capital growth, emphasizing the need for additional research to understand this complicated relationship better. As a result, the purpose of this study is to fill a research gap by examining the question: How do FPFs impact capital market growth in Kenya in the wake of harsh economic conditions emanating from local currency depreciation and geopolitical tension?

1.3 Research Objective

The objective of the study is to assess the effect that foreign portfolio flows have on the growth of capital market in Kenya.

1.4 Value of the Study

This study adds to the existing literature by providing a thorough knowledge of the relationship between FPFs and Kenya's capital market growth. It considers the relationship between variables with the impacts of factors like local currency depreciation and geopolitical tensions, resulting in a more complex theoretical framework for assessing the influence of the two variables. The findings contribute to the refinement and extension of current ideas concerning capital market growth and foreign portfolio investment during the crises of local currency depreciation and geopolitical tension.

The study's findings are essential for Kenyan policymakers. They can learn more about how FPFs affect the NSE and, by implication, the entire economy. This information is helpful in guiding regulatory and economic strategies that aim to achieve a balance between encouraging foreign investment and guaranteeing market stability. The information can also help policymakers stimulate economic development by creating a favorable environment for both domestic and foreign investors by understanding the elements that promote or hinder capital market growth. In practice, the study's findings provide useful information for market players in Kenya, including domestic and foreign investors, businesses, and financial institutions. Understanding the relationship between the two variables in the wake of geopolitical tensions and economic hurdles can help investors make better investment decisions. Businesses can utilize this knowledge to efficiently traverse the financial landscape and establish capital-raising and risk-management strategies. The study's findings are essential in creating investment products that are tailored to the unique dynamics of the Kenyan capital market.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The second chapter of this study reviews the literature to investigate several issues connected to the effect of FPFs on Kenya's capital market growth. This chapter begins with a theoretical review of the Efficient Market Hypothesis, McKinnon-Shaw Hypothesis, and Arbitrage Pricing Theory. The chapter also identifies determinants of Kenya's capital market growth, including FPFs, global crises, political and economic stability, market capitalization, and technological advancement. In addition, the chapter reviews local and international empirical studies to indicate the relationship between the variables.

2.2 Theoretical Review

The Efficient Market Hypothesis, Arbitrage Pricing Theory, and McKinnon-Shaw Hypothesis are three important financial theories examined in this review. These theories serve as the foundation for investigating the influence of FPFs on capital markets, as well as their potential role in improving market efficiency and stability.

2.2.1 Efficient Market Hypothesis

Eugene Fama, a Nobel Prize winner, developed the Efficient Market Hypothesis in 1970. The theory posits that all historical trading information, such as stock prices and volume, is already replicated in current stock prices. The theory argues that in a capital market, investors' decision to trade securities or stocks is based on the belief that the prices of those securities already account for all the information available at that time (Fama, 1970). As a result, it becomes nearly impossible for investors to consistently outperform the market through analysis or prediction (Baldrige, 2022). However, the theory implies that the available information influences prices, suggesting that FPFs can improve market efficiency by introducing new information into the market. Foreign investors bring additional knowledge and trading activity to the capital market because "foreign investors trade at an information advantage to domestic investors" (Iwatsubo & Watkins, 2021). This

is essential in helping correct mispricing and improves market stability and liquidity by affecting security prices because complete information makes the market more efficient (Machmuddah, 2020). Conversely, the theory indicates that in the short term, FPFs, based on publicly available information, may not significantly impact the capital market because the available information is already reflected in asset prices.

Although EMH is one of the most significant theories describing the financial market, it faces criticism suggesting the theory is unrealistic. Critics suggest that markets are not always efficient, indicating that security prices can deviate from their fundamental values. Some markets, such as emerging markets, are less efficient because of limited transparency and liquidity, economic and political uncertainty, legal complexities, and inadequate investor protections (Baldrige, 2022). In addition, EMH is developed on the assumption that investors have rational behavior, an erroneous assumption because investors are vulnerable to behavioral heuristics affecting their investment choices (Mushinada & Veluri, 2019). Nevertheless, EMH is still relevant to this study because it predicts the relationship between FPFs and capital market growth where relevant information is already included in market prices.

2.2.2 Arbitrage Pricing Theory

Stephen Ross coined the Arbitrage Pricing Theory in the 1970s as an alternative to the CAPM. APT was developed to address the shortcomings of CAPM, which relies on a single factor (the market portfolio) to explain an asset's expected return. Ross argued that multiple macroeconomic factors or "systemic risk factors" influence asset prices (Kumar, 2016). According to the theory, the expected asset return is a linear function of these systemic factors, including economic growth, interest rates, inflation, exchange rates, market risks, and political risks (Irsan & Diana, 2019). FPFs directly impact these factors, indicating that these inflows can reduce systemic risks to influence security returns. Wagas et al. (2015) indicate a significant association between less volatile FPFs and macroeconomic factors, including gross domestic product growth rate, inflation, foreign direct investment, currency depreciation, and interest rate. Therefore, FPFs contribute to

the resilience and stability of the capital market by addressing systemic risk factors and increasing stock returns, creating a more conducive environment for capital market growth.

APT has received much criticism over the years despite its strengths. One significant criticism is that APT necessitates the identification of relevant risk factors, which can be difficult in practice. Renn et al. (2020) suggest systemic risks are highly complex, unclear, uncertain, and have a transgressive impact on other systems, making them challenging to identify and manage. Another criticism indicates that APT suffers from the problem of multicollinearity because multiple variables used in the model might be correlated, making it challenging to disentangle their individual effects on asset prices (Munshi, 2014). In addition, the model is based on mathematic constructs, such as orthogonal factors, which may lack clear economic interpretation (Munshi, 2014). Therefore, when using APT to examine the connection between FPFs and capital market stability and resilience in the face of systemic risk factors, it is essential to exercise caution and be aware of these criticisms.

2.2.3 McKinnon-Shaw Hypothesis

The relationship between repression, economic growth, and capital market development is explained by the McKinnon-Shaw Hypothesis, developed in the 1970s by economists Edward Shaw and Ronald McKinnon. The theory states that underdeveloped, financially repressed economies, characterized by government intervention in financial markets and interest rate controls, face growth and capital accumulation constraints (Orji et al., 2015). The hypothesis draws a connection between financial market growth, macroeconomic stability, and effective resource allocation in developing countries (Hassan et al., 1993). As a result, the theory indicates the impact of macroeconomic factors on capital market growth and development. Shaw and McKinnon proposed liberalization of the financial market by removing repressive measures from financial markets to revamp economic growth by mobilizing internal savings, attracting foreign capital, and promoting the development of a more efficient capital market (Hassan et al., 1993; Pain, 1993).

The concept of financial repression has received criticism on two fronts. Some argue that it inadequately explains real-world variables, both as a theory and as a policy. Meanwhile, others contend that while it may exist, it is an unwise approach. In the context of this study, this hypothesis suggests that FPFs positively impact financial market liberalization, especially in countries with a history of restrictive policies and financial repression. The theory predicts that an increase in FPFs results in a more dynamic and vibrant capital market by attracting foreign capital and promoting market efficiency through liberalization.

2.3 Determinants of Capital Market Growth

The research explores the various determinants of capital market growth in this theoretical review, with an emphasis on FPFs, market capitalization, political and economic stability, global crises, and technological breakthroughs. The importance of foreign portfolio movements in capital market expansion is examined, emphasizing the benefits and challenges they present. The identified determinants create the dynamic landscape of financial markets and play an important role in economic growth and prosperity.

2.3.1 Foreign Portfolio Flows

FPFs' role in capital market growth is a two-edged sword with both challenges and benefits for the market. These flows, which consist of non-resident individuals, institutional investors, or foreign corporations investing in a country's financial assets, significantly impact the expansion and stability of the capital market. Foreign investors frequently inject liquidity and capital into a country's capital market, increasing trading activity, market depth, and market capitalization, all of which are critical to capital market growth and efficiency (Folkerts-Landau et al., 1995). According to Iwatsubo and Watkins (2021), FPFs help foreign investors transfer knowledge, expertise, and best practices to domestic market investors, improving market transparency and efficiency. Heightened foreign participation lowers the cost of capital for domestic companies by providing them with a more diverse and potential source of financing that attracts other investors, including local investors (Shabbir & Muhammad, 2019). However, FPFs are associated with some risks, such as exposure to volatile global markets and the possibility of sudden outflows, which can destabilize the domestic capital market (Grenville, 2012). Consequently, while FPFs are a significant driver of growth, potential risks might adversely affect their ability to influence the growth of the capital market positively.

2.3.2 Market Capitalization

Due to its role in signaling the size, depth, and overall attractiveness of a financial market, market capitalization is a critical determinant of capital market growth. It represents the total value of all listed companies on a stock exchange and is a benchmark for investors and businesses (Bloom, 2013). A large market capitalization indicates a large pool of investable assets, which can entice domestic and international investors looking for diverse opportunities with lower liquidity risk (Zietlow & Seidner, 2007). In addition, a strong capital market with significant market capitalization fosters greater liquidity, lower trading costs, and increased market stability (Kamara, 2013). As a result, more companies go public, raising capital to finance expansion and innovation, fueling economic growth. Besides, a high market capitalization boosts a country's reputation and attractiveness to foreign investors by indicating a stable and well-regulated financial ecosystem. Market capitalization is a barometer of capital market growth.

2.3.3 Political and Economic Stability

Economic stability and development are critical in shaping capital market growth. According to Le et al. (2023), a stable and robust economy that boosts trade openness and the political environment attracts both domestic and foreign investors, fostering confidence and a favorable investment climate. Economic stability, as evidenced by low inflation rates, low unemployment, and consistent GDP growth, reduces investment risks and encourages long-term capital market investment (Indangasi, 2017). Besides, a developing economy and stable political environment provide numerous opportunities for businesses to expand and innovate, resulting in increased demand for capital (Zhang et al., 2020). As a result, capital markets can thrive, providing an essential source of funding for businesses and projects. In addition, economic development frequently results in the emergence of new industries, businesses, and financial instruments, diversifying capital market offerings and attracting a wider range of investors (Schumpeter, 2021). As a result, economic stability and development foster an environment conducive to capital market growth and expansion, underpinning their critical role in fostering economic growth and prosperity.

2.3.4 Global Crises

Global crises have a profound and multifaceted impact on capital market growth and stability. Financial, geopolitical, and health-related crises significantly disrupt investor confidence, market sentiment, and economic fundamentals. For instance, a report by IMF (2023) indicates that geopolitical tensions have contributed to financial fragmentation, having "potentially important implications for global financial stability by affecting the cross-border allocation of capital, international payment system, and asset prices." During global crises, uncertainty and risk aversion arise, leading to a flight to safety, where fear outweighs greed in the financial market, promoting investors to prefer less risky assets for capital preservation (Bellafiore et al., 2013). This may result in a decrease in capital market activity, lower valuations, and decreased liquidity. In addition, global crises frequently result in regulatory and policy responses from governments and central banks, such as COVID-19 measures, which impacted capital markets through factors such as interest rate changes and stimulus packages (Berger et al., 2023). Disruptions in global supply chains, trade, and economic activity also impact corporate earnings, which in turn affects stock prices (Bongini et al., 2019). Capital markets are inextricably linked to the global economic and geopolitical environment, and global crises can have a substantial and long-term impact on their performance, posing both challenges and opportunities for investors and financial institutions.

2.3.5 Technological Advancement

The capital market landscape has significantly changed as a result of technological advancements, particularly in the areas of artificial intelligence (AI), information technology, and telecommunications. These developments are facilitated by the rise in high-frequency trading and their methods and the application of blockchain technology (Kauffman et al., 2014). The technological improvements have increased capital market efficiency and accessibility. High-frequency trading algorithms use AI to make splitsecond trading choices, whereas electronic trading platforms allow for faster order execution and real-time monitoring of financial assets (Kauffman et al., 2014). Blockchain technology has boosted transparency and security in financial transactions, minimizing the risk of errors and fraud (Barroso & Laborda, 2022). Besides, technological improvements have removed geographical boundaries, allowing investors from all over the world to participate in global trade conveniently. These innovations have lowered transaction costs while also increasing market liquidity, making it easier for both established firms and startups to get the money they need for growth and development (Lutsyshyn et al., 2019). As technology advances, capital markets are projected to evolve further, bringing new opportunities and efficiency for market players.

2.4 Empirical Studies

Various international and domestic studies attempt to unravel the complex relationship between FPFs and capital market growth in the area of empirical research. Research suggests that FPFs can have both good and negative effects on the capital market, with varied effects on liquidity, returns, and volatility, emphasizing the complexities of this connection.

2.4.1 International Studies

International empirical research provides mixed findings on the association between FPFs and capital market growth. In a study by Omorokunwa (2018), the VECM was utilized to analyze the relationship between foreign capital inflows and the stock market in Nigeria for the period from 1986 to 2016. The research findings indicate that, in the short term, foreign capital inflows positively influence capital market liquidity. However, it was observed that their continuous influx negatively impacts long-term capital market development (Omorokunwa, 2018). Another empirical study conducted in Malaysia using Tobin's Q and ROA to measure firm performance suggested a positive association between capital inflows and domestic capital market growth (Jusoh et al., 2020). In this case, the study indicates that increasing foreign investors enhances firm performance, which is a significant determinant of stock prices, hence growth in the capital market (Jusoh et al., 2020). Through multiple regression, the cointegration analysis, and the VECM, a study analyzed data on the impact of foreign financial inflows on the Pakistan stock market between 2001 and 2012. The study found that these inflows have a significant, positive effect on Pakistan stock market returns using a sample of over 130 observations from the dataset (Ali & Javaid, 2014). Consequently, the study implies that FPFs have a substantial impact on the host country's capital market.

On the contrary, other empirical studies indicate that FPFs adversely impact capital market growth. A study conducted in Indonesia using the GARCH model indicated a negative association between FPFs and the growth of the local capital market. According to the study, an increase in foreign investors in the stock market exposes the economy to a shock because negative news has a more significant effect on stock return volatility compared to good news (Danila et al., 2023). Chhimwal and Bapat (2020) used autoregressive-movingaverage and Threshold GARCH models to investigate the impact of domestic investments and FPIs on stock market volatility. The study revealed that although FPIs alleviate capital flow in India, increasing FPFs pose a risk to stock prices because these inflows' selling pressure has a significant adverse impact on stock prices (Chhimwal & Bapat, 2020). In other words, the unexpected selling shock of these inflows causes stock market volatility, which may lead to a flight to safety to capital and reduced investor confidence.

2.4.2 Local Studies

In Kenya, empirical studies show that while FPFs significantly impact the growth of the capital market, not all flows have a positive impact. Research conducted in Kenya uses vector autoregression to analyze monthly foreign gross inflows' impact on the stock market liquidity. According to the study, these flows significantly impact the market liquidity positively rather than impeding it, supporting the efforts to encourage foreign investors in the Kenyan capital market (Ochenge et al., 2020). Oyucho et al. (2023), through panel regression, analyzed the impact of foreign equity portfolios on Kenyan market returns from 2013 to 2022. The research found a strong and positive connection between foreign equity portfolios of exchange-traded funds and Treasury Bills with the market returns of the NSE20 share index (Oyucho et al., 2023). However, the research also concluded that foreign bond portfolios are significantly and negatively related to market returns, indicating that investments in foreign bonds have an adverse impact on the capital market (Oyucho et al., 2023). This suggests that FPFs have both positive and negative impacts on the Kenyan capital market.

Other empirical studies in Kenya find that FPFs have an insignificant effect on the growth of Kenya's capital market. For instance, research was conducted to explore the connection between foreign equity flows on the Kenyan stock market using normality, multicollinearity, linearity, and homoscedasticity text. According to the research, foreign equity outflows and inflow volumes, foreign equity gross sales, and foreign equity gross purchases "had no statistical significance in predicting the current volatility in the stock market" (Ochieng et al., 2019). Another study utilizing the Ordinary Least Square approach found similar results after examining 21 financial firms listed at the NSE (Koskei, 2017). The study indicates that foreign portfolio outflows do not affect stock returns on the Kenyan capital market (Koskei, 2017). Consequently, these studies indicate that both the foreign capital outflows and inflows do not impact the growth of the Kenyan capital market.

2.5 Conceptual Framework

The conceptual model below illustrates the predicted relationship between FPFs and the capital market expansion in Kenya. The independent variables in this study are FPIs, while the dependent variable is capital market growth. Interest rate and foreign exchange are control variables, isolating the effect of the independent variable on the dependent variable.

Figure 1: Conceptual framework showing the relationship between FPFs and capital market growth



2.6 Literature Review Summary

The literature review offers an in-depth examination of major concepts and theories about the impact of FPFs on capital market growth. The chapter begins by discussing the EMH, which posits that stock prices incorporate all available information. This implies that FPFs can have a lasting impact on capital market growth. The literature also accepts EMH concerns, particularly in less efficient markets and due to behavioral biases. The MSH, stressing the relationship between financial repression, economic growth, and capital market development, is then discussed. It implies that financial market liberalization, such as through encouraging FPFs, can boost economic growth. The APT, offered as an alternative to the CAPM, emphasizes the relevance of systemic risk variables and how FPFs affect these factors to impact security returns. FPFs, market capitalization, political and economic stability, global crises, and technological advancements are explored as factors influencing capital market growth. The study of empirical research, both domestic and international, provides varying results on the relationship between FPFs and capital market expansion. The conceptual framework provides a graphical explanation of the relationship between FPFs and capital market growth, considering control variables.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter offers an overview of the methodologies employed in this research. The chapter provides a methodological approach to data collection, analysis, and interpretation. Besides, the chapter describes various study aspects, such as the research design, data collection methods, diagnostic tests, analytical models, and significance tests employed.

3.2 Research Design

This study has utilized descriptive research. The use of a descriptive design is based on its ability to allow for a methodical assessment of the link between the variables (FPFs and Kenya's capital market growth). This design is deemed acceptable since it promotes the collection and examination of both qualitative and quantitative data, resulting in a thorough understanding of the variables explored. In addition, as highlighted in the previous chapter, the study design permits the investigation of several variables that influence the expansion of the capital market.

3.3 Data Collection

The research was conducted using secondary data from secondary sources: financial records, market data, scholarly papers, and government publications. These sources provide comprehensive historical data on FPFs capital market performance, along with other relevant variables from 2013 to 2022. The data was collected monthly to guarantee enough data points (and degree of freedom) to execute the statistical analysis adequately. The main secondary data source was existing data and reports issued by relevant agencies: CMA, the NSE, and the World Bank.

3.4 Data Analysis

To make conclusion on data collected, the study employed data analysis on the impact of FPFs on the growth of the capital market in Kenya. The analysis encompasses diagnostics tests, analytical modelling and significance test.

3.4.1 Diagnostic Tests

A series of diagnostic tests, including the ADF test, were conducted to ascertain the appropriateness of the gathered data for analysis. ADF test involves a statistical approach commonly employed to evaluate the stationarity of time series data. The stationarity notion has significant importance in the analysis of the time series analysis because of its role in mitigating the risk of obtaining misleading outcomes from non-stationary data. The null hypothesis posited in this test asserts that the data under consideration exhibits non-stationarity, while the alternative hypothesis contends that stationarity characterizes the data. The null hypothesis is rejected if the P-value of the ADF test is below a predetermined significance level, such as P-value ≤ 0.05 . This rejection implies that the data exhibits stationarity and is, therefore, appropriate for investigation using time analysis methods.

3.4.2 Analytical Model

The primary focus of the analytical plan is the utilization of a regression model specifically designed to assess the correlation between FPFs and the Kenyan capital market growth. The model is formulated in the following manner:

$$Y = \beta_0 + \beta_1 \ln (FPFs) + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

The variable of interest being investigated is denoted as Y, which indicates the growth of the Kenyan capital market. It was measured using market capitalization data, which reflects the overall market value of Kenya's publicly traded stocks.

The symbol β_0 represents the intercept term in a regression model, which represents the baseline level of market growth, considering that all independent variables are set to zero.

The symbol β_1 denotes the coefficient that is linked to FPFs and quantifies the influence of FPFs on the growth of the capital market. This was measured from the data from NSE tracking the net foreign inflows. The variables X_2 , X_3 , and additional variables are denoted as possible control variables, encompassing factors such as foreign exchange rate (Kenya Shillings against U.S. dollar) and interest rate (CBR).

The symbol ε represents the error term, which accounts for the unexplained variability in the model.

The coefficient β_1 was a primary area of emphasis since it measures the extent and strength of the association between FPFs and capital market growth. FPFs were collected in their natural logarithmic form, which reduce the enormous numerical numbers to a more reasonable scale.

3.4.3 Significance Test

The study employed the coefficient of determination (\mathbb{R}^2) as a fundamental statistical metric to evaluate the importance of the associations and the ability of the model to explain the phenomenon. The coefficient of determination (\mathbb{R} -squared value) measures the percentage of the variability in the dependent variable (growth of the Kenyan capital market) that can be accounted for by the independent variables, which consist of FPFs and control factors. A high \mathbb{R} -squared value indicates a robust model's capacity to account for the fluctuations in the dependent variable, implying that FPFs and other factors contribute considerably to capital market growth. On the contrary, a low \mathbb{R} -squared value indicates a restricted capacity of the model to explain the phenomenon under investigation, implying the existence of additional unconsidered variables that influence the expansion of the capital market.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION 4.1 Introduction

This chapter analyzes the data gathered using the secondary sources as indicated in Chapter Three above. The study aims to explore the connection between FPFs and Kenya's capital market growth. The analysis contains descriptive statistics, diagnostic tests, regression analysis, and significance tests to evaluate the importance of the association observed.

4.2 Descriptive Statistics

Table 1 below presents the descriptive statistic results for the dataset's primary variables. The descriptive results below outline four different variables, each measured on 120 observations. The average value for FPFs is 6.916, ranging from 0.000 to 9.194. FPFs' standard deviation of 1.354 suggests a moderate level of variability. The skewness is -1.786, indicating a negatively skewed distribution and a kurtosis is 5.726, revealing a leptokurtic skewed distribution with heavy tails and a shaper peak than a normal distribution. Regarding CBR, the mean is 8.823 percent, with a range from 7.00 percent to 11.5 percent. The standard deviation is 1.324, reflecting a relatively narrow spread of data. The skewness of 0.276 suggests a slightly positively skewed distribution, while kurtosis is -0.569, indicating a platykurtic distribution with lighter tails and a flatter peak than a normal distribution. For exchange rates, the mean is 101.472, ranging from 84.146 to 122.935, with a standard deviation of 9.210, indicating moderate variability. The skewness is -0.253, implying a platykurtic distribution. Lastly, the mean for market capitalization is Ksh.2,195.664 billion, ranging from Ksh.1,388.0 to Ksh.2,841.40 billion. The standard deviation is Ksh.306.423 billion, indicating a considerable spread in the data, while skewness of -0.171 and kurtosis of -0.123 suggest a slightly negatively skewed distribution and a platykurtic distribution. These statistics provide insightful information on the central tendency, variability, and distribution shape of the variables examined in this study.

	Ν	Mean	Max	Min	Std. Dev.	Skewness	Kurtosis
FPFS	120	6.916	9.194	-	1.354	-1.786	5.726
(LN)							
CBR	120	8.823	11.500	7.000	1.324	0.276	-0.569
Exchange	120	101.472	122.935	84.146	9.210	-0.098	-0.253
Rates							
Market	120	2,195.664	2,841.40	1,388.0	306.423	-0.171	-0.123
Cap.							

Table 1: Descriptive Statistics Results

4.2.1 Analysis of Foreign Portfolio Flows and Market Capitalization

The line chart below reveals the trend for two main variables in this study from 2013 to 2022: market capitalization growth and the natural logarithm of FPFs. The chart depicts these two variables' relative movements and fluctuations throughout time. Notably, the chart illustrates a sharp decline in market cap growth in March 2016, followed by a sharp increase in the next month, reaching a peak of 43.13 percent growth. During this time, the FPFs had no significant fluctuations, suggesting a lack of relationship between these two variables. In 2020, the market responded to the COVID-19 pandemic by declining in March while FPFs increased. In August of the same year, FPFs declined while market cap growth increased, showing that the two variables have periods of divergence. In general, the pattern of market cap growth varies significantly, with noticeable peaks and troughs signifying intervals of positive and negative values. On the contrary, FPFs have a smoother trajectory with higher and lower values.

Figure 2: Trend Analysis of Net Foreign Portfolio Flows and Market Capitalization



4.3 Diagnostic Tests

This section provides an overview of the diagnostic test conducted to ensure the appropriateness of the data for analysis. A diagnostic test is essential to guarantee the dependability and robustness of the data analysis and help locate possible problems that can affect the validity of the findings, such as non-stationarity. ADF test was used to investigate the data's suitability for the selected analytical techniques, specifically regression analysis.

4.3.1 Stationarity Test

A diagnostic test, the ADF test, was done to ascertain the appropriateness of the gathered data for analysis. According to the results in Table 4.2, the ADF statistics for ln (*FPFs*) is -6.0735, significantly more negative than the critical value of -1.942 at the 95 percent level. The very low p-value (0.0000) indicates a strong rejection of the null hypothesis, indicating that the ln (*FPFs*) data exhibits stationarity. Similarly, the ADF statistics for Market Cap (%) is strongly negative (-7.9137), and the p-value is below the predetermined significance level of 0.0000 . This implies that the Market Cap time series data is stationary.

Therefore, the data for these two important variables is appropriate for investigation using time analysis methods.

Initially, the ADF statistics for CBR and foreign exchange rate were less than the critical value in absolute value. In addition, their p-values were greater than the predetermined significance level of 0.05, implying that the null hypothesis was not rejected. This implies that data for CBR and foreign exchange rates exhibited non-stationarity, hence inappropriate for investigation using time analysis methods. In this case, differencing was used to transform stationarity by subtracting the previous value from the current one. Adjusted CBR and foreign exchange rate (FX) were computed as follows:

$$CBR_{Adj} = CBR_t - CBR_{t-1}$$
$$FX_{Adj} = FX_t - FX_{t-1}$$

As a result, the data series for all variables achieved stationarity after adjustment, implying that they are all appropriate for investigation using analysis methods. CBR_{Adj} and FX_{Adj} had ADF statistics of -6.6985 and -6.7359, respectively, below the critical values. They also have lower p-values, indicating that the null hypothesis for the non-stationarity of their time series was rejected. In other words, this provides strong evidence to reject the null hypothesis of a unit root, suggesting that these time series are stationary.

	Critical value	ADF Statistic	P-value
	at 95%	(t-Stat)	
Ln (FPFs)	-1.942	-6.0735	0.0000
Market Cap %	-1.942	-7.9137	0.0000
Diff-CBR	-1.942	-6.6985	0.0000
Diff-FX	-1.942	-6.7359	0.0000

Table 2: Stationarity Test (ADF Result)

4.4 Data Analysis

The section offers an overview of the data analysis process, highlighting the analytical tools used to investigate the relationship between FPFs and capital market growth in Kenya. The

study's core analytical model is a regression model developed to analyze the relationship between FPFs, market cap growth (Market Cap %), adjusted foreign exchange rate (FX_{Adj}) , and adjusted interest rate (CBR_{Adj}) . The regression seeks to measure the influence of FPFs on capital market growth.

4.4.1 Regression Analysis

The regression analysis results below shed light on the relationship between FPFs and the expansion of Kenya's capital market, considering other control variables, such as FX_{Adj} and CBR_{Adj} . The total model's Multiple R of 0.3017 indicates a weak positive correlation, suggesting that the variables explain approximately 30 percent of Kenya's capital market growth variability. The coefficient of determination (R Square) of 0.0910 indicates that the independent variables in the model account for only 9.1 percent of the variance in the dependent variable.

Table 3: Regression Analysis Summary Output

Regression Statistics						
Multiple R	0.301735					
R Square	0.091044					
Adjusted R Square	0.067537					
Standard Error	6.458033					
Observations	120					

ANOVA

	df	SS	MS	F	Significance F
Regression	3	484.583	161.5277	3.87299	0.011092
Residual	116	4837.918	41.70619		
Total	119	5322.501			

	Coefficients	Standard Error	t-Stat	P-value	Lower 95%	Upper 95%
Intercept	8.763275	3.086778	2.838972	0.005345	2.649523	14.87703
ln (FPFs)	-1.15778	0.4399	-2.63192	0.009645	-2.02906	-0.28651
Adj_CBR	-2.95488	1.902987	-1.55276	0.123205	-6.72398	0.814229
Adj_FX	-0.73419	0.580304	-1.26518	0.208342	-1.88355	0.415176

The model indicates that the intercept is statistically significant (p-value = 0.0053) when the individual coefficients are examined. This indicates that the projected market increase is roughly 8.76 percent when all other factors are held constant. The coefficient for ln(FPFs) is -1.1578 with a p-value of 0.0096, showing that the natural logarithm for FPFs has a statistically significant negative association with Kenya's capital market growth. This implies that, on average, as FPFs increase, capital market growth falls, assuming all variables remain constant. The control variables' coefficients, FX_{Adj} and CBR_{Adj} , are -0.7342 and -2.9549, respectively. However, neither of these coefficients is statistically significant at the standard 0.05 significance level, implying that these variables may not be important in explaining variation in the growth of the capital market in the context of the model. The regression model, derived from this regression output is as indicated below:

 $Y = 8.7633 - 1.1578 \ln(FPFs) - 2.9549 CBR_{Adj} - 0.73419 FX_{Adj} + \varepsilon$

4.5 Significance Test

As the ANOVA results indicate, the significance test assesses the overall impact of the independent variables, including theln(*FPFs*), CBR_{Adj} , and FX_{Adj} , on Kenya's capital market growth. The F-statistic of 3.84 with a corresponding p-value of 0.0111 suggests that, collectively, the independent variables have a statistically significant impact on the dependent variable. This signifies that the model, as a whole, provides meaningful information to predict the relationship between these variables and the growth of Kenya's capital market. However, it is essential to note that the explained variability in the model remains relatively low, accounting for only around 9.1% of the total variance. While the model demonstrates statistical significance, it emphasizes the need for cautious interpretation. It underscores the potential influence of unconsidered factors on the capital market dynamics beyond the scope of this model. However, it is crucial to note that the model is statistically significant, it highlights the possible influence of unconsidered factors on capital market dynamics beyond the scope of this model.

4.6 Findings Interpretation

The findings indicate a negative association between FPFs and Kenya's capital market growth. Descriptive statistics shed light on the key variables, revealing FPFs' average value, standard deviation, skewness, and kurtosis. The analysis of FPFs and market capitalization trends from 2013 and 2022 indicates periods of divergence, challenging the assumption of a straightforward relationship. The regression model analysis, which introduces adjusted FX and CBR to enhance the stationarity of their data series, demonstrates a slight positive correlation. The findings show that an increase in FPFs is related to a decline in Kenya's capital market growth when adjusted for their natural logarithm. The significance test suggests that independent variables collectively impact capital market growth. However, the model's low R-squared value highlights its weak explanatory power, warning against relying too heavily on the model's predictions. The study notes that while the connection between FPFs and capital market growth is statistically significant, the coefficient alone does not prove causation. In other words, while the findings are statistically significant, they highlight the possibility of other unexplored factors influencing capital market dynamics.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS 5.1 Introduction

In this final chapter, the study provides a comprehensive summary of the study's key findings, draws conclusions based on the analysis results, discusses the implication of these findings in the broader context of the relationship between key variables, and recommends direction for future research.

5.2 Summary

The study investigated the connection between Kenya's capital market expansion and FPFs. Descriptive statistics, diagnostic tests, and regression analysis were conducted to reveal a significant negative correlation between FPFs and the expansion of Kenya's capital market. The analysis of the simple relationship between FPFs and capital market growth was called into question when descriptive statistics indicated intervals of divergence in the trends spanning from 2013 to 2022. The regression model showed a weak positive connection, suggesting that FPFs, CBR, and foreign exchange rates can collectively influence capital market growth. This aligns with the APT farmwork, suggesting that various macroeconomic factors, including interest rates, economic growth, exchange rates, market rates, and political rates, influence asset returns and capital market growth (Wagas et al., 2015). In addition, this is consistent with the idea that FPFs influence capital market growth by impacting systemic risks. This might indicate that interaction between CBR, FPFs, and foreign exchange rates or synergies contributing to capital market growth.

The regression model indicated an isolated negative influence of FPFs, interest rates, and foreign exchange rates without accounting for other factors. The findings indicated a negative and significant association between FPFs and capital market growth (market capitalization growth) when FPFs are considered in isolation, *ceteris paribus*. This suggests that other factors in the collective scenario mitigate the negative impact of FPFs on the growth of the capital market, which is consistent with the APT framework. This

aligns with the idea that FPFs influence capital market growth by bringing additional trading activity and knowledge to the capital market, indicating that FPFs require another factor to influence the growth. In addition, the McKinnon-Shaw Hypothesis suggests that macroeconomic stability and effective resource allocation influence financial market growth in developing countries (Hassan et al., 1993). This study's findings support this assertion by indicating that when FPFs are considered alongside macroeconomic factors, such as foreign exchange rates and CBR, they may positively influence capital market growth.

The study's findings indicate an adverse and substantial relationship between FPFs and capital market growth, as measured by market capitalization growth. The study findings align with the empirical studies indicating that FPFs negatively affect the growth of the local capital market because foreign investors expose the economy to shocks, and the volatility of stock returns is more significantly impacted by negative news than favorable news (Danila et al., 2023). In addition, the negative impact of the FPFs on capital market growth can be explained by the argument that growing FPFs risks the stock price because of their selling pressure, which has a significant adverse impact (Chhimwal & Bapat, 2020). Therefore, the stock market volatility might be caused by FPFs' sudden selling of stocks, which can trigger a flight to safety and reduce investor confidence (Bellafiore et al., 2013). The study findings add to the growing body of evidence highlighting the complicated and frequently adverse impact on the dynamics of the capital markets.

5.3 Limitations of the Study

The study has several significant limitations, the most significant of which are related to how the data on FPF were treated. The study treats FPF data as absolute values to facilitate the computation of their natural logarithm. Recognizing both inflows (positive values of FPFs) and outflows (negative values) as positive contributes to a possible constraint, even though this methodology is favorable for analysis. The study may need to be more accurate in order to justify market dynamics by treating outflows as inflows, neglecting the multifaceted effects associated with each. Future studies could improve accuracy by taking

a more sophisticated technique that distinguishes the varied effects of inflows and outflows. Apart from the methodological aspect, the utilization of secondary data introduces inherent limits and the possibility of biases emanating from the secondary sources. Although the study's purpose enhances clarity, it may inadvertently leave out important factors affecting capital market dynamics. In addition, the chosen timeframe, though necessary for the study's scope, may fail to capture abrupt shifts or long-term patterns in the relationship between FPFs and capital market growth, urging a cautious interpretation of the findings in a broader temporal context. The financial markets are dynamic and vulnerable to various external factors, economic conditions, and global events.

5.4 Conclusion and Recommendations

The study contributes to the existing literature indicating the association between Kenya's capital market growth and FPFs. The results cast doubt on a simple association between FPFs and capital market growth by showing a statistically significant negative correlation between these variables. Descriptive data and regression model analysis indicate that increasing FPFs decreases Kenya's capital market growth after controlling for variables such as foreign exchange rates and the CBR. According to the study, while negatively associated with capital market growth alone, microeconomic factors, such as the CBR and foreign exchange rates, may mitigate the negative impact and help FPFs improve capital market growth positively. Besides, the study recognizes the existence of unidentified determinants influencing the dynamics of the capital market, underlining the need for a thorough understanding that goes beyond the variables taken into account in this study.

The study's detailed findings lead to recommendations for Kenya's capital market. The negative and significant correlation between FPFs and capital market growth must be acknowledged by policymakers and market players, particularly when considering market capitalization growth. The study emphasizes how crucial it is to combine macroeconomic stability factors with FPFs—like foreign exchange rates and CBR—to potentially lessen their adverse effects and promote favorable interactions that promote capital market expansion. Although CBR and foreign exchange rates do not significantly influence capital

market growth, policymakers should recognize that these factors play a significant role in mediating the negative impact of FPFs. Subsequent studies in this field ought to take into account a better treatment of FPF data, differentiating between inflows and outflows and expanding the study to encompass longer-term trends and sudden changes in the dynamic characteristics of financial markets. In Kenya's financial landscape, making educated decisions would require a thorough awareness of the various elements impacting the expansion of the capital market.

References

- Adeola, O. O., & Aziakpono, M. J. (2022). Unlocking the relationship between capital flows and economic growth in a small open economy of Kenya: An empirical investigation. *Cogent Economics & Finance*, 10(1), 1-24. doi:10.1080/23322039.2022.2085608
- Adnan, A., & Hasan, M. M. (2021). The emergence of COVID-19 and capital market reaction: An emerging MarketScenario analysis. *Asian Academy of Management Journal of Accounting and Finance*, 17(1), 35-62. doi:10.21315/aamjaf2021.17.1.2
- Ali, S., & Javaid, S. H. (2014). Foreign financial inflows and stock market of the host Country:Empirical evidence from Pakistan. JISR management and social sciences & economics, 12(2), 77-90. doi:10.31384/jisrmsse/2014.12.2.6
- Baldridge, R. (2022, August 5). What is the efficient market hypothesis? Retrieved from https://www.forbes.com/advisor/investing/efficient-market-hypothesis/
- Barroso, M., & Laborda, J. (2022). Digital transformation and the emergence of the Fintech sector: Systematic literature review. *Digital Business*, 2(2), 100028. doi:10.1016/j.digbus.2022.100028
- Bellafiore, M., Webb, R. I., & Webb, A. R. (2013). An inside look at trading in today's markets (Collection). Upper Saddle River, NJ: FT Press.
- Berger, A. N., Karakaplan, M. U., & Roman, R. A. (2023). The economic and financial impacts of the COVID-19 crisis around the world: Expect the unexpected. London, United Kingdom: Elsevier.
- Bitok, S. K., Tenai, J., Bitok, J. K., & Chenuos, N. K. (n.d.). Factors influencing the development of capital markets in a developing economy: A case study of Nairobi securities exchange in Kenya. *European Journal of Business and Management*, 6(16), 52-60. Retrieved from https://www.iiste.org/Journals/index.php/EJBM/article/view/13362/13620
- Bloom, M. (2013). Double accounting for goodwill: A problem redefined. Abingdon, NJ: Routledge.

- Bongini, P., Cucinelli, D., Battista, M. L., & Nieri, L. (2019). Profitability shocks and recovery in time of crisis evidence from European banks. *Finance Research Letters*, 30, 233-239. doi:10.1016/j.frl.2018.10.003
- Capital Markets Authority. (2023, January 24). How investors are protected in Kenya's capital markets. Retrieved from https://www.businessdailyafrica.com/bd/sponsored/how-investors-are-protected-in-kenya-capital-markets-4097486
- Cardozo-Alvarado, N., Castañeda-Arévalo, D., Gamboa-Estrada, F., & Miguélez-Márquez, J. (2023). The global financial cycle and the effects of fed unconventional monetary policies on foreign portfolio flows in Colombia. *Borradores de Economia*. doi:10.32468/be.1226
- CGTN. (2023, July 29). Kenya's capital markets decline in Q2 on tough economic conditions. Retrieved from https://newsaf.cgtn.com/news/2023-07-29/Kenya-scapital-markets-decline-in-Q2-on-tough-economic-conditions-11OHdMNxbLG/index.html
- Chhimwal, B., & Bapat, V. (2020). Impact of foreign and domestic investment in stock market volatility: Empirical evidence from India. *Cogent Economics & Finance*, 8(1), 1754321. doi:10.1080/23322039.2020.1754321
- Danila, N., Bunyamin, Djalaluddin, A., & Fathony, Y. (2023). Do foreign fund flows influence the stock market index? Evidence from Indonesia. SAGE Open, 13(4). doi:10.1177/21582440231201485
- Degutis, A., & Novickytė, L. (2014). The efficient market hypothesis: A critical review of literature and methodology. *Ekonomika*, 93(2), 7-23. doi:10.15388/ekon.2014.2.3549

Evans, K. (2002). Foreign Portfolio and Direct Investment: Complementarity, Differences, and Integration. Retrieved from Organisation for Economic Cooperation and Development website: https://www.oecd.org/investment/investmentfordevelopment/2764407.pdf

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383. doi:10.2307/2325486

- Folkerts-Landau, D. F., Garry, J., Schinasi, C., Marcel, K., Carmen, V., Ng, R., &
 Spencer, M. G. (1995). IV Effect of Capital Flows on the Domestic Financial
 Sectors in APEC Developing Countries. In *Capital flows in the APEC region*.
 NJ: International Monetary Fund.
- Grenville, S. (2012). Taming volatile capital flows in emerging economies. Agenda A Journal of Policy Analysis and Reform, 19(2), 107-120. doi:10.22459/ag.19.02.2012.10
- Hassan, M. K., Samad, A., & Islam, F. (1993). A reexamination of McKinnon-Shaw hypotheses: Evidence from five South Asian countries. *The Bangladesh Development Studies*, 21(4), 77-88. Retrieved from http://www.jstor.org/stable/40795490?origin=JSTOR-pdf
- Indangasi, J. (2017). The relationship between economic growth and stock market performance in Kenya. *Journal of Finance and Accounting*, *1*(1), 27-41.
- International Monetary Fund. (2020). Emerging and frontier markets: Managing volatile portfolio flows. In *Global financial stability report: Markets in the time of COVID-19* (pp. 47–65). Author.
- Iwatsubo, K., & Watkins, C. (2021). The changing role of foreign investors in Tokyo stock price formation. SSRN Electronic Journal. 67, 101548. doi:10.2139/ssrn.3787804
- Jusoh, M. A., Rashid, M., & Ajis, M. N. (2020). The influence of foreign investors on firm performance in Malaysia: A case of trading and services listed firms. *International Journal of Supply Chain Management*, 9(3), 927-934.

Kamara, L. T. (2013). The investor's creed. Frederick, NJ: America Star Books.

- Kartal, M. T., Ertugrul, H. M., & Ulussever, T. (2021). The impacts of foreign portfolio flows and monetary policy responses on stock markets by considering COVID-19 pandemic: Evidence from Turkey. SSRN Electronic Journal, 22(1). Retrieved from https://doi.org/10.1016/j.bir.2021.06.003
- Kauffman, R. J., Liu, J., & Ma, D. (2015). Innovations in financial IS and technology ecosystems: High-frequency trading in the equity market. *Technological Forecasting and Social Change*, 99, 339-354. doi:10.1016/j.techfore.2014.12.001

- Koskei, L. (2017). The effect of foreign portfolio equity sales on stock returns in Kenya:
 Evidence from NSE listed financial institutions. *International Journal of Economics and Finance*, 9(4), 185. doi:10.5539/ijef.v9n4p185
- Kumar, R. (2016). Risk and return. In *Valuation: Theories and concepts* (pp. 47–72). Retrieved from https://doi.org/10.1016/B978-0-12-802303-7.00002-4
- Le, A. N., Pham, H., Pham, D. T., & Duong, K. D. (2023). Political stability and foreign direct investment inflows in 25 Asia-Pacific countries: The moderating role of trade openness. *Humanities and Social Sciences Communications*, 10(1), 1-9. doi:10.1057/s41599-023-02075-1
- Machmuddah, Z., Utomo, S. D., Suhartono, E., Ali, S., & Ali Ghulam, W. (2020). Stock market reaction to COVID-19: Evidence in customer goods sector with the implication for open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 99. doi:10.3390/joitmc6040099
- Makina, D. (2019). *Extending financial inclusion in Africa*. Amsterdam, Netherlands: Elsevier Science.
- Makoni, P. L. (2020). Foreign portfolio investments, exchange rates, and capital openness: A panel data approach. *International Journal of Economics and Business Administration*, *VIII*(Issue 2), 100-113. doi:10.35808/ijeba/458
- Munshi, J. (2014). The rise and fall of the arbitrage pricing theory. *SSRN Electronic Journal*. doi:10.2139/ssrn.2459086
- Mushinada, V. N., & Veluri, V. S. (2019). Elucidating investors rationality and behavioural biases in Indian stock market. *Review of Behavioral Finance*, 11(2), 201-219. doi:10.1108/rbf-04-2018-0034
- Nairobi Securities Exchange. (2023, June 18). Nairobi Securities Exchange PLC. Retrieved from https://www.nse.co.ke/#
- Ngila, F. (2023, April 27). Foreign investors are fleeing Kenya's stock market. Retrieved from https://qz.com/foreign-investors-are-fleeing-kenya-s-stock-exchange-1850381687
- Ochenge, R. O., Ngugi, R., & Muriu, P. (2020). Foreign equity flows and stock market liquidity in Kenya. *Cogent Economics & Finance*, 8(1), 1781503. doi:10.1080/23322039.2020.1781503

- Ochieng, I. L., Olweny, T. O., Oluoch, O. J., & Ochere, G. O. (2019). Effect of foreign equity gross purchases on stock market volatility in Kenya: Empirical evidence from Nairobi securities exchange. *European Scientific Journal ESJ*, 15(7), 1-9. doi:10.19044/esj.2019.v15n7p1
- Omorokunwa, O. G. (2018). Stock Market Performance and Foreign Capital Flow. *Amity Journal of Finance*, *3*(2), 24-41.
- Ondiba Ochenge, R., Ngugi, R., & Muriu, P. (2020). Foreign equity flows and stock market liquidity in Kenya. *Cogent Economics & Finance*, 8(1), 1781503. doi:10.1080/23322039.2020.1781503
- Onyango, H. (2023, June 16). Cash-strapped Kenya looks to expand bond market to attract skittish investors. Retrieved from https://www.theafricareport.com/312516/cash-strapped-kenya-looks-to-expand-bond-market-to-attract-skittish-investors/
- Onyeisi, O. S., Odo, I. S., & Anoke, C. I. (2016). Foreign Portfolio Investment and Stock Market Growth in Nigeria. *Developing Country Studies*, 6(11), 64-76. Retrieved from https://core.ac.uk/download/pdf/234683107.pdf
- Orji, A., Ogbuabor, J. E., & Anthony-Orji, O. I. (2015). Financial liberalization and economic growth in Nigeria: An empirical evidence. *International Journal of Economics and Financial Issues*, 5(3), 663-672.
- Oyucho, O., Ochieng', I., & Agong', O. (2023). Foreign equity portfolio investments and market returns at the NSE20 share index; Kenya. *International Journal of Finance and Accounting*, 8(3), 1-21. doi:10.47604/ijfa.2153
- Pain, N. (1993). Financial liberalization and foreign portfolio investment in the United Kingdom. Oxford Economic Papers, 45(1), 83-102. doi:10.1093/oxfordjournals.oep.a042085
- Renn, O., Laubichler, M., Lucas, K., Kröger, W., Schanze, J., Scholz, R. W., & Schweizer, P. (2022). Systemic risks from different perspectives. *Risk Analysis*, 42(9), 1902-1920. doi:10.1111/risa.13657
- Schumpeter, J. A. (2021). *The theory of economic development*. London, UK: Routledge.

- Shabbir, M. S., & Muhammad, I. (2019). The dynamic impact of foreign portfolio investment on stock prices in Pakistan. *Transnational Corporations Review*, 11(2), 166-178. doi:10.1080/19186444.2019.1616508
- Siregar, E. I., & Diana. (2019). The impact of political risk and macro economics on stock return at Indonesia stock exchange (An approach of Arbritage pricing theory (APT)). *International Conference on Economics, Management, and Accounting*. doi:10.18502/kss.v3i26.5412
- Standard Chartered. (2022, September 22). The re-shaping of Africa's capital markets. Retrieved from https://www.sc.com/en/feature/re-shaping-africas-capitalmarkets/
- The World Bank. (2022, September 6). Capital markets. Retrieved from https://www.worldbank.org/en/topic/financialsector/brief/capital-markets
- U.S. Embassy Kenya. (2023, July 24). Remarks by Ambassador Whitman at the U.S.-Kenya business roadshow, New York (April 26, 2023). Retrieved from https://ke.usembassy.gov/why-africa-why-kenya-2/
- Waliu, O. T., & Oludayol, A. E. (2020). Dynamic effects of foreign portfolio investment on economic growth in Nigeria. *Financial Markets, Institutions and Risks*, 4(3), 5-12. doi:10.21272/fmir.4(3).5-12.2020
- Waqas, Y., Hashmi, S. H., & Nazir, M. I. (2015). Macroeconomic factors and foreign portfolio investment volatility: A case of South Asian countries. *Future Business Journal*, 1(1-2), 65-74. doi:10.1016/j.fbj.2015.11.002
- Williams, D. (1966). The Growth of Capital and Securities Markets (9781616352837). Retrieved from International Monetary Fund website: https://www.elibrary.imf.org/downloadpdf/journals/022/0003/003/article-A008en.xml
- Zhang, J. A., O'Kane, C., & Chen, G. (2020). Business ties, political ties, and innovation performance in Chinese industrial firms: The role of entrepreneurial orientation and environmental dynamism. *Journal of Business Research*, 121, 254-267. doi:10.1016/j.jbusres.2020.08.055
- Zietlow, J., & Seidner, A. G. (2007). *Cash & Investment Management for Nonprofit Organizations*. Hoboken, NJ: Wiley & Sons.