

**MACROECONOMIC FACTORS, INSTITUTIONAL QUALITY, AND STOCK MARKET
PERFORMANCE IN KENYA**

BY

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REG NO. 20/00694

MASTER OF SCIENCE IN COMMERCE (FINANCE AND INVESTMENT)

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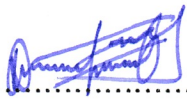
**A DESERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL
FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF
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UNIVERSITY**

October 2025

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this dissertation contains no material created or published by others, save where appropriate citations are included.

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Signed.......... Date.....*6th Dec 2025*.....

I do hereby confirm that I have examined the master's dissertation of

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And I have approved it for examination.

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Dissertation Supervisor

ABSTRACT

The stability of the stock market is an important reflection of a country's financial and economic resilience. In recent years, the Nairobi Securities Exchange (NSE) has shown notable fluctuations in performance, raising the need to understand the underlying macroeconomic and institutional dynamics that influence its behavior. This study examined the relationship between key macroeconomic variables and stock market performance in Kenya, with institutional quality incorporated as a moderating factor. Using monthly time-series data covering the period from January 2005 to December 2024, the study employed the Autoregressive Distributed Lag (ARDL) model to estimate both short-run and long-run effects, while interaction terms of selected macroeconomic factors with institutional quality captured the moderating influence of institutional quality. The variables considered included inflation, interest rates, exchange rate volatility, market liquidity, and political events. The results showed that inflation had a lagged negative effect on stock performance, suggesting that its impact was realized over time, while interest rates showed a positive short-run association, implying that credible monetary policy enhances investor confidence. Exchange rate volatility showed a delayed positive effect, reflecting improved export competitiveness after market adjustment. Institutional quality significantly moderates the effects of inflation and interest rates, confirming its role in stabilizing market responses to macroeconomic shocks. The study concludes that the performance of Kenya's stock market is jointly determined by macroeconomic fundamentals and institutional strength. Sustainable market growth therefore requires effective management of inflation, predictable interest rate policy, and enhanced institutional governance to foster transparency, policy consistency, and investor confidence in the capital market.

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DEDICATION

I humbly dedicate this project to the Most Merciful and Gracious God, who granted me the wisdom, strength, and perseverance to complete this research. I also extend my heartfelt appreciation to my beloved wife, Nancy, and my son, Travis, for their patience, understanding, and countless sacrifices, which have been instrumental in making this dream a reality.

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LIST OF ABBREVIATIONS AND ACRONYMS

APT	Arbitration Pricing Theory
ARDL	Autoregressive Distributed Lag
CBK	Central Bank of Kenya
CBR	Central Bank Lending Rate
CDS	Central Depository and Settlement Corporation
CMA	Capital Market Authority
GOK	Government of Kenya
IFC	International Financial Corporation
NASI	NSE All Share Index
NSE	Nairobi Securities Exchange
WGI	World Bank's Worldwide Governance Indicators
PPP	Purchasing Power Parity

DEFINITION OF TERMS

Exchange rate: It is the rate of conversion between currencies of different nations.

Inflation: It is the general increase in prices over time that diminishes money's purchasing power and affects all sectors of the economy.

Interest rate: The percentage that a bank or financial institution charges somebody when accessing a credit facility.

Market trend: Is the overall trend of a financial market or asset price over time, either upward, downward, or sideways.

Money Supply: The entire amount of funds and liquid financial instruments operating within the economy of a country at any given time.

The stock market is a market in which shares of publicly held enterprises are issued, purchased, and sold, either through stock exchanges or over-the-counter channels.

Inertial Effect: refers to the persistence of stock market performance, where past values significantly influence current outcomes.

Political Events: refer to major governance transitions and electoral cycles in Kenya that influence investor confidence and market expectations.

Stock Market Performance: refers to the overall efficiency and return behavior of the Nairobi Securities Exchange, measured through stock price movements and market indicators that reflect how well the market responds to macroeconomic and institutional factors.

Market liquidity: refers to the ease with which securities at the Nairobi Securities Exchange can be bought or sold without causing significant changes in their prices, reflecting the depth and efficiency of trading activity.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Stock markets play a significant role in economic development because they ease capital mobilization, resource allocation, and investment growth. They are essential in both established and emerging economies for promoting financial integration and corporate finance. For example, research from Singapore, China, India, and Bangladesh shows that robust regulatory frameworks, technical infrastructure, and active investor participation improve financial market efficiency and resilience (Azam, Wang, & Alam, 2016). Nonetheless, globalization and financial integration make markets vulnerable to systemic dangers. The 2008 global financial-crisis and the COVID-19 epidemic exposed vulnerabilities, particularly in developing economies, where external shocks often result in increased volatility, capital flight, and diminished investor confidence. These experiences highlight the necessity of investigating how macroeconomic factors influence financial markets.

Stock markets are increasingly acknowledged in Sub-Saharan Africa as engines of economic, financial development, and capital flow mobilization. Countries such as Ghana and Uganda show this tendency; however, issues such as insufficient capitalization, poor liquidity, and low public participation remain (Tumwebaze, Orobia, & Kamukama, 2019). In this respect, institutional quality and strong macroeconomic management are often cited as essential for long-term stock market development. However, weak governance, inconsistent regulatory enforcement, and political instability continue to erode investor trust and market efficiency throughout the area. Regional initiatives like the East African Securities Exchanges Association and the West African Capital Market Integration Council show continuous efforts to promote integration and resilience.

Nonetheless, the effectiveness of such programs is strongly reliant on country-specific institutional and macroeconomic variables, highlighting the importance of specialized empirical research.

Kenya's capital market, led by the Nairobi Securities Exchange (NSE), has expanded tremendously and is still an important platform for corporate financing and wealth development. Despite these gains, the NSE operates in a fragile macroeconomic environment marked by inflation, fluctuating interest rates, and currency volatility. Institutional flaws, such as gaps in regulatory compliance and recurring political uncertainty, worsening market inefficiency and undermine investor trust. While there is a large body of literature studying the effects of macroeconomic variables on global and regional stock markets, few studies have specifically included institutional quality in the Kenyan context. Existing research often misses governance and regulatory frameworks or focuses solely on certain macroeconomic metrics.

1.1.1 Stock Market Performance

Stock markets are central to economic development, facilitating the mobilization and allocation of capital. In Kenya, the Nairobi Securities Exchange (NSE) plays a pivotal role in channeling savings into productive investments and enhancing corporate transparency. A vibrant stock market attracts investment, boosts liquidity, and reflects economic sentiment. Favorable macroeconomic conditions such as stable inflation, consistent GDP growth, and low interest rates typically support stock market performance. The performance of the NSE is often evaluated using benchmarks like the NSE 20 Share Index, which tracks blue-chip companies, and the NSE All Share Index, which captures broader market dynamics. According to Bhattarai, Gautam & Chettri (2021), stock exchanges promote long-term capital formation and risk-sharing, while Otieno and Lenaiturial, (2024) emphasizes the NSE 20 Share Index as a reliable measure of market trends in Kenya.

Since the early 1990s, the stock market in Kenya has undergone a dynamic transformation, which is indicative of the country's broader financial and economic changes. The Nairobi Securities Exchange (NSE) experienced substantial growth from 2014 to 2018, with a market capitalization that rose from KES 2.3 trillion in 2014 to KES 2.5 trillion in 2017 and then moderated to KES 2.1 trillion in 2018 (Capital Markets Authority [CMA], 2023). Macroeconomic stability enhanced regulatory reforms, and increased investor participation all contributed to this expansionary period. However, the years that followed (2018–2022) were marked by increased volatility and a decline in performance, which was primarily due to domestic policy uncertainty, reduced foreign investor inflows, and global economic disruptions, including the COVID-19 pandemic. The market capitalization of KES decreased from KES 2.54 trillion in 2019 to KES 2.34 trillion in 2020, and it further decreased to KES 1.99 trillion in 2022. As a result, equity turnover decreased from KES 153.8 billion in 2019 to KES 94.3 billion in 2022, and the NSE 20-Share Index decreased from 2,654 to 1,676 points, suggesting a decrease in market liquidity and investor confidence (CMA, 2023).

The NSE exhibited signs of recovery in 2023, when market capitalization increased to KES 1.44 trillion. This figure further increased to KES 1.9 trillion by October 2024, being a 29% gain within the year (Kenyan Wall Street, 2024). This is a positive development. The NSE's market capitalization was KES 1.97 trillion as of January 2025 (Standard Media, 2025), which was bolstered by improved macroeconomic indicators and renewed foreign investor participation. The NSE has proved notable resilience in the face of enduring structural challenges, such as political uncertainty, policy inconsistency, and macroeconomic volatility. The exchange's potential to make a significant contribution to inclusive economic development and its increasing relevance in

Kenya's financial sector are both emphasized by its recovery if it is still bolstered by a stable macroeconomic and regulatory environment.

1.1.2 Macroeconomic Factors

The behavior of investors and the success of the stock market are both significantly affected by macroeconomic variables such as inflation, interest rates, and exchange rates, which have a considerable influence. The implications that they have on returns, risk perception, and value are more obvious in developing economies such as Kenya. Inflation reduces the real value of returns, erodes investor purchasing power, and may diminish company profits. It can also prompt central banks to tighten monetary policy, which may reduce market liquidity and slow economic growth. In Kenya, inflation often arises from both domestic supply-side constraints and external shocks, affecting investor confidence and capital flows.

Interest rates, as determined by the Central Bank of Kenya (CBK), guide saving and borrowing decisions. Higher rates attract savers but raise borrowing costs, often dampening investment. Conversely, lower rates encourage borrowing and spending but may reduce savings. CBK's Central Bank Rate (CBR) serves as a key monetary policy tool, influencing liquidity and overall economic activity. Exchange rate volatility affects trade competitiveness and foreign investment. A depreciating shilling may attract foreign investors due to cheaper local asset prices but can also increase input costs for firms reliant on imports. Fluctuating exchange rates affect corporate earnings, investor returns, and stock valuations, making them critical consideration in market performance analysis. Together, these variables not only shape short-term market dynamics but also influence the long-term trajectory of capital market development in Kenya.

1.1.3 Institutional Quality

Institutional quality encompasses the rules, laws, and governance structures shaping economic interactions and expectations in society. Traditional growth models emphasize physical and human capital as primary growth determinants; however, emerging literature increasingly highlights the critical role of institutional factors in explaining cross-country differences in long-term development. For instance, Gebrue (2025) finds that dimensions such as political stability, voice and accountability, corruption control, and absence of violence exert statistically significant positive effects on GDP growth in upper-middle-income African nations. Improvements in these areas tend to enhance the efficiency of capital allocation across diverse sectors.

Wandeda, Masai, and Nyandemo (2021) employ dynamic panel data methods on Sub-Saharan African economies and find that improved institutional quality boosts output, especially in lower-income nations. The research proves that institutional enhancements provide more significant growth impacts in West African countries than in other sub-regions, highlighting the regional specificity of institutional influence. In Kenya, ongoing institutional deficiencies, including selective enforcement, corruption, and inadequate investor protection, persistently hinder the depth and breadth of the stock market. Enhancing institutional quality may augment transparency, mitigate systemic risks, and draw both domestic and foreign investment. Improved governance will provide greater responsiveness of capital markets to macroeconomic indicators, promoting sustainable financial sector expansion and inclusive economic progress.

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE), established in 1954, is among the leading capital markets in sub-Saharan Africa. It lists both equity and debt instruments and provides a platform for domestic and international firms to raise capital. Supported by key institutions like the Capital

Markets Authority (CMA) and the Central Bank of Kenya (CBK), the NSE has undergone major reforms aimed at increasing market efficiency and accessibility.

Notable milestones include the Capital Markets Act (1989) and the establishment of the Central Depository System (2002), which modernized trading and settlement. Privatization initiatives, particularly during 2003–2007, and policy frameworks like Vision 2030 have further expanded the exchange’s role in economic transformation. The NSE’s performance is tracked using several indices: the NSE All Share Index which reflects performance across all listed companies; the FTSE NSE Kenya 15 and 25 Indexes which track the most liquid and large-cap stocks; and the NSE 20 Share Index, a traditional benchmark covering top-performing blue-chip stocks. Despite its progress, the NSE still faces challenges such as low investor participation, regulatory bottlenecks, and Market Liquidity. Strengthening macroeconomic fundamentals and institutional capacity is still vital for the NSE to fully realize its potential as a driver of inclusive economic growth.

1.2 Statement of the Problem

In an ideal world, stock markets would help businesses raise funds, deploy resources, and develop wealth. Due to stable macroeconomic conditions and strong institutional frameworks, such markets should move money, improve investor confidence, and drive long-term economic growth. Strong governance, clear regulations, and good monetary and fiscal policies should keep markets stable during shocks. In countries with strong macroeconomic governance and good institutions, stock exchanges promote financial inclusion, reduce investment risks, and promote sustainable economic growth.

Economic growth in Kenya relies on the Nairobi Securities Exchange (NSE). NSE expansion and contraction reflected the macroeconomic conditions between 2005 and 2018.

Market capitalization as a proportion of GDP peaked at 44.06% in 2006 and dropped to 34.07% in 2005, before gradually declining over the years (YCharts, 2024; The Global Economy, 2024). Due to promising investment conditions and macroeconomic stability, the NSE market capitalization rose from KES 750 billion in 2014 to KES 2.54 trillion in 2018 (Capital Markets Authority [CMA], 2024). However, inflation, interest rate instability, currency depreciation, and worldwide disruptions like the COVID-19 pandemic caused considerable decreases in later years. For instance, the NSE fell 5% in 2019 and 27.15% in 2020 before falling to KES 1.986 trillion in 2022 (CMA, 2024). In 2024, there were indications of improvement, as market capitalization increased by 29% from KES 1.4 trillion in January to KES 1.9 trillion in October. However, this growth was inconsistent and susceptible to resurgent macroeconomic pressures (Kenyan Wall Street, 2024). As Macroeconomic variables continue to hurt the capital market. Governance issues, weak regulatory enforcement, and policy uncertainty have further eroded investor confidence, making the NSE more vulnerable to shocks than stock markets in developed or emerging Asian economies, where institutional quality provides a higher level of protection.

In Kenya and other developing markets, empirical research shows that macroeconomic factors affect stock market performance, but institutional integrity is often overlooked. Kemboi (2024) found that exchange rate fluctuations hurt stock returns more than inflation, while Ondiwa and Oloo (2024) found that high short-term interest rates discouraged participation despite a rising money supply. Ngetich and Mbuva (2023) saw a modest and statistically insignificant correlation between inflation and stock returns. These findings show that macroeconomic issues affect the NSE but do not necessarily explain it. Regional studies also emphasize institutional quality in market stabilization (Tumwebaze, Orobias, & Kamukama, 2019). Limited empirical research has included institutional quality in Kenya, making it difficult to understand how governance,

regulatory efficacy, and political stability interact with macroeconomic variables to affect stock market outcomes.

Despite evidence that macroeconomic variables such as inflation, interest rates, and exchange rate movements influence stock market outcomes, limited empirical studies in Kenya have examined the moderating role of institutional quality in this relationship. Consequently, there is still a gap in understanding how governance, regulatory effectiveness, and political stability interact with macroeconomic factors to influence stock market performance. Addressing this gap is critical to enhancing Kenya's capital market resilience and positioning the NSE as a more effective driver of sustainable economic growth.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of the study was to investigate how macroeconomic variables affect Kenyan stock market performance and evaluate how institutional quality moderates this relationship.

1.3.2 Specific Objectives

- i. To analyze the effect of inflation rates on the performance of the stock market in Kenya.
- ii. Assess the effect of interest rates on the stock market performance in Kenya.
- iii. Examine the effect of exchange rate volatility on the stock market performance in Kenya.
- iv. Assess the moderating effect of institutional quality on the relationship between macroeconomic factors on the stock market performance in Kenya.

1.4 Research Hypotheses

- i. *H₀₁: There is no significant relationship between inflation rates and stock market performance in Kenya.*

- ii. *H₀₂: There is no significant relationship between interest rates and stock market performance in Kenya.*
- iii. *H₀₃: There is no significant relationship between exchange rate volatility and stock market performance in Kenya.*
- iv. *H₀₄: Institutional quality does not significantly moderate the relationship between selected macroeconomic factors (inflation, interest rate, and exchange rate volatility) and stock market performance in Kenya.*

1.5 Significance of the Study

This study will be significant in the following ways:

1.5.1 The Government/Policy Makers/Regulators

The findings of this study will be useful to policymakers and financial regulatory authorities such as the Capital Markets Authority (CMA), Nairobi Securities Exchange (NSE), and Central Bank of Kenya (CBK). By showing the macroeconomic variables that have a substantial impact on stock market performance, the findings will give empirical data to help the development of effective monetary, fiscal, and regulatory policies targeted at improving market stability and investor confidence. In particular, the findings of this study can be used to inform stock pricing methods, improve the design of trading laws, and lead reforms aimed at strengthening the NSE's institutional framework. Furthermore, the government will get a better grasp of how macroeconomic variables such as inflation, interest rates, and exchange rate changes interact with market results, enabling for more responsive and data-driven economic policymaking. This may lead to a more resilient and efficient capital market that better promotes economic development and financial inclusion.

1.5.2 Investors

The study's findings will provide investors with useful insights into how various macroeconomic issues influence stock market performance. By studying key variables such as interest rates, inflation, currency rates, and institutional quality, the study will give a complete examination of the external conditions that influence market dynamics. This knowledge provides investors with a better understanding of the macroeconomic context in which their assets function, allowing them to forecast market moves more precisely. As a result, investors will be better able to make strategic decisions about asset allocation, risk management, and market entry/exit timing. In summary, the study helps to develop better evidence-based investing strategies by correlating macroeconomic changes to stock market behavior in Kenya.

1.5.3 Researchers and Scholars

This study's results on the effects of macroeconomic variables on Kenyan stock market performance will add significantly to the existing body of knowledge and theory. The study, which focusses on the Nairobi Securities Exchange (NSE), will provide empirical evidence on the dynamic relationship between important macroeconomic indicators and stock market performance in an emerging nation. This will not only help to close the gap in region-specific research but will also provide comparative insights for scholars studying similar markets. Furthermore, the study's use of institutional quality as a moderating factor deepens theoretical understanding by expanding classic macroeconomic models to include institutional characteristics. Future academics studying stock market behavior, economic policy implications, or financial market development will benefit from a broader and more complex framework, supporting ongoing scholarly investigation in related areas.

1.6 Scope of the Study

The major goal of this study was to examine the macroeconomic factors that influence the performance of the Kenyan stock market, with a special emphasis on the moderating role of institutional quality. The study used market-level data from companies registered on the Nairobi Securities Exchange (NSE), with the goal of capturing broad market trends rather than firm-specific dynamics. Inflation rates, interest rates, and exchange rate volatility are among the key macroeconomic variables under examination, all of which have been shown to influence investor sentiment and market efficiency. The research covered a period of 20 years using monthly data, from January 2005 to December 2024, offering a solid period for analyzing long-term trends and recurring patterns. Data was gathered from reputable secondary sources, including the Nairobi Securities Exchange, the Central Bank of Kenya, the Kenya National Bureau of Statistics (KNBS), and the World Bank's Worldwide Governance Indicators (WGI), which provide critical insights into institutional dimensions such as political stability, regulatory quality, and government effectiveness. This comprehensive approach allowed a greater understanding of how both economic fundamentals and institutional frameworks impact stock market performance in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews theoretical, conceptual, and empirical literature to learn macroeconomic factors influencing the stock market performance of listed firms in Kenya. This chapter also discusses any remaining research gaps in the study.

2.2 Theoretical Review

Various hypotheses have appeared to explain the relationship between macroeconomic issues and organizational success. This research is advanced, and understanding is enhanced by the theories that are addressed in this article. The theories that fall under this category include Monetarist Theory, The Keynesian theory of interest rates, The purchasing power parity (PPP) theory and the institutional theory.

2.2.1 Monetarist theory

The Monetarist Theory, developed primarily by Milton Friedman and later refined by economists such as James Tobin and William Baumol, emphasizes the critical influence of money supply and monetary policy on overall economic activity and asset prices. Rooted in the classical Quantity Theory of Money, the monetarist framework is expressed through the equation $MV = PY$, where M denotes money supply, V the velocity of money, P the price level, and Y real output. According to Friedman (1963), when the money supply expands faster than real output, inflation results in eroding purchasing power and distorting investment decisions. Monetary stability, therefore, becomes essential for sustaining economic and financial stability.

Within this framework, fluctuations in money supply and interest rates influence stock market performance through their effects on liquidity, investment, and inflation expectations.

Rising inflation and tightening monetary policy reduce real returns and liquidity, discouraging equity investments, while monetary expansion enhances liquidity and may temporarily boost stock prices (Friedman, 1963). Tobin (1969), through his Portfolio Selection Theory, further extended monetarist ideas by explaining that investors rebalance their portfolios between money and other financial assets in response to interest rate changes. When interest rates fall, investors shift funds from money to equities, increasing stock demand and prices; conversely, higher interest rates induce the opposite effect. Similarly, Baumol (1952) in his Inventory Theory of Money Demand proved how individuals adjust money holdings relative to interest rates, affecting the flow of funds into capital markets.

A principal strength of monetarist theory is its clarity and its unequivocal focus on the pivotal function of monetary policy in regulating inflation. The theory shows a direct correlation between money supply growth and price fluctuations, offering policymakers a clear and understandable framework for understanding how central banks might affect macroeconomic stability. This viewpoint has been particularly beneficial in creating monetary frameworks aimed at stabilizing inflation expectations and enhancing investor confidence. The monetarist perspective provides a robust basis for emphasizing the significance of central bank credibility, policy consistency, and disciplined management of the money supply in reaching economic stability.

However, critics have noted that monetarism sometimes oversimplifies the inflationary process, especially in emerging and developing economies. Inflation in these contexts often results from both monetary growth and structural or external reasons that lie outside the direct influence of central banks. Palley (2012) contends that monetarism does not sufficiently consider factors including political instability, fluctuating global commodity prices, and supply chain disruptions. These constraints are particularly pertinent in nations such as Kenya, where inflation is often

influenced by external shocks to food and fuel costs rather than solely by excessive monetary expansion. For instance, dependence just on money supply management is inadequate, requiring supplementary policies to rectify structural deficiencies, stabilize supply networks, and mitigate external risks.

The Monetarist Theory is directly applicable to this study's findings, which revealed that inflation had a significant negative short-run effect on stock market performance in Kenya. The theory explains this relationship through its focus on money supply and inflationary pressures, where excessive monetary expansion erodes purchasing power and discourages equity investment. As shown in the study, periods of rising inflation and tightening monetary policy reduced liquidity in the Nairobi Securities Exchange (NSE), leading to lower investor confidence. Therefore, the study empirically confirms the monetarist proposition that stable monetary policy and inflation control are vital for sustaining financial market performance in emerging economies such as Kenya.

2.2.2 Keynesian theory of interest rates

The Keynesian Theory of Interest Rates was first articulated by John Maynard Keynes in *The General Theory of Employment, Interest and Money* (1936). According to this theory, interest rates depend on the money supply and society's liquidity need. Keynes believed people and institutions keep money for transactions, precautions, and speculation. Thus, the interest rate rewards for forgoing liquidity, or cash balances. When liquidity preference is strong, people demand more money than supply, raising interest rates. When it lowers, interest rates fall. This theoretical perspective emphasizes monetary policy's impact on economic conditions. Policymakers can affect economic agents' liquidity preferences and interest rates by altering the money supply. Higher interest rates discourage borrowing, restrict investment, and moderate inflation, while lower rates

boost aggregate demand and economic development. Thus, interest rates are essential for macroeconomic stability. Interest rates are important economically and allow monetary authorities to directly affect financial markets and economic performance, according to Keynesianism.

The classical understanding of interest rates as being based only on savings and investment balances was replaced by a more comprehensive understanding that took institutional and psychological variables into account according to Keynes' theory. It highlighted how central banks manipulate the money supply to impact interest rates, which in turn affects output, employment, and investment choices. Later advancements in post-Keynesian and contemporary monetary theories acknowledged that interest rates are affected by both domestic and international financial integration, expanding the importance of expectations, uncertainty, and capital movements (Blanchard, 2017). Interest rate changes are an initiative-taking tool used by the Central Bank of Kenya (CBK) in Kenya to manage liquidity, control inflation, and indirectly affect stock market activity.

A primary strength of the Keynesian Theory of Interest Rates is its capacity to explicitly link interest rates with investment decisions, thus providing a robust framework for the analysis of financial markets. The introduction of liquidity preference transcends mechanical theories of interest rate determination, acknowledging the institutional, psychological, and behavioral elements that influence market outcomes. This makes it especially significant in situations where investor sentiment and precautionary incentives profoundly affect borrowing and lending practices. The theory emphasizes the pivotal function of monetary policy, illustrating how modifications in the money supply can affect investment, consumption, and, so, economic growth.

However, the theory is not without limitations. Critics contend that it simplifies the long-term dynamics of interest rates, particularly amid enduring inflationary pressures, by disregarding

the long-run neutrality of monetary variables. Moreover, in a progressively globalized financial sector, the Keynesian framework often underappreciates the impact of foreign capital flows and exchange rate fluctuations on domestic interest rate variations (Snowdon & Vane, 2005). In emerging economies like Kenya, structural rigidities, underdeveloped financial markets, and increased feelings of political risk have occasionally constrained the efficacy of interest rate modifications in maintaining investment flows. These deficiencies show that although Keynesian concepts are useful for understanding short-term swings, they may not entirely encompass the intricacies of interest rate dynamics in open and structurally constrained economies.

The Keynesian Theory provides the conceptual foundation for understanding how changes in interest rates influence stock market performance in Kenya. Specifically, when the Central Bank of Kenya (CBK) increases policy rates, the expense of borrowing for enterprises and consumers escalates. This escalation diminishes business profitability by elevating financing expenses, concurrently deterring equity demand as investors gravitate towards more secure fixed-income assets. Conversely, reduced interest rates decrease borrowing expenses, encourage private investment, and improve liquidity in financial markets, so stimulating stock market activity. The study's findings, which showed a positive short-run effect of interest rates on stock market performance, can be interpreted through the Keynesian Theory of Interest Rates. While Keynesian theory posits that higher interest rates discourage investment, the Kenyan context reflects a developing market where moderate rate increases signal monetary discipline and macroeconomic stability, thereby enhancing investor confidence. This outcome aligns with the theory's liquidity preference framework, showing how central bank interventions affect investment decisions. The results suggest that in Kenya, the Central Bank's rate adjustments play a dual role balancing inflation control while sustaining investor expectations and short-term capital flows into the NSE.

2.2.3 Purchasing Power Parity (PPP) Theory

The Purchasing Power Parity (PPP) Theory, initially proposed by Gustav Cassel in 1918, offers a framework for understanding the evolution of exchange rates in relation to comparative price levels among nations. The idea posits that, over time, exchange rates will adjust to equalize the purchasing power of various currencies, guaranteeing that equivalent items are priced the same in any two countries when expressed in a common currency. Two primary forms of Public-Private Partnership (PPP) are identified. Absolute PPP asserts that the exchange rate between two nations is dictated by the ratio of their aggregate price levels, showing a direct correlation between prices and currency worth. Relative Purchasing Power Parity (PPP) focuses on movements rather than absolute values, showing that variations in exchange rates mirror disparities in inflation rates among nations.

Since its establishment, PPP has appeared as a fundamental principle in international finance theory. Although it serves as a standard for exchange rate assessment, empirical analyses prove that Purchasing Power Parity (PPP) is more applicable in the long term than in the short term, owing to market frictions, capital movements, and governmental interventions. In emerging markets such as Kenya, PPP theory has been used to elucidate currency rate volatility resulting from inflationary pressures, balance of payments imbalances, or speculative attacks. Later enhancements of the theory include interest rate differentials and investor expectations as supplementary factors influencing currency values (Rogoff, 1996).

The efficacy of PPP exists in its logical clarity and its capacity to correlate inflation, trade, and currency fluctuations. It offers a theoretical benchmark for assessing whether a currency is undervalued or overvalued. PPP is criticized for its inadequate short-term forecasting capability and its inability to consider structural rigidities, speculative inflows, and policy-induced distortions

(Taylor & Taylor, 2004). In the Kenyan context, currency rate volatility is additionally affected by political instability, external debt obligations, and commodity price shocks elements that Purchasing Power Parity alone cannot adequately encompass. Sumba, Nyabuto, and Mugambi (2024) support this nuanced perspective by proving that the exchange rate pass-through to inflation in Kenya is non-linear; significant inflationary impacts occur only when depreciation surpasses a monthly threshold of approximately 0.51%. This underscores the influence of market-specific thresholds and monetary policy responses on exchange rate dynamics, which extend beyond the explanatory capacity of basic Purchasing Power Parity models.

This study uses Purchasing Power Parity (PPP) to substantiate the inclusion of exchange rate variations as a critical explanatory variable in analyzing stock market performance in Kenya. Fluctuations in exchange rates significantly influence investor confidence, corporate profitability, and general market stability. The significant depreciation of the Kenya shilling against the US dollar has historically escalated import expenses, exacerbated inflation, and diminished real returns on financial assets, suppressing stock market activity (Chege & Ngugi, 2021). In contrast, stable currency rates diminish uncertainty, improve investor confidence, and promote market expansion. By including Purchasing Power Parity (PPP) into the conceptual framework, the study elucidates the essential connection between exchange rate fluctuations and stock market dynamics at the Nairobi Securities Exchange (NSE).

2.2.4 Institutional Theory

Institutional Theory, originally articulated by Meyer and Rowan (1977) in organizational sociology and later expanded to economics by Douglass North (1990), underscores the major influence of both formal and informal institutions on economic behavior and market results. Institutions make up explicit regulations, such as legislation, property rights, and regulatory frameworks, alongside

informal norms, including cultural practices, political traditions, and social customs. Collectively, these institutions set up the "rules of the game" that regulate interactions within political, economic, and social systems. The theory posits that effective institutions diminish uncertainty, decrease transaction costs, and promote investment by fostering an atmosphere of predictability and stability. In contrast, feeble or unstable institutions undermine investor trust, disrupt market efficiency, and impede long-term economic performance.

Institutional Theory has become a fundamental foundation in political economy and development economics. North (1990) emphasized that robust institutions enhance secure property rights, regulatory enforcement, and accountability, hence easing sustained economic growth. The quality of institutions in capital markets affects how well investors are protected, how clear financial reports are, and how well regulatory agencies work. Countries with strong institutions have investors who are more confident and are better able to manage macroeconomic shocks. On the other hand, countries with poor institutions have more volatility and less investment (Acemoglu & Robinson, 2012).

A principal advantage of Institutional Theory is its holistic viewpoint, as it amalgamates political, legal, and cultural aspects in the examination of economic results. In contrast to solely economic models, it acknowledges that markets are situated within wider institutional frameworks. This makes the theory particularly relevant in developing economies, as governance frameworks, regulatory efficacy, and political stability directly influence market confidence and financial outcomes (Acemoglu & Robinson, 2019). Its adaptability enables the elucidation of cross-national disparities in economic performance, even when nations possess analogous macroeconomic underpinnings.

Critics argue that the theory often suffers from imprecision in assessment, as notions such as "institutional quality" are expansive and complex (Rodrik, 2018). Assessing informal standards like corruption, political patronage, or societal trust is intrinsically intricate and occasionally subjective. Furthermore, although the theory underscores the significance of institutions, it may undervalue the impact of short-term macroeconomic shocks (e.g., commodity price volatility or financial crises), which can influence markets irrespective of institutional quality. A further restriction is that institutional innovations require time to manifest, complicating the establishment of obvious causal relationships in short-term evaluations.

Institutional Theory shows the conceptual basis for integrating institutional quality as a moderating variable in this research. In Kenya, variations in stock market performance cannot be only attributed to macroeconomic determinants; governance frameworks, regulatory standards, and political stability are also significant factors. Historically, instances of political instability or inadequate implementation of financial rules have diminished investor confidence, decreased foreign capital inflows, and increased volatility in the Nairobi Securities Exchange (NSE). Improvements in regulatory quality and political stability, conversely, boost transparency, bolster investor protection, and promote stock market expansion (World Bank, 2020). Consequently, Institutional Theory supports the incorporation of governance indicators in the empirical model to reflect the interplay more accurately between macroeconomic fundamentals and stock market results.

2.3 Empirical Review

Empirical literature considers the work of a wide variety of authors from the past, as well as their experiments, experiences, observations, and conclusions. I present the following study on national and international stock prices, along with macroeconomic aspects.

2.3.1 Inflation and stock market performance

Inflation is a critical macroeconomic factor influencing stock market performance. From a theoretical perspective, the relationship is complex and often ambiguous. The Fisher Effect posits that nominal stock returns should rise with inflation to preserve real returns, implying a neutral or positive relationship. However, in practice, especially in emerging markets, high and unpredictable inflation tends to erode purchasing power, increase production costs, reduce firm profitability, and deter long-term investment, often leading to negative stock market outcomes. Empirical evidence from Kenya and similar economies reveals mixed results.

Mwiwa and Jagongo (2025) examined the impact of various inflation types on the stock performance of publicly traded commercial banks at the Nairobi Securities Exchange (NSE) from 2017 to 2022. Their research distinctly categorized inflation into cost-push, demand-pull, imported inflation, and hyperinflation to assess their respective impacts on bank stock returns. Employing a time series regression methodology within an Ordinary Least Squares (OLS) framework, they found that cost-push and demand-pull inflation had a statistically significant and positive impact on bank stock returns, suggesting that commercial banks may serve as partial hedges against moderate inflationary pressures. On the other hand, imported inflation and hyperinflation had mixed and not extraordinarily strong impacts. The study offers significant insights by differentiating across types of inflation; nevertheless, it is limited to the banking sector. This limited focus excludes cross-sectoral dynamics, neglects the mediating influence of institutional quality, and does not investigate linkages between inflation and other macroeconomic factors, thereby constraining the generalizability of its conclusions.

Ngetich and Mbuva (2023) conducted a firm-level panel analysis covering companies listed on the NSE between 2011 and 2021, using monthly data and a fixed-effects regression model

confirmed through the Hausman test. Their results showed that a 1% increase in inflation led to a 0.38% decline in stock returns, with the adverse impact being more pronounced among small-cap and non-financial firms. These findings suggest that inflation disproportionately reduces equity value for firms with limited pricing power. However, the study treated inflation as a uniform variable, overlooking distinctions between cost-push and demand-pull components, as well as the moderating role of institutional and behavioral factors. This highlights the need for more integrated models that account for macroeconomic, institutional, and structural dynamics an approach adopted in the present study.

Odhiambo (2023) employed a time-series approach to examine the relationship between inflation and stock market liquidity in Kenya using monthly data from 1990 to 2020. The study applied ARCH and GARCH models to the NSE 20-Share Index and consumer price inflation to capture volatility dynamics. The results revealed a positive and statistically significant association between inflation and stock market liquidity, suggesting that inflationary pressures heighten uncertainty and risk within the capital market. The study recommended that policymakers adopt targeted monetary interventions to manage inflation and reduce volatility. However, its analysis was limited to volatility outcomes, excluding the direct impact of inflation on stock returns. Furthermore, it did not differentiate between types of inflation or consider moderating factors such as institutional quality or investor behavior. These limitations underscore the need for a more comprehensive framework such as that adopted in the present study that integrates both volatility and return dynamics alongside structural and institutional influences.

Musembi, Simiyu, and Njoka (2020) investigated the impact of inflation on the overall performance of the NSE from 2008 to 2018, basing their analysis on Fisher's hypothesis. They looked at both linear and asymmetric impacts between inflation and the NSE all-share index using

ARDL and NARDL methods. Their findings revealed a substantial negative correlation, suggesting that increasing inflation diminishes overall market performance. The study incorporated investor sentiment to elucidate fluctuations in returns, introducing a behavioral aspect often lacking in macro-finance studies. The analysis was limited to aggregate market indices, obscuring sectoral differences, and did not categorize inflation into specific groups. Moreover, institutional quality was not regarded as a possible moderate variable. The study emphasized asymmetric inflation effects and investor mood but did not investigate the influence of governance and structural dynamics on inflation-stock market interactions.

Despite these insights, a common limitation in literature is the treatment of inflation as an isolated explanatory variable without considering the broader institutional environment in which it works. For instance, the degree to which inflation affects market performance may depend not just on its size but also on the credibility of monetary policy, the transparency of regulatory institutions, and the stability of governance frameworks. In economies where institutional quality is weak, inflation can have a disproportionately adverse effect on investor behavior and Market Liquidity. The current study addresses this critical gap by examining how institutional quality moderates the relationship between inflation and stock market performance in Kenya. By integrating governance indicators into the inflation-stock market nexus, the research offers a more context-sensitive understanding of how macroeconomic and institutional forces interact to shape equity market outcomes.

2.3.2. Interest rate and stock market performance

Interest rates are widely recognized as a key determinant of stock market performance. In theory, changes in interest rates affect the cost of borrowing, investment decisions, corporate profitability, and investor sentiment. When interest rates rise, borrowing becomes more expensive for firms,

reducing profitability and future expected earnings, which may lead to a decline in stock prices. Conversely, lower interest rates encourage investment and consumption, potentially boosting firm performance and stock valuations. Empirical studies conducted in Kenya and other emerging economies reinforce this theoretical perspective.

Ngaruiya, Mathuva, and Obi (2025) evaluated the impact of Kenya's 2016 interest rate restrictions and their later removal in 2019 on the performance of banking sector stocks listed on the NSE. Using an event-study method, they looked at unusual returns around the times when the policy was announced. The results showed that putting the cap in place caused immediate negative anomalous returns, which showed that investors were worried about profitability constriction. But the long-term effect was not statistically significant, which means that the market may have adjusted over time. The study offers significant insights into policy shocks and market reactivity; nevertheless, it is limited to the banking sector and neglects larger market implications. Moreover, the influence of institutional quality, regulatory credibility, and investor sentiment was not examined, resulting in significant deficiencies in understanding the interaction between macroeconomic policy alterations and institutional dynamics on stock performance.

Kengere, Kimani, and Manyaga (2023) examined the impact of interest rate variations on the volatility of share prices in the NSE 20 Share Index by regression and Pearson correlation studies. Their findings showed that increasing interest rates amplified stock Market Liquidity, yielding a beta coefficient of around 0.53 ($p < .01$). This corroborates the Loanable Funds Theory, showing that stringent monetary policy elevates financing expenses and induces volatility in equity valuation. Even though it made good points, the study only looked at volatility and did not look at how interest rates directly affect stock returns. It also did not consider other macroeconomic factors like inflation or exchange rates, and it did not look at the strength of institutions either. This

constrains the explanatory depth of the findings and shows the necessity for a more cohesive framework.

Mogire (2022) examined the correlation between interest rate fluctuations and stock market performance for NSE 20-listed companies from 2011 to 2020. The study used correlation and regression analysis, revealing a significant negative correlation ($r = -0.78$) between interest rates and individual stock prices, so substantiating the assertion that elevated rates diminish equity values. However, a substantial positive association ($r = 0.83$) was seen between interest rates and overall market indices like the NSE 20 index and total returns, which is strange. Interest rates oversaw almost 60% of the changes in returns, which means that higher rates could be good for the market in most situations. The findings offer a complex perspective; nonetheless, the analysis excluded other macroeconomic variables, like inflation and exchange rate volatility, and did not account for institutional quality as a moderating variable. This narrow approach restricts its generalizability and highlights the necessity of multi-variable models to effectively capture the complexities of Kenya's market.

Otieno, Ngugi, and Wawire (2017) analyzed the dynamic interplay between short-term interest rates represented by Treasury bills and commercial loan rates and stock market returns in Kenya, using monthly data from 1993 to 2015. Utilizing the Autoregressive Fractionally Integrated Moving Average (ARFIMA) model and Granger causality tests, the study showed a long-term unidirectional causality from interest rates to stock returns, showing fluctuations in interest rates forecast equity market performance over time. In the short term, feedback causation was noted, suggesting that stock performance also affect interest rate predictions via investor emotion or portfolio rebalancing. This study enhances comprehension of the bidirectional relationships between interest rates and equity returns. But the study left out inflation, exchange rates, and

institutional quality from its framework, therefore, the study did not investigate significant structural and governance-related phenomena.

However, the strength and direction of this relationship may not be uniform across all economic and institutional contexts. Studies suggest the effects of interest rates on stock returns are modest or insignificant during periods of market distortion, regulatory interventions (e.g., interest rate caps), or global economic shocks such as the COVID-19 pandemic. Moreover, most studies analyze interest rates as isolated variables without accounting for the broader institutional frameworks, such as regulatory quality, rule of law, or political stability, which may condition how markets absorb and react to macroeconomic changes.

This gap is particularly relevant in countries like Kenya, where institutional quality has varied significantly over time and may influence how sensitive the stock market is to monetary policy shifts. So, the current study extends existing literature by examining not only the direct effects of interest rates on stock market performance but also the moderating role of institutional quality, thereby offering a more comprehensive view of capital market behavior in a developing country setting.

2.3.3. Exchange rate volatility and stock market performance

Exchange rate volatility is widely recognized as a significant determinant of stock market performance, especially in emerging economies where currency fluctuations introduce considerable uncertainty. Empirical studies in the Kenyan context confirm that exchange rate instability adversely affects both stock returns and Market Liquidity.

Koech (2021) investigated the impact of macroeconomic variables on the performance of companies listed on the Nairobi Securities Exchange. The study used secondary data from the Central Bank of Kenya (CBK) and the Kenya National Bureau of Statistics (KNBS) to apply the

Granger Causality Test and the Autoregressive Distributed Lag (ARDL) model. The findings revealed a Granger-cause link between interest rates, currency rates, and NSE performance, implying that these variables can forecast market changes. Furthermore, the ARDL findings showed a strong long-term association between exchange rates and stock market performance, emphasizing the importance of currency changes in Kenya's capital market. While the study was useful, it did not account for institutional quality characteristics such as regulatory integrity or political stability, leaving unexplored how governance structures may shape or regulate these correlations.

Akidi and Nwankwo (2024) investigated exchange rate dynamics and stock market performance in Nigeria, providing findings that are relevant to other African markets such as Kenya. Using annual data from 1981 to 2022, the analysis used exchange rates, interest rates, and trade openness as explanatory factors, with the All-Share Index (ASI) serving as a proxy for stock market performance. Using Johansen cointegration and an Error Correction Model (ECM), the authors discovered that both the exchange rate and interest rates had a negative and statistically significant impact on stock market performance. The findings show that currency volatility and high borrowing costs reduce investor confidence and slow market expansion. However, the study did not consider institutional quality characteristics such as political stability, regulatory efficacy, and rule of law, which are important in deciding investor impressions in emerging economies. This absence reduces the findings' explanatory value, especially in African nations where institutional inadequacies can aggravate macroeconomic shocks.

Kima, Kiptoo, and Ngetich (2022) used monthly time-series data from 2009-2021 to explore the effects of exchange rate volatility, inflation, and interest rates on the NSE 20 Share Index in Kenya, employing an Error Correction Model (ECM) method. Their findings revealed

that exchange rate volatility had a statistically significant negative impact on stock market performance, highlighting the destabilizing significance of currency changes in investor confidence. While the study presents contemporary and context-specific data, it treats macroeconomic variables as isolated drivers and does not investigate how institutional quality may mediate or magnify these impacts. This narrow approach ignores the potential for governance and regulatory mechanisms to improve the negative effects of macroeconomic volatility in Kenya.

Koskei (2021) examined the short-term effects of macroeconomic factors during the COVID-19 pandemic, using daily data from January to May 2020. The study used multiple regression analysis to decide the effect of exchange rate variations, inflation, and Treasury bill rates on the Nairobi All Share Index (NASI). The results revealed that exchange rate swings had a negative but statistically inconsequential short-term impact, while inflation and interest rates harmed stock market performance during the crisis. These findings show the markets' increased susceptibility to inflation and interest rate pressures during times of uncertainty. However, the study's short temporal span and exclusion of institutional quality indicators such as policy credibility and regulatory stability limited its applicability beyond the pandemic period.

The relationship between exchange rate volatility and stock market performance has been widely recognized as a critical area of concern, particularly in emerging market economies. Exchange rate fluctuations can influence stock markets through various channels, including their impact on firm earnings, import and export competitiveness, investor sentiment, and overall market stability. Persistent currency volatility has been associated with weakened investor confidence and reduced market activity in developing economies. Despite this, existing literature often treats exchange rate volatility as an isolated macroeconomic factor, offering limited insight into how broader structural and institutional conditions shape its impact. In contexts such as

Kenya, where financial markets work within complex institutional frameworks, understanding this dynamic requires moving beyond traditional macroeconomic explanations. This study therefore looks to contribute to the literature by examining how institutional quality moderates the relationship between exchange rate volatility and stock market performance, offering a more comprehensive and context-sensitive perspective on capital market behavior in developing economies.

2.3.4 Institutional Quality as a Moderator Between Macroeconomic Factors and Stock Market Performance

An expanding body of empirical literature emphasizes the critical role of institutional quality in shaping stock market development, particularly in emerging and developing economies. Most studies treat institutional quality as a direct determinant, yet a growing need exists to explore how it might also moderate the influence of macroeconomic factors on market outcomes.

Mensah, Osei-Fosu, and Asante (2022) examined the effects of public sector management and institutional quality on stock market development in six Sub-Saharan African countries, including East African economies. Using fixed and random effects panel estimators over the period 2005–2018, they found that institutional quality significantly contributes to stock market development overall, but its effect was statistically insignificant within the East African Community (EAC). This finding is particularly relevant to Kenya, suggesting that general institutional reforms may not uniformly affect market performance in the region. However, the study did not investigate why this divergence occurs, nor did it consider whether institutional quality may moderate the relationship between macroeconomic conditions and stock market behavior, leaving a critical gap unaddressed.

Mensah, Osei-Fosu, and Asante (2022) investigated how public sector management and institutional quality influenced stock market development in six Sub-Saharan African countries, including East African economies. Using fixed and random effects panel estimators for the period 2005-2018, they discovered that institutional quality has a considerable impact on stock market development globally, but its influence is statistically insignificant inside the East African Community. This is especially pertinent to Kenya since it shows that broad institutional improvements may not have a consistent impact on market performance in the area. However, the study did not go into the underlying causes of the divergence between subregions, nor did it evaluate whether institutional quality could function as a moderator between macroeconomic conditions and stock market behavior. The gap here is the lack of investigation into the interplay affects institutions and macroeconomic variables on East African stock market results.

Ali, Zhongxin, Ali, Fei, and Chowdhury (2022) examined whether institutional quality moderates the link between corporate governance and stock liquidity using panel data from 140 Pakistani listed firms from 2008 to 2020. They used hierarchical regression analysis to compare governance indicators (board independence, ownership concentration, and audit committee performance) against institutional quality criteria from the Worldwide Governance Indicators (WGI). Their findings revealed that institutional quality boosts the favorable effect of governance on stock liquidity, emphasizing the importance of institutional frameworks in magnifying financial outcomes. While the study provides solid evidence of institutions' moderating role, it is firm-level in scope and focuses on stock liquidity rather than overall market performance. The study's limitation is its lack of macro-level application, as it does not examine whether institutional quality moderates' correlations between macroeconomic parameters (inflation, interest rates, and currency

rates) and stock market results. The current study fills this gap by applying the moderation hypothesis to a national and macroeconomic environment in Kenya.

Khandaker and Al Farooque (2021) used the Generalized Method of Moments (GMM) to examine the relationship between macroeconomic volatility and institutional quality in 42 developed and emerging nations from 2001 to 2012. Their findings showed that strong institutional contexts reduce the negative effects of inflation and interest rate changes on stock Market Liquidity, implying that effective governance frameworks help protect capital markets from shocks. Although this gives valuable insights on institutional buffering, the study focused on Market Liquidity rather than stock market performance metrics like returns, index levels, or capitalization. As a result, it is still unclear whether institutional quality in volatile markets like Kenya not only reduces volatility but also influences the overall trajectory of market performance.

Lin, Inam, and Law (2021) used the Autoregressive Distributed Lag (ARDL) bounds testing approach to investigate the association between institutional quality and stock market development in Malaysia between 1984 and 2016. Using corruption control, political stability, and bureaucratic quality from the International Country Risk Guide (ICRG) as institutional indicators, as well as controls such as GDP growth, inflation, and private credit, they discovered a significant long-run relationship: higher institutional quality, particularly reduced corruption and political stability, promotes stock market development. However, the study only examined the direct effect of institutional quality, ignoring its possible moderating role in macroeconomic-financial links. Furthermore, Malaysia's institutional and financial landscape is quite different from that of Sub-Saharan Africa, which has weak governance institutions and higher macroeconomic instability. Thus, the gap is due to a lack of context-specific studies that investigate institutional moderation in African markets.

2.4 Knowledge Gap

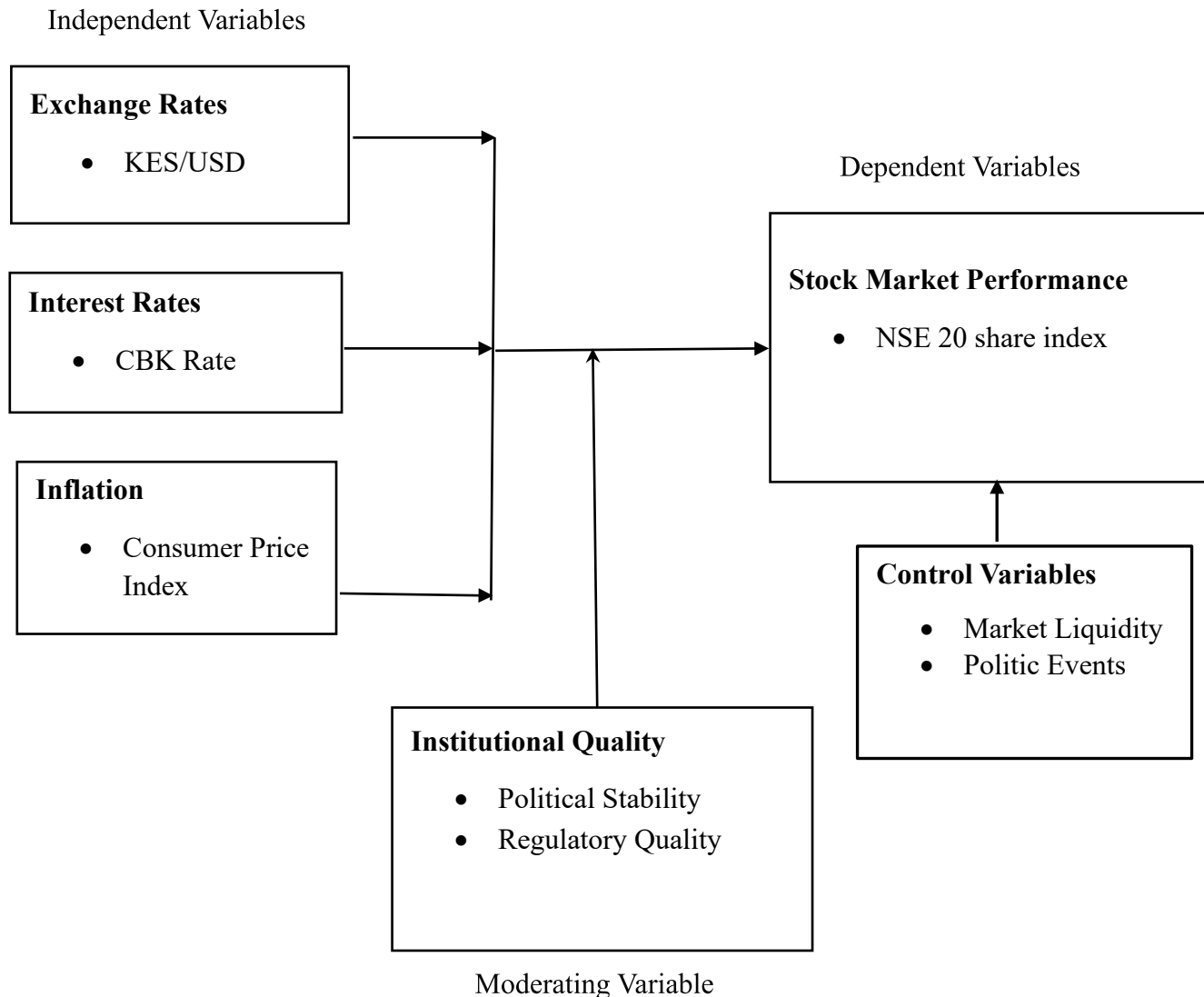
Despite these valuable insights, a significant research gap is still. None of the reviewed studies explicitly examined the moderating role of institutional quality on the relationship between macroeconomic variables (such as inflation, interest rates, and exchange rate volatility) and stock market performance in Kenya. Most existing research either focuses on volatility, broader financial development, or firm-level governance, without modeling the integrated effects of macroeconomic and institutional factors on national stock markets.

This study looks to fill this gap by providing an empirical analysis of how institutional quality measured through indicators such as political stability, regulatory quality, and the rule of law, moderates the relationship between key macroeconomic variables and the performance of the Nairobi Securities Exchange (NSE). By doing so, it contributes a novel perspective to the literature on capital markets in emerging economies and offers practical tips for policymakers aiming to strengthen the resilience and efficiency of Kenya's financial markets.

2.5 Conceptual Framework

According to Regoniel (2015) a conceptual framework illustrates the interrelationships among the study's factors, macroeconomic variables like inflation rates, interest rates, and currency rates serve as independent variables, while stock market performance is the dependent variable. Institutional quality, acting as a moderate variable, influences the relationship between the two. The figure below illustrates this relationship:

Figure 2.1: Conceptual Framework



Source: Researcher (2025)

2.5.1 Exchange Rate Volatility

In this study, exchange rates were viewed as an important macroeconomic element affecting stock market performance. Exchange rates are the value of a country's currency in relation to other countries' currencies, and in Kenya's case, they are especially essential given the country's reliance on international trade and capital flows. Exchange rates are notoriously volatile, often shifting in reaction to swings in global demand, monetary policy choices, and market mood. Variations in

exchange rates have a direct impact on the cash flows, costs, and revenues of international trade enterprises. For example, a depreciation of the local currency enhances the cost of imports while increasing the competitiveness of exports, affecting the profitability of publicly traded enterprises. These firm-level influences eventually translate into changes in equity valuations, which influence the broader stock market index. Furthermore, sustained exchange rate fluctuation may heighten uncertainty in financial markets, influencing investor confidence and risk perceptions. To account for this effect, the study used the monthly average exchange rate between the US dollar and the Kenya shilling as an indicator of exchange rate trends. This option was right since the US dollar is the primary reference currency in global trade and finance, and changes in the Kenyan shilling against the dollar have a substantial impact on both domestic enterprises and foreign investors. Monthly averages smoothed down short-term noise and provided a stable time-series measure for empirical study.

2.5.2 Interest Rates

This study regarded interest rates as a significant macroeconomic variable affecting stock market performance. Interest rates denote the expense of borrowing, articulated as the compensation borrowers provide to lenders for using funds over a designated duration. Fluctuations in interest rates influence liquidity conditions, investment motivations, and general economic activity, making them significantly pertinent to financial market dynamics. Rising interest rates elevate borrowing costs, which often diminishes investment in both the real economy and the stock market. Elevated interest rates make fixed-income instruments more appealing compared to stocks, thereby deterring engagement in the stock market. Conversely, reduced interest rates alleviate borrowing limitations, promote credit growth, and foster more investment in the economy, particularly equities markets. Theoretical connections highlight the importance of interest rates in

influencing stock market performance. This study used the monthly average Central Bank Rate (CBR), as reported by the Central Bank of Kenya, to measure interest rates. The CBR functioned as a definitive gauge of monetary policy orientation and the standard borrowing cost, therefore offering a dependable and uniform assessment of interest rate fluctuations throughout the study period.

2.5.3 Inflation

This study used the Consumer Price Index (CPI) to quantify inflation, reflecting the percentage variation in the overall price level of a sample assortment of consumer goods and services across time. Monthly CPI-based inflation rates were sourced from the Kenya National Bureau of Statistics (KNBS), guaranteeing dependence on an official and reputable data source. The inflation rate was determined by the annual percentage variation in the Consumer Price Index for each month. This technique offered a reliable and uniform metric of inflation throughout the research duration, as it accounted for seasonal variations and transient price swings. The use of monthly CPI data improved the precision of time-series analysis, enabling research to show both short-term fluctuations and long-term trends in inflation. This method is extensively used in empirical macroeconomic and financial research because of its clarity, global comparability, and conformity with national statistical standards. The study used CPI-based inflation to guarantee that the measure of price stability was both strong and appropriate for analyzing its impact on stock market performance inside the ARDL framework.

2.5.4 Institutional Quality

Institutional quality was operationalized as a composite moderating variable combining two key governance indicators: political stability and regulatory quality. World Bank's Worldwide Governance variables (WGI) collection. The analysis concentrated on two principal dimensions:

Regulatory Quality, assessing the government's capacity to devise and execute effective policies that foster private sector growth; and Political Stability and Absence of Violence/Terrorism, gauging the perceived probability of political turmoil, conflict, or violence. These metrics were reported annually as percentile ranks from 0 (lowest governance quality) to one hundred (best governance quality), showing a consistent international benchmark for governance comparisons across nations and temporal contexts. For analytical purposes, the parameters were assessed as a composite index to encapsulate overall institutional excellence. To construct the composite index for institutional quality, the standardized scores of political stability and regulatory quality were averaged to produce a single continuous measure being Kenya's institutional environment for each year. Given that the stock market performance data were accessible monthly, the annual WGI values were interpolated to create a coherent monthly series. This methodological modification ensured alignment between institutional quality metrics and the time-series data for macroeconomic and financial variables. The study utilized WGI indicators to elucidate the moderating influence of governance on the relationship between macroeconomic fundamentals and stock market performance in Kenya. This methodology provided a dependable and globally acknowledged assessment of institutional quality, simultaneously mirroring the nation's governance setting throughout the study duration.

2.5.5 Stock Market Performance

This study evaluated stock market performance using the NSE 20 Share Index, a price-weighted index that monitors the performance of twenty blue-chip businesses listed on the Nairobi Securities Exchange (NSE). The selection of these enterprises was predicated on criteria including trading activity, market capitalization, and underlying financial strength, which collectively showed the index as a dependable benchmark for assessing general market movements and investor mood in

Kenya. The NSE 20 Share Index is extensively used in academic and policy research as a benchmark for stock market performance, as it captures price variations of highly liquid and representative firms. The index successfully reflected the dynamics of the Kenyan stock market during the research period by concentrating on firms having a robust market presence. Monthly data on the NSE 20 Share Index was gathered and examined as a continuous interval-scale variable. This enabled the use of time-series methodologies to analyze the evolution of stock market dynamics in relation to significant macroeconomic indicators and institutional quality. The use of the NSE 20 Share Index in this manner offered a reliable and valid assessment of market performance, guaranteeing uniformity and comparability during the research period.

2.5.6 Control Variables

The study included two control variables, market liquidity and political events, to account for non-macroeconomic influences on stock market performance. Market liquidity was assessed by the monthly turnover ratio, calculated by dividing the total value of shares exchanged in a month by the average market capitalization for that period. This indicator showed the facility with which investors could transact securities without inducing significant price fluctuations. Recent studies highlight that increased liquidity promotes effective price discovery, diminishes transaction costs, and bolsters investor trust, thereby helping stock market performance (Chen, Liao, & Tsai, 2020; Mensi et al., 2022).

Political events were quantified using a dummy variable, with a value of 1 for months corresponding to significant political occurrences, specifically general elections, and times of increased uncertainty, and 0 otherwise. Empirical data shows that political instability and electoral cycles can profoundly influence investor sentiment and market volatility in emerging nations, particularly within African markets (Adegbite, Anyanwu, & Okafor, 2019; Owusu & Frimpong,

2021). Consequently, political events were regarded as exogenous shocks capable of disrupting the relationship between macroeconomic fundamentals and stock market performance.

The ARDL model included both control variables in conjunction with the primary macroeconomic predictors: inflation, interest rates, and exchange rates, along with the moderating variable of institutional quality. This specification guaranteed that the projected impacts of macroeconomic variables were not distorted by market microstructure dynamics or transient political shocks, which are especially pertinent in the Kenyan setting.

2.6 Operational definition and measurement of variables

Table 2.1 below provides an explanation of the definition and measurement of variables.

Table 2.1: Operationalization of Variables

Variable	Proxy / Measure	Expected Sign	Measurement Scale	Source(s)
Dependent Variable	Stock Market Performance (SMP): NSE 20 Share Index (monthly averages/returns).	N/A	Interval	Nairobi Securities Exchange (NSE)
Predictor: Inflation	Monthly Consumer Price Index (CPI) – Monthly percentage change.	Negative	Interval	Kenya National Bureau of Statistics (KNBS);
Predictor: Interest Rate	Central Bank Rate (CBR) (monthly average).	Negative	Interval	Central Bank of Kenya (CBK)
Predictor: Exchange Rate	Nominal Exchange Rate (KES/USD, monthly average).	Negative	Interval	CBK; IMF International Financial Statistics (IFS)
Moderator: Institutional Quality	World Governance Indicators (WGI): Percentile ranks for <i>Regulatory Quality</i> and <i>Political Stability & Absence of Violence</i> .	Positive	Interval	World Bank WGI Dataset
Control Market Liquidity	1: Turnover Ratio = (Monthly Value of Shares Traded ÷ Market Capitalization).	Positive	Interval	NSE Monthly Trading Reports
Control Political Events	2: Dummy variable (POL_t): 1 for months of general elections or major political unrest; 0 otherwise.	Negative	Interval (binary coded)	Independent Electoral and Boundaries Commission (IEBC); News archives (Nation, Standard, Trading Room)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this chapter is to provide a description of the research technique that will be utilized to accomplish the objectives of the study to determine the elements that influence the success of the stock market in Kenya, including the moderating effect of institutional quality and the macroeconomic determinants. Consequently, this chapter incorporates research design, population, and sampling procedures, and it is equipped with a procedure for collecting data, and it uses empirical models.

3.2 Research Design

Research design is a systematic framework that describes how data will be collected, analyzed, and interpreted to answer research objectives. It guarantees that the study's aims, methodology, and conclusions are consistent, hence increasing its validity and trustworthiness (Adeoye, 2023). Mixed-methods research combines qualitative and quantitative methodologies to gain deeper insights. A well-crafted design supports methodological decisions and links them with theoretical frameworks and practical objectives (Mwange et al., 2023), making it critical for rigorous and meaningful research.

This study adopted an explanatory research design to investigate the causal relationships between macroeconomic factors, institutional quality, and stock market performance. An explanatory design is appropriate because it aims to identify and study the nature of the relationships between variables, especially how independent variables (macroeconomic factors) affect the dependent variable (stock market performance) and how a moderating variable (institutional quality) changes this relationship (Saunders et al., 2019). This methodology

facilitates the creation and evaluation of an econometric model to ascertain both short-term and long-term dynamics.

Furthermore, this study used a descriptive research approach, which is ideal for systematically monitoring and characterizing correlations between variables without changing them. Descriptive designs allow researchers to get a comprehensive picture of the current state of phenomena, making them useful in studies that examine historical patterns and real-world dynamics. In this context, the design will show how macroeconomic fluctuations such as inflation, interest rates, and exchange rate movements have influenced the Nairobi Securities Exchange's (NSE) performance over time. This method is suitable for capturing existing patterns and trends in the Kenyan stock market within its macroeconomic context.

3.3 Target Population

The target population refers to the complete set of entities having specific characteristics relevant to the research objectives and to whom the findings are intended to generalize (Willie, 2024). A clearly defined target population is critical for ensuring the external validity and credibility of results (Willie, 2024). In this study, the target population comprises all companies listed on the Nairobi Securities Exchange (NSE) along with their aggregated market returns from 2005 to 2024. The research will focus on market-level performance rather than firm-level analysis. Therefore, no sampling of individual firms is needed. Instead, indices such as the NSE 20 Share were used alongside macroeconomic and institutional indicators to analyze overall stock market behavior in Kenya.

3.4 Sampling Frame

The study used monthly time-series data drawn from secondary sources to represent Kenya's stock market and key macroeconomic indicators over the period January 2005 to December 2024. As

the research was based on secondary data rather than direct surveys, the sampling frame consisted of institutional and financial data sources that provide consistent, verifiable, and publicly available information relevant to the variables under study. Specifically, data on stock market performance (proxied by the NSE 20 Share Index) were obtained from the Nairobi Securities Exchange (NSE) and the Capital Markets Authority (CMA). Macroeconomic indicators such as inflation, interest rates, and exchange rates were sourced from the Central Bank of Kenya (CBK) and the Kenya National Bureau of Statistics (KNBS), while political stability and regulatory quality used to construct the institutional quality moderator were extracted from the World Bank's Worldwide Governance Indicators (WGI) dataset. The sampling frame therefore covered 240 monthly observations per variable, standing for a continuous dataset that captures Kenya's financial and macroeconomic dynamics over the study period. The selection of this sampling frame was guided by data reliability, completeness, and relevance to the study objectives. The chosen institutions are the primary repositories of official financial and economic statistics in Kenya, ensuring data accuracy and comparability. This frame ensured that the analysis captured both cyclical and structural variations affecting the Kenyan capital market within the defined study period.

3.4 Data Collection Procedure

According to Creswell (2002), the process of gathering information from the individuals who are the subject of the research is referred to as data collecting. According to Flick (2009), data collection is the process of systematically obtaining and quantifying information to respond to the queries that were conducted at the beginning of the research project. For this investigation, secondary data was collected from secondary sources by data capture forms, which are described in full in Appendix II. The data sources consisted of three primary origins: interest rates and exchange rates was sourced from the Central Bank of Kenya, the NSE 20 share index was obtained

from the Nairobi Stock Exchange, and inflation data was gathered from the Kenya Bureau of Statistics, the World Bank's Worldwide Governance Indicators (WGI) for institutional quality. Market Liquidity was obtained from the capital markets bulletins, and political event data was recorded using government archives and credible news sources, covering the period from 2005 to 2024.

3.5 Data Processing and Analysis

Data processing and analysis in this study involved a systematic approach to organizing, transforming, and interpreting quantitative data to address the research objectives using STATA software, which eased robust time-series modeling. The study used secondary time-series data covering macroeconomic variables (such as interest rates, inflation, exchange rates, and net capital flow), institutional quality indicators, and stock market performance measures such as the NSE 20 Share Index for the period 2005 to 2024. Initially, the data underwent exploration series analysis to show trends, patterns, and potential anomalies. This includes the generation of descriptive statistics (Mean, standard deviation) to understand the behavior and distribution of each variable over time also time series tests. This also helped to find the analytical methods to use as well as the models to apply in the analysis.

3.6 Econometric Model Specification

The ARDL bounds test results showed that the computed F-statistics and t-statistics were below the lower bound critical values, leading to the conclusion that no long-run cointegrating relationship among the variables was present. Consequently, the estimator did not advance to the error correction model (ECM) specification, which is applicable only upon the confirmation of cointegration. The analysis solely used the short-run ARDL representation, articulated in first differences, to elucidate the dynamic short-term adjustments between stock market performance

and the chosen macroeconomic, institutional, and control variables. This method guarantees statistical validity, mitigates spurious regression problems, and offers significant insights into the impact of shocks in the explanatory variables on short-term stock market fluctuations.

The general short-run ARDL model of two lags is specified as:

$$\begin{aligned} \Delta \ln(SMP)_t = & \beta_1 \ln(SMP)_{t-1} + \beta_2 \ln(SMP)_{t-2} + \beta_3 INF_{t-1} + \beta_4 INT_RATE_t \\ & + \beta_5 \ln(EXR)_{t-1} + \beta_6 (INF \times IQ)_{t-1} + \beta_7 (INF \times IQ)_{t-2} + \beta_8 (INT \times IQ)_t \\ & + \beta_9 MKT_{t-1} + \beta_{10} MKT_{t-2} + \beta_{11} POL_EVENT_t + \varepsilon_t \end{aligned}$$

Where:

- SMP_t = Stock market performance (log-transformed)
- INF_t = Inflation rate
- INT_RATE_t = Interest rate
- EXR_t = Exchange rate (log-transformed)
- IQ_t = Institutional quality
- $INF \times IQ, INT \times IQ$ = Interaction (moderating) effects
- MKT_t = Market Liquidity indicator
- POL_EVENT_t = Political event dummy variable
- ε_t = Error term

This specification is appropriate because: It allows the study to examine the short-run effects of inflation, interest rates, and exchange rate volatility on stock market performance: It explicitly incorporates institutional quality as both a direct determinant and a moderator through interaction terms: It accounts for control variables (market liquidity and political events) that may confound the relationship: Since cointegration was not found, the absence of an error-correction term ensures the model remains statistically valid and avoids spurious long-run inference.

3.7 Pre-estimation Test

3.7.1 Stationarity/unit root Tests

Prior to estimating the ARDL model, it was essential to learn the order of integration of the variables. This measure was implemented to prevent erroneous regression outcomes and to guarantee the proper application of the ARDL approach. The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests were used for this purpose. Both tests evaluate the stationarity characteristics of time series data, although they diverge in their handling of serial correlation and heteroskedasticity. The ADF test enhances the fundamental Dickey-Fuller regression by using lagged difference terms to address autocorrelation, while the PP test employs a non-parametric modification to the test statistics, making it resilient to various forms of serial correlation and heteroskedasticity.

The test findings proved that none of the variables were integrated in order two, $I(2)$. This discovery is significant as the ARDL methodology established by Pesaran and Shin (1999) and Pesaran, Shin, and Smith (2001) is applicable alone when the foundational variables are a combination of $I(0)$ and $I(1)$. The existence of $I(2)$ variables would invalidate the calculated F-statistics employed for cointegration testing, therefore making the ARDL limits testing approach unsuitable. The confirmation that all variables were either stationary at levels $I(0)$ or stationary after initial differencing $I(1)$, but not $I(2)$, fulfilled the requisite criterion for ARDL estimation. This established a solid foundation for implementing the ARDL model to analyze both the short-term dynamics and the long-term interactions among the variables.

3.7.2 Lag Length Selection

After the validation of the integration order of the variables, the following phase in the ARDL process involves finding the best lag duration. Choosing a suitable lag structure is essential, as it

guarantees that the model effectively is dynamic interactions among the variables while preventing issues such as serial correlation or over-parameterization. This study established the appropriate lag time using the Akaike Information Criterion (AIC), favored for its efficiency in small samples and its capacity to balance model fit with degrees of freedom. A lag length of two (2) was determined based on this criterion. This decision enabled the model to accurately be essential dynamics while avoiding overfitting, thus reducing both omitted lag bias and excessive parameterization. By choosing an ideal lag length of two, the ARDL model effectively captured the fundamental time series connections, hence improving the reliability of both short-run and long-run parameter estimates.

3.7.3 Cointegration Test

After confirming the order of integration and selecting the optimal lag length, the next step was to establish whether the variables shared a stable long-run equilibrium relationship. For this purpose, the ARDL Bounds Test proposed by Pesaran, Shin, and Smith (2001) was employed. This approach is helpful because it accommodates a mixture of $I(0)$ and $I(1)$ variables and provides bounds for assessing whether the lagged levels of the variables jointly explain the dependent variable. The decision rule is based on the computed F-statistic: values above the upper bound confirm cointegration, while values below the lower bound imply no long-run relationship. The test results showed that the F-statistics were below the lower bound critical values, meaning the null hypothesis of no cointegration could not be rejected. Consequently, the analysis focused on the short-run dynamics captured by the ARDL, which explains how shocks and fluctuations in macroeconomic and institutional factors influence stock market performance in the short run. This shift in focus to the short-run coefficients ensured that the model remained valid and that the

findings reflected the immediate adjustments of the stock market to macroeconomic shocks and institutional interactions, even in the absence of long-run convergence.

3.8 Diagnostic and Stability Tests

3.8.1 Serial Correlation (Breusch-Godfrey LM Test)

The Breusch-Godfrey LM test was used to assess if the residuals from the estimated ARDL model displayed serial correlation. Showing serial correlation is an essential diagnostic procedure, as its presence shows that the error terms are not independently distributed over time. A violation may result in inefficient coefficient estimates, skewed standard errors, and erroneous statistical inference, hence compromising the trustworthiness of the model's results. Furthermore, in time series models like ARDL, serial correlation may show that the definition of lag length is insufficient, thus failing to adequately represent the dynamic interactions among the variables. The study employed the LM test to verify that the disturbances conformed to conventional regression assumptions and that the dynamic specification was accurately defined. The findings showed an absence of serial correlation in the residuals, so affirming that the mistakes were dispersed separately. This conclusion confirmed the model's adequacy, bolstered trust in the estimated parameters, and improved the robustness and reliability of the ARDL results.

3.8.2 Heteroskedasticity (Breusch-Pagan-Godfrey and White's Tests)

To verify whether the variance of residuals was constant across observations, both the Breusch-Pagan-Godfrey and White's tests for heteroskedasticity were applied. The presence of heteroskedasticity would imply that the variability of the error terms changes with the level of the explanatory variables, violating a core assumption of classical regression. Such violations can lead to inefficient coefficient estimates, inflated or deflated standard errors, and unreliable statistical inference. The Breusch-Pagan-Godfrey test was used to detect linear forms of heteroskedasticity

linked directly to the independent variables, while White's test provided a more general diagnostic capable of capturing any unspecified form of heteroskedasticity. Together, these tests offered a comprehensive evaluation of whether the residuals showed constant variance. The results revealed no evidence of heteroskedasticity, showing that the residuals were homoscedastic. This finding reinforced the robustness of the ARDL estimates, confirmed the accuracy of hypothesis testing, and increased confidence in the reliability of the overall model specification.

3.8.3 Normality (Jarque-Bera Test)

Alongside the assessment of serial correlation and heteroskedasticity, the distributional characteristics of the residuals were analyzed by the Jarque-Bera normalcy test. The normality of residuals is crucial as statistical methods, such as hypothesis testing and confidence interval generation, depend on the presumption of normally distributed errors. Departures from normalcy can skew standard errors and result in erroneous conclusions. The Jarque-Bera test assesses normality by contrasting the skewness and kurtosis of the residuals with those predicted in a normal distribution. The findings showed that the residuals mildly conformed to a normal distribution, as the null hypothesis of normality was not rejected. This discovery affirmed that the residuals satisfied the normality assumption, hence bolstering the credibility of the statistical inference and further substantiating the dependability of the ARDL estimate results.

3.8.4 Model Specification

The Ramsey Regression Specification Error Test (RESET) was used to assess the sufficiency of the model's functional specification. This diagnostic assessment aims to show any specification mistakes, including the omission of pertinent variables, the inclusion of extraneous variables, or improper functional forms resulting from overlooked non-linearities. This type of misspecification can lead to biased coefficient estimates, erroneous statistical inferences, and eventually undermine

the model's trustworthiness. The RESET test incorporates powered terms of the fitted values into the regression and evaluates if these supplementary variables significantly enhance model fit, showing potential misspecification. This study's test findings showed that the ARDL models were accurately described, with no indications of functional form problems. The lack of substantial specification issues confirmed that the selected model structure well stood for the connections among the variables. This result bolstered confidence in the precision of the calculated parameters and reinforced the robustness of empirical findings.

3.8.5 Stability Test

Finally, the stability of the estimated ARDL model was assessed using the CUSUM of Squares (CUSUMSQ) tests. These recursive residual-based diagnostics are widely applied to examine whether model parameters are still stable over time or whether structural breaks and shifts occur within the sample period. Specifically, the CUSUMSQ test investigates the constancy of the error variance. The procedures involve plotting the cumulative sum of residuals against critical significance bounds at the 5% level, with stability confirmed if the plots are still within these bounds. In this study, the results showed that the plots of both tests stayed well within the critical boundaries, providing evidence of structural stability in the estimated ARDL model. The absence of significant parameter instability or variance shifts enhanced confidence in the reliability of the model and confirmed its robustness for capturing the underlying relationships among the variables.

3.9 Estimation Technique

The study employed a comprehensive time-series econometric framework to examine the linkages between stock market performance, macroeconomic factors, and institutional quality in Kenya. As a preliminary step, a Time Series Cross-Correlation (TSCC) analysis was conducted to explore the dynamic associations between the Nairobi Securities Exchange (NSE) 20 Share Index and selected

macroeconomic indicators. This diagnostic analysis provided initial evidence on the direction, size, and timing of interactions among variables such as inflation, interest rate, exchange rate, institutional quality, and market liquidity. The TSCC results revealed significant short-run correlations, particularly between stock market performance, exchange rate fluctuations, and institutional quality, suggesting the potential for short-term interactions but limited evidence of persistent long-run co-movements.

Following this exploratory stage, the Autoregressive Distributed Lag (ARDL) methodology was applied after establishing the stationarity properties of each series. The ARDL model was considered because it accommodates regressors integrated of different orders, specifically $I(0)$ and $I(1)$, while excluding $I(2)$ variables. Moreover, the technique is well-suited for small-sample studies, often yielding more efficient and reliable estimates than alternative cointegration approaches. To evaluate the existence of a long-run equilibrium relationship, the ARDL bounds testing procedure proposed by Pesaran, Shin, and Smith (2001) was employed. However, the computed F- and t-statistics fell below the lower critical bounds, indicating the absence of cointegration among the variables. Consequently, the analysis focused on the short-run ARDL representation, which enabled an examination of immediate adjustments and short-term interactions between stock market performance, macroeconomic variables, and institutional quality.

This integrated approach combining TSCC and ARDL analysis allowed the study to capture both instantaneous correlations and dynamic causal responses. By incorporating lagged effects of both dependent and explanatory variables, the short-run ARDL specification effectively modeled market adjustments, mitigated omitted variable bias, and reflected the volatility and short-term sensitivity characteristic of the Nairobi Securities Exchange.

3.9 Ethical Considerations

This study followed recognized ethical research principles to maintain integrity, transparency, and responsibility throughout the research process. The study did not collect any primary data from human participants because it relied solely on secondary data from credible sources such as the Kenya National Bureau of Statistics (KNBS), the Central Bank of Kenya (CBK), the Nairobi Securities Exchange (NSE), The Capital Market Authority and the World Bank's Worldwide Governance Indicators (WGI). As a result, the risks of confidentiality, consent, or injury to respondents are limited.

The study was, nevertheless, adhered to the following ethical criteria. First, all data was reported honestly and accurately, without making up, changing, or misrepresenting the results. Second, all authors, institutions, and databases that provided information were properly credited. This will protect academic integrity and keep people from plagiarizing. Third, the research was done in an objective way, making sure that the data are analyzed and interpreted without prejudice from individuals or institutions. Lastly, the study followed KCA University's ethical rules and respect copyright laws, intellectual property rights, and any agreements about how to use data from secondary sources. The study seeks to maintain scholarly integrity and repute by adhering to these principles, while also providing a responsible contribution to the domain of finance and investment research.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter offers the empirical findings from a study on the relationship between macroeconomic conditions, institutional quality, and stock market performance in Kenya. The analysis uses the Autoregressive Distributed Lag (ARDL) approach, which includes institutional quality as a moderator as well as controls for political events and Market Liquidity. The chapter begins with descriptive statistics and correlation analysis, then progresses to unit root and cointegration testing. It then presents the ARDL estimation results, emphasizing both short-run and long-run dynamics, before evaluating the moderating function of institutional quality and the impact of control variables. Finally, the findings' reliability is confirmed using robustness checks such as Johansen cointegration, residual diagnostics, and stability tests.

4.2 Descriptive Statistics

Table 4.1 displays the descriptive statistics for the primary variables included in the study, encompassing 240 monthly observations from January 2005 to December 2024. Descriptive statistics provide summaries of the sample and data measures, which aid in describing the characteristics of a particular data set (Mishra, Pandey, Singh, & Gupta, 2019). The standard deviation was used to assess the variability around the mean, while the mean itself is a measure of central tendency that provides the average of the specific sample data being used, according to George and Mallery (2018). On the other hand, minima and maxima provided information on the distribution's spread, with the minima offering the lowest value and the maximum the largest value. The results of the analysis of macroeconomic factors, moderating role of institutional

quality, control variables and how they influence stock market performance in Kenya are shown in Table 4.1.

Table 4.1: Descriptive statistics

Statistics	Obs	Mean	Std. Dev.	Min	Max
Stock Performance	Market 240	3463.241	1211.14	1467.361	5987.367
Inflation	240	8.855	3.534	3.060	14.840
Interest Rate	240	9.243	2.392	5.750	18.000
Exchange Rate	240	95.152	20.244	61.9	159.69
Institutional Quality	240	27.056	2.032	23.740	31.995
Market Liquidity	240	7.709	2.128	4.575	11.995
Political Events	240	0.025	0.156	0.000	1.000

Source: Author's study data (2025).

The stock market performance was proxied by the Nairobi Securities Exchange (NSE) 20 Share Index, it shows a mean of 3463.241 and a standard deviation of 1211.14, showing moderate variability in market activity over the study period. The minimum value of 1467.361 and the maximum of 5987.367, reflecting periods of both market downturn and recovery. Inflation averages 8.855 percent with a standard deviation of 3.534, showing significant variability across months, in line with Kenya's experience of intermittent inflationary shocks. The minimum and maximum inflation rates, 3.060 and 14.840 respectively, show intervals of both relative price stability and elevated inflation. The average interest rate is 9.243 percent, fluctuating between 5.750 and 18.000 percent, with a standard deviation of 2.392. This broad variation highlights the effects of alterations in monetary policy, particularly the implementation and later elimination of interest rate ceilings.

The exchange rate has a Mean of KES 95.152 per USD, with notable volatility, with a standard deviation of 20.244. The interval of 61.90 to 159.69 indicative of significant currency depreciation over time, aligning with Kenya's long-term exchange rate trajectory. The institutional quality has an average of 27.056 and a standard deviation of 2.032, with a range from 23.740 to 31.995. The gradual dissemination shows modest institutional modifications throughout the period instead of sudden transformations. Market Liquidity shows a mean of 7.709 and a standard deviation of 2.128, with values spanning from 4.575 to 11.995. This signifies considerable volatility in stock market conditions, potentially associated with both macroeconomic and political developments. The political events dummy has a mean value of 0.025, showing the infrequency of significant political disturbances, while the highest value of 1 signifies the occurrence of such events on specific months. Overall, the descriptive results show notable variation in macroeconomic and institutional indicators, which provides a sound basis for examining their dynamic effects on stock market performance through the ARDL framework.

4.3 Time Series Cross-Correlation (TSCC) Analysis

To explore the temporal dynamics of stock market performance, a correlogram was generated for the logarithm of the NSE 20 Share Index. The autocorrelation (AC) and partial autocorrelation (PAC) coefficients were computed for up to 40 lags to assess the persistence and memory properties of the series. The results revealed exceptionally high autocorrelation values at initial lags, with the first-order autocorrelation coefficient (AC_1) recorded at 0.989 and the corresponding partial autocorrelation (PAC_1) at 0.997. Although the autocorrelation values gradually declined across later lags, they stayed above 0.4 even at lag 40, showing a strong and prolonged dependence of current stock market performance on its past values. The Ljung–Box Q-statistics were statistically significant ($p < 0.01$) across all lags, confirming the presence of serial correlation and

suggesting that the series is not white noise. The partial autocorrelation function (PACF) displayed a sharp decline after the first lag and minor fluctuations, thereafter, implying that the series follows an autoregressive process of low order. This pattern proves that earlier market performance exerts a considerable influence on current market movements, consistent with the concept of market inertia and behavioral anchoring among investors (Brooks, 2019; Enders, 2015). The full results are under Appendix V.

To examine the dynamic relationships between stock market performance and macroeconomic fundamentals, a Time Series Cross-Correlation (TSCC) analysis was conducted using the logarithm of the NSE 20 Share Index as the dependent variable. The analysis explored contemporaneous and lagged correlations with inflation, interest rate, exchange rate, institutional quality, political events, and market liquidity. The results, presented in Table 4.9, reveal distinct correlation patterns across variables and lags. The exchange rate displayed the strongest negative association with stock market performance ($\rho = -0.81$ across lags 0–2), showing that exchange rate depreciation significantly undermines stock returns, through inflationary pressures and reduced foreign investment inflows. Institutional quality showed a moderate positive relationship ($\rho = 0.33$ at lag 2), implying that improvements in governance and regulatory capacity contribute to enhanced investor confidence and market stability, though with a delayed effect.

Market liquidity showed a strong contemporaneous correlation ($\rho = 0.77$) with stock performance, confirming the vital role of trading activity and capital flows in sustaining market growth. In contrast, inflation and interest rates recorded weak and negative correlations, suggesting that these monetary factors exert minimal short-run influence on equity price movements. Political events showed marginally positive correlations ($\rho \approx 0.07$), implying limited yet observable short-term reactions to political developments. Overall, the TSCC findings suggest that exchange rate

fluctuations, institutional quality, and market liquidity are the most influential determinants of Kenya's stock market performance. These correlations provide initial evidence of potential short- and lagged interactions that justify further investigation through the Autoregressive Distributed Lag (ARDL) model.

Table 4.2: Cross-correlation coefficients between stock market performance and selected macroeconomic and institutional variables (lags 0–2)

Variable	Lag 0	Lag 1	Lag 2	Interpretation
Inflation	-0.055	-0.052	-0.074	Weak negative relationship
Interest rate	-0.026	-0.009	+0.013	Weak and insignificant link
Exchange rate	-0.814	-0.813	-0.811	Strong negative relationship
Institutional quality	+0.299	+0.317	+0.332	Moderate positive (delayed)
Political events	+0.069	+0.066	+0.063	Marginal positive association
Market liquidity	+0.768	+0.761	+0.747	Strong positive contemporaneous link

Source: Author's study data (2025)

4.4 Diagnostic Tests

The research conducted various diagnostic tests to ensure that the time series model postulations have not been violated and to find the models that should be investigated. Testing for pre-estimation and post-estimation was therefore done before executing a time series model. The tests for unit root, Lag Order Selection and Bounds Test for Cointegration were performed as pre-estimation, while the tests for Autocorrelation, heteroskedasticity, normality and stability were performed as post-estimation. These tests were conducted in the study to prevent spurious findings.

4.4.1 Unit Root Tests

Unit root testing was conducted utilizing both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) methodologies. The use of both tests enhances robustness, since the ADF addresses higher-order serial correlation through the inclusion of delayed variables, while the PP test non-parametrically adjusts for heteroskedasticity and autocorrelation. This combination guarantees that

the stationarity characteristics of the data are unaffected by certain test assumptions (Gujarati & Porter, 2009; Nkoro & Uko, 2016).

Table 4.3: ADF and PP Unit Root Test Results (Level Series)

Variable	ADF Z(t)	1% CV	P- value	PP Z(t)	5% CV	P- value	Stationarity Status
Stock Performance	-2.409	-2.881	0.3751	-2.625	-3.431	0.2684	Non-stationary I (1)
Inflation	-6.026	-2.881	0.0000	-14.795	-3.431	0.0000	Stationary I (0)
Interest Rate	-4.270	-2.881	0.0035	-2.928	-3.431	0.1535	Mixed (ADF I (0), PP I (1))
Exchange Rate	-3.602	-2.881	0.0297	-3.434	-3.431	0.0470	Stationary at 5% I (0)
Institutional Quality	-3.252	-2.881	0.0746	-3.109	-3.431	0.1042	Non-stationary I (1)
Market Liquidity	-4.281	-2.881	0.0034	-3.812	-3.431	0.0160	Stationary I (0)
Political Events	-6.482	-2.881	0.0000	-15.844	-3.431	0.0000	Stationary I (0)
1st Diff SMP	-4.792	-2.881	0.0001	-11.411	-3.431	0.0000	Stationary I (0)
1st Diff Int_Rate	-4.932	-2.881	0.0000	-10.577	-3.431	0.0000	Stationary I (0)
1st Diff IQ	-5.666	-2.881	0.0000	-15.339	-3.431	0.0000	Stationary I (0)

Source: Author's study data (2025).

The findings show a heterogeneous order of integration among the factors. Inflation, Market Liquidity and political events, are stationary at level I (0) according to both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. The stock market performance and institutional quality, non-stationary at level, although the exchange rate shows borderline stationarity at the 5% significance level in both tests. The interest rate variable shows incongruent evidence: stationary according to the ADF test but non-stationary per the PP test, showing it may function as I (1).

The findings show that the dataset includes a combination of I (0) and I (1) series. This combination confirms the suitability of the ARDL methodology as it allows for regressors that are a mix of I

(0) and I (1) but excludes I (2). Consequently, ARDL can be effectively used to analyze both the short-term dynamics and the long-term cointegration linkages among macroeconomic variables, institutional quality, and stock market performance in Kenya.

4.4.2 Lag Order Selection Criteria

The optimal lag length for the autoregressive distributed lag (ARDL) and VAR framework was established by applying lag selection criteria, including the Akaike Information Criterion (AIC), Final Prediction Error (FPE), Hannan–Quinn Information Criterion (HQIC), and Schwarz Bayesian Information Criterion (SBIC). The findings are displayed in Table 4.4 The findings prove that various criteria propose distinct ideal lag durations. The AIC and FPE choose latency 2 as optimal, although the HQIC and SBIC both prefer lag 1. While the likelihood ratio (LR) test is optimized at lag 3, the information criteria present varying suggestions. This study selects lag 2 as the ideal lag duration for subsequent estimations, given the AIC and FPE often yield superior performance in finite samples and are less restrictive than HQIC and SBIC. This selection guarantees that the model adequately encapsulates the fundamental dynamics of stock market performance and its interplay with macroeconomic variables, institutional quality, Market Liquidity, and political occurrences, while reducing the likelihood of residual autocorrelation.

Table 4.4: Lag Order Selection Results

Lag	LogL	LR	df	p-value	FPE	AIC	HQIC	SBIC
0	-1868.12				0.018793	15.8909	15.9323	15.9936
1	-170.02	3396.20	49	0.000	1.6e-08	1.9155	2.2468*	2.7374*
2	-91.90	156.24	49	0.000	1.3e-08*	1.6687*	2.2899	3.2098
3	-50.62	82.57*	49	0.002	1.3e-08	1.7341	2.6452	3.9943
4	-26.48	48.28	49	0.502	1.7e-08	1.9447	3.1458	4.9242

*Notes: * denotes the criterion-selected lag length.

Source: Author's study data (2025).

4.4.3 Bounds Test for Cointegration

After estimating the ARDL/ECM model, the bounds cointegration test of Pesaran, Shin, and Smith (2001) was applied to verify the existence of a long-run equilibrium relationship between stock market performance, macroeconomic variables, and institutional quality. Computed F-statistics (2.075) and t-statistics (-1.504) were both below the lower critical bounds at the 10%, 5%, and 1% significance levels. So, the null hypothesis of no long-run cointegration could not be rejected. This finding implied that the variables did not share a stable long-run relationship during the study period. As a result, the study focused on the short-run ARDL specification to capture the dynamic short-term effects rather than imposing long-run constraints that are not statistically supported.

Table 4.5: Bounds Test Results

Test-statistic	10% I (0) / I (1)	5% I (0) / I (1)	1% I (0) / I (1)	Decision
F-statistic	2.075 < 1.891 / 3.038	2.155 / 3.374	2.713 / 4.071	Fail to reject H0
t-statistic	-1.504 > -2.542 / -4.514	-2.849 / -4.514	-3.444 / -5.526	Fail to reject H0

Source: Author's study data (2025)

The lack of cointegration indicates that Kenya's stock market does not sustain a long-term equilibrium with macroeconomic variables and institutional quality from 2005 to 2024. The market is influenced by short-term shocks, especially fluctuations in interest and exchange rates, as well as institutional dynamics that either worsen or alleviate their impact. This conclusion aligns with research in emerging economies, where institutional deficiencies and significant Market Liquidity hinder the formation of stable long-term connections (see Odhiambo, 2020; Mlambo & Adetiba, 2021).

4.4.4 Serial Correlation

To examine whether the ARDL model suffered from autocorrelation, the Breusch–Godfrey LM test for serial correlation was conducted. The results are presented in Table 4.6 below.

Table 4.6: Breusch–Godfrey LM Test for Autocorrelation

Lags (p)	Chi-square (χ^2)	df	Prob > χ^2	Decision (5% level)	Conclusion
1	0.001	1	0.9698	Fail to reject H_0	No autocorrelation
2	0.368	2	0.8318	Fail to reject H_0	No autocorrelation
3	0.534	3	0.9114	Fail to reject H_0	No autocorrelation
4	1.211	4	0.8763	Fail to reject H_0	No autocorrelation

Source: Author's study data (2025).

At all lag orders (1, 2, 3 and 4), the p-values are greater than 0.05, showing that the null hypothesis of no serial correlation cannot be rejected. This suggests that the ARDL model does not suffer from autocorrelation, and hence the residuals are independently distributed. The absence of serial correlation confirms the reliability of the model's short- and long-run estimates (Wooldridge, 2016).

4.4.5 Heteroskedasticity Test

To evaluate for heteroskedasticity in the ARDL model residuals, both the Breusch–Pagan / Cook–Weisberg test and White's test were applied.

Table 4.7: Heteroskedasticity Test Results

Test	Chi ²	df	Prob > Chi ²	Decision (5% level)
Breusch–Pagan / Cook–Weisberg	0.60	1	0.4388	Fail to reject H_0
White's Test (Heteroskedasticity only)	170.68	150	0.1188	Fail to reject H_0

Source: Author's study data (2025).

Both tests produced p-values above 0.05, meaning the null hypothesis of homoskedasticity cannot be rejected. Therefore, there is no evidence of heteroskedasticity in the residuals, implying that the error terms have constant variance across observations.

4.4.6 Normality Test

The Jarque-Bera (JB) test was employed to assess whether the residuals of the ARDL model follow a normal distribution. The test statistics are based on the skewness and kurtosis of the residuals

and follows a Chi-square distribution with two degrees of freedom, corresponding to the two components being evaluated.

Table 4.8: Normality Test Results

Test	Chi ²	df	Prob > Chi ²	Decision (5% level)
Jarque–Bera Normality Test	5.995	2	0.0499	reject H ₀

Source: Author’s study data (2025).

In this study, the JB statistic was 5.995, which is marginally higher than the 5% critical value of the Chi-square distribution with two degrees of freedom ($\chi^2(2) \approx 5.991$). This resulted in a p-value of 0.0499, leading to the rejection of the null hypothesis of normality at the 5% significance level. Despite this outcome, the deviation from normality is mild, as the statistic only surpasses the critical threshold. Moreover, given the large sample size ($n = 238$), the Central Limit Theorem assures that the sampling distribution of the ARDL estimators will remain asymptotically normal, even when the residuals themselves deviate slightly from normality. Additionally, ARDL estimators are robust to minor violations of the normality assumption, especially when other diagnostic tests for autocorrelation and heteroskedasticity indicate that the model is well-specified. Consequently, although the JB test suggests a slight departure from normality, this is not considered a critical issue, and the reliability of the estimated ARDL coefficients is still intact.

4.4.6 Model specification

The Ramsey Regression Specification Error Test (RESET) was conducted to evaluate whether the ARDL model suffers from specification errors such as omitted variables or incorrect functional form. The test introduces nonlinear combinations of the fitted values into the regression and checks if they significantly improve model fit. The results are presented below: on Table 4.9

Table 4.9: Model Specification Results

Test	F-statistic	df	Prob > F	Decision
Ramsey RESET	1.36	(3, 204)	0.2556	Fail to reject H_0

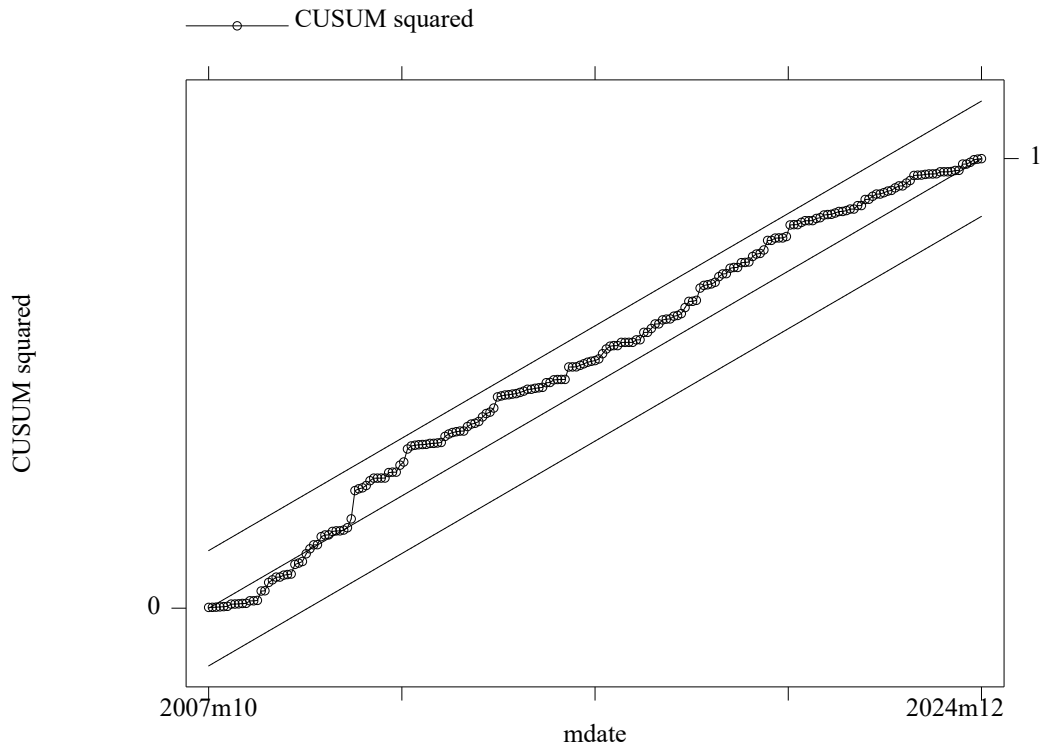
Source: Author's study data (2025).

In this study, the RESET test produced an F-statistic of 1.36 with a corresponding p-value of 0.2556. Since the p-value is greater than the conventional 5% significance level, we fail to reject the null hypothesis that the model has no omitted variables. This outcome suggests that the ARDL model is correctly specified in terms of functional form and that key explanatory variables have been adequately captured. Therefore, the risk of model misspecification is minimal, supporting the validity of the estimated results.

4.4.7 Model Stability Test

To assess the stability of the estimated ARDL model, the CUSUM of Squares (CUSUMSQ) test was conducted. The test examines whether the model coefficients are still stable over time by comparing the cumulative sum of squared residuals against critical boundaries.

Figure 4.1: CUSUM of Squares Stability Test



Source: Author's study data (2025)

The results in Figure 4.1 show that the CUSUM of Squares line remained within the 5% significance boundaries throughout the sample period (2005–2024). This shows that the ARDL model is structurally stable, and the estimated parameters did not experience significant instability or structural breaks during the study period. This finding is consistent with the diagnostic tests, further supporting the reliability of the short-run dynamic results obtained from the ARDL model (Brown, Durbin, & Evans, 1975).

4.5. Inferential Analysis

4.5.1 Time Series Analysis (ARDL Coefficients Results without moderation)

The selection of the model with the Akaike Information Criterion (AIC) resulted in an ARDL (2,2,0,1) specification. Table 4.10 below shows the Model fit and Overall significance of the ARDL Model fitted.

Table 4.10: Model Fit and Overall Significance of the ARDL Model without moderation

Statistic	Value	ANOVA Component	SS / MS (approx.)	df	F	Prob > F
R-squared (R²)	0.9893	Model (Explained)	SSR \approx 18.56	8	2638.65	0.0000
Adjusted R-squared	0.9889	Residual (Unexplained)	SSE \approx 0.20	229		
Root MSE	0.0417	Total	SST \approx 18.76	237		
Number of Observations (N)	238					
Log Likelihood	423.096					

Source: Author's study data (2025)

The ARDL model specification incorporates multiple lags of both dependent and independent variables. As a result, the initial periods are lost when constructing the lagged regressors. In this study, the first two months of 2005 (January and February) were dropped because they were consumed by the lag structure. Starting the estimation from March 2005 to December 2024, it ensured that sufficient lagged values were available for reliable estimation, without compromising the integrity of the sample or introducing artificial adjustments. The model shows a strong explanatory power with an R-squared of 0.9893 and an adjusted R-squared of 0.9889, meaning that approximately 99% of the variation in stock market performance is explained by the macroeconomic variables included. The overall F-statistics are highly significant ($p < 0.01$), confirming the robustness of the model.

4.5.2 Short-Run ARDL Coefficients without moderation

The short-run ARDL (2,2,0,1) results reveal that stock market performance in Kenya shows significant persistence and short-term correction mechanisms. The first lag of stock market performance (L1) is positive (1.2362) and highly significant ($p < 0.01$), showing that past market performance strongly influences current market behavior. The second lag (L2) is negative (-0.2630) and significant ($p < 0.01$), suggesting short-run adjustments toward equilibrium following deviations.

Inflation shows an insignificant immediate effect, L0(-0.00037) $P=0.631$, L1(0.00082) $p=0.285$ implying that short-term price fluctuations do not have a direct impact on market returns. However, the second lag of inflation (-0.00219) is negative and significant ($p < 0.05$), confirming that prolonged inflationary pressures adversely affect stock market performance. The interest rate is positive but statistically insignificant, suggesting that in the short run, monetary policy adjustments through interest rates have limited influence on stock market activity. The exchange rate has a negative (-0.5409) and significant contemporaneous effect ($p < 0.01$), showing that currency depreciation initially weakens market performance by raising import costs and inflationary risks. However, the lagged exchange rate (L1) 0.4923 is positive and significant ($p < 0.01$), suggesting that after a brief adjustment period, depreciation may boost stock performance by enhancing the competitiveness of export-oriented firms. The results are presented on table below.

Table 4.11: ARDL Short-Run Dynamics without moderation

Variable	Coefficient	Std. Error	t-Statistic	p-Value	Significance
Lagged Stock Market Performance (L1)	1.2362	0.0615	20.11	0.000	***
Lagged Stock Market Performance (L2)	-0.2630	0.0606	-4.34	0.000	***
Inflation (L0)	-0.00037	0.00077	-0.48	0.631	
Inflation (L1)	0.00082	0.00077	1.07	0.285	
Inflation (L2)	-0.00219	0.00077	-2.84	0.005	**
Interest Rate (L0)	0.00080	0.00122	0.65	0.514	
Log Exchange Rate (L0)	-0.5409	0.1467	-3.69	0.000	***
Log Exchange Rate (L1)	0.4923	0.1498	3.29	0.001	***
Constant (C)	0.4449	0.1908	2.33	0.021	**

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Source: Author's study data (2025)

$$\begin{aligned} \ln(SMP)_t = & 0.4448677 + 1.236174 \ln(SMP)_{t-1} - 0.2630257 \ln(SMP)_{t-2} \\ & - 0.0003722 INF_t + 0.0008246 INF_{t-1} - 0.0021896 INF_{t-2} \\ & + 0.0007957 INT_RATE_t - 0.540858 \ln(EXR)_t + 0.492264 \ln(EXR)_{t-1} + u_t \end{aligned}$$

4.5.3 Time Series Analysis (ARDL Coefficients Results with moderation)

The selection of the model with the Akaike Information Criterion (AIC) resulted in an ARDL (2,1,0,1,0,0,2,0,2,0) specification. Table 4.10 below shows the Model fit and Overall significance of the ARDL Model fitted.

Table 4.12: Model Fit and Overall Significance of the ARDL Model

Statistic	Value	ANOVA Component	SS / (approx.)	MS df	F	Prob > F
R-squared (R²)	0.9905	Model (Explained)	SSR ≈ 56.40	17	1346.12	0.0000
Adjusted R-squared	0.9897	Residual (Unexplained)	SSE ≈ 2.73	220		
Root MSE	0.0401	Total	SST ≈ 59.13	237		
Number of Observations (N)	238					
Log Likelihood	437.33					

Source: Author's study data (2025)

The ARDL (2,1,0,1,0,0,2,0,2,0.) model demonstrates an excellent fit to the data. The R-squared of 0.9905 and the adjusted R-squared of 0.9897 show that the explanatory variables collectively account for over 99% of the variation in stock market performance. Furthermore, the low Root MSE (0.0401) reflects minimal residual variance, underscoring the accuracy of the model in capturing observed dynamics. The high log likelihood value (437.33) provides further evidence of strong overall fit. These results suggest that the ARDL specification is highly robust and well-suited for examining the short-run dynamics between stock market performance, macroeconomic indicators, and institutional factors.

The ANOVA decomposition supports the overall robustness of the ARDL model. The regression model explains a substantial portion of the variation in stock market performance, with an F-statistic of 1346.12 ($p < 0.001$) showing that the explained variation is highly significant compared to the residual error. With 17 model degrees of freedom and 220 residual degrees of freedom, the results affirm that the regressors collectively have strong explanatory power. The mean square error (Root MSE = 0.0401) further shows that residual variance is minimal, aligning with the extremely high R^2 (0.9905). This confirms that the model captures all systematic variations in the dependent variable, leaving little room for unexplained error.

4.5.4 Short-Run ARDL Coefficients for the Moderation

The short-run results of the ARDL (2,1,0,1,0,0,2,0,2,0) model demonstrate that stock market performance in Kenya exhibits strong inertia, which is consistent with the previous run without moderation, as both lags of the dependent variable were statistically significant. The first lag of stock performance was positive and highly significant (coef. = 1.1974, $p = 0.001$), showing that past positive returns strongly reinforce current performance a finding consistent with momentum effects documented in financial market studies. Conversely, the second lag was negative and

significant (coef. = -0.2249, p = 0.000), suggesting that earlier gains tend to reverse over time as the market self-corrects. This dual effect highlights the short-run persistence of stock returns in Kenya, but also reveals an inherent mean-reverting tendency, where temporary booms are followed by corrections. Table 4.11 below shows the overall coefficients of the short run results.

Table 4.13: ARDL Short-Run Dynamics with moderation

Variable	Coefficient	Std. Error	t-Statistic	p-Value	Significance
Lagged Stock Market Performance L1	1.1974	0.0607	19.73	0.000	***
Lagged Stock Market Performance L2)	-0.2249	0.0622	-3.61	0.000	***
Lagged Inflation (L1)	-0.0171	0.0078	-2.20	0.029	**
Interest Rate	0.0417	0.0202	2.06	0.040	**
Lagged Exchange Rate (L1)	0.5440	0.1477	3.68	0.000	***
Lagged Inflation × IQ L1	0.00067	0.00028	2.36	0.019	**
Lagged Inflation × IQ L2	-0.00008	0.00003	-3.02	0.003	***
Interest Rate × IQ	-0.0015	0.00076	-2.01	0.046	**
Lagged Market Liquidity (L1)	0.0113	0.0052	2.15	0.032	**
Lagged Market Liquidity (L2)	-0.0132	0.0038	-3.43	0.001	***
Political Events	0.0366	0.0171	2.13	0.034	**

Note: *** $p < 0.01$, ** $p < 0.05$

Source: Author's study data (2025)

$$\begin{aligned} \Delta \ln(SMP)_t = & 1.197 \ln(SMP)_{t-1} - 0.225 \ln(SMP)_{t-2} - 0.0171 INF_{t-1} + 0.0417 INT_RATE_t + 0.544 \ln(EXR)_{t-1} \\ & + 0.000672 (INF \times IQ)_{t-1} - 0.000082 (INF \times IQ)_{t-2} - 0.00153 (INT \times IQ)_t \\ & + 0.0113 MKT_{t-1} - 0.0132 MKT_{t-2} + 0.0366 POL_EVENT_t \\ & - 0.536 + \varepsilon_t \end{aligned}$$

Where:

- **Persistence stock market lags:** The stock market shows strong inertia: a positive effect from the first lag (1.197, $p < 0.000$) and a correction from the second lag (-0.225, $p < 0.000$).
- **Inflation:** Negative short-run effect through lagged inflation (-0.017, $p = 0.029$).
- **Interest rate:** Positive short-run effect (0.0417, $p = 0.040$).

- **Exchange rate:** Immediate negative impact (-0.422 , $p = 0.281$, insignificant), but positive lagged effect (0.544 , $p < 0.001$).
- **Moderation:** Institutional quality moderates' inflation (positive at $t-1$, 0.000672 ; negative at $t-2$, -0.000082) and interest rates (negative at time t , -0.00153).
- **Controls:** Market liquidity alternates between positive at $t-1$ (0.0113) and negative at $t-2$ (-0.0132). Political events increase performance in the short run (0.0366).

4.6. Discussions and Findings

The outcomes of the hypothesis testing were used to draw conclusions about the population based on the study's data. Consistent with the research aims, the Autoregressive Distributed Lag (ARDL) model was employed to assess the proposed linkages and to analyze the short-run effects of each independent variable on stock market performance. The study employed a 95% confidence level ($p < 0.05$), showing that results were considered statistically significant if the likelihood of occurrence owing to random chance was less than 5 percent. The null hypothesis was rejected in favor of the alternative hypothesis when the calculated p-value was below 0.05. If the p-value surpassed the 0.05 criterion, the null hypothesis was retained. The results of these hypothesis tests formed the foundation for evaluating and forecasting the effect of macroeconomic variables and moderating role of institutional quality on stock market performance in Kenya.

4.6.1 Stock Market Persistence and Adjustment

Across both models, the lagged values of stock market performance were positive and highly significant at the first lag ($p < 0.01$) and negative at the second lag ($p < 0.01$). This pattern confirms that past market performance strongly influences current outcomes while long-term equilibrium is restored through correction mechanisms. The findings imply that the Nairobi Securities Exchange (NSE) shows short-term momentum followed by adjustment toward stability. Such dynamics show

that market performance in Kenya responds predictably to economic conditions, consistent with the expectation that financial markets reflect real economic activity when macroeconomic and institutional frameworks are credible.

These dynamics are well explained by the Behavioral Finance Theory, which suggests that investors often display herding behavior and overreact to short-term market information, leading to temporary price momentum, followed by correction as latest information is assimilated (Kahneman & Tversky, 1979). The results also align with Arbitrage Pricing Theory (APT), which postulates that asset prices adjust gradually to systematic economic factors, leading to lagged responses in market returns. Thus, the persistence in the NSE indicates an adaptive market that reacts rationally in the long term, despite short-term inefficiencies.

4.5.1 Inflation and stock Market performance

The baseline model shows that inflation exerts a negative and statistically significant effect on stock market performance at the second lag (-0.0022 , $p < 0.05$). This result supports the first research aim, which aimed to find how inflation affects market performance. The negative association implies that rising inflation diminishes the real value of returns and increases uncertainty, discouraging investment. The moderated results show that inflation influence stock market performance in Kenya. Inflation was determined to have no substantial immediate impact on market performance (coef. = -0.0023 , $p = 0.815$) which is consistent with the baseline model. Nonetheless, its lagged value showed a negative and statistically significant effect (coef. = -0.0171 , $p = 0.029$), indicating that previous inflationary pressures tend to diminish returns in the short term.

This outcome aligns with Monetarist theory, which posits that sustained inflation erodes the actual worth of financial assets, thereby diminishing investor confidence and lowering expected real

returns. Theoretically, this shows that inflationary shocks, although initially inconsequential, might disrupt stock market dynamics when they permeate pricing and return expectations. Empirically, these findings corroborate Musembi et al. (2020) and Ngetich and Mbuva (2023), who reported a negative relationship between inflation and stock market performance in Kenya, implying that rising consumer prices dampen market returns. However, the results differ from Mwiwa and Jagongo (2025), who found certain inflation types (cost-push and demand-pull) had positive effects in the banking sector showing that inflationary tolerance may vary by industry. The observed lagged effect implies that investors initially absorb inflationary changes but reassess portfolio risk in later months as cost pressures affect corporate profitability.

4.5.2 Interest rates and stock Market performance

In the Baseline model, the interest rate coefficient was positive but statistically insignificant, showing that short-term monetary adjustments have limited influence on stock market performance. This finding addresses the second research objective and suggests that investors at the NSE may not immediately respond to interest rate shifts due to expectations of policy reversals or limited sensitivity to credit market changes. It also reflects findings by Oloo and Ondiwa (2024) and Mwangi and Wekesa (2020), who reported that the relationship between interest rates and equity returns in Kenya is weak in the short term. But the moderated model findings show a positive and statistically significant impact of interest rates on stock market performance in Kenya (coef. = 0.0417, $p = 0.040$). Implying that moderate increases in interest rates can attract investment by signaling macroeconomic stability and inflation control. This finding diverges from conventional Keynesian theory, which asserts that elevated borrowing costs inhibit investment and business profitability, thereby reducing equity demand. In the Kenyan setting, the observed association may show different short-term mechanisms. Rising interest rates may draw capital

inflows into the domestic economy, as investors pursue higher returns in the money market and government securities. These inflows can enhance liquidity and indirectly elevate stock prices, particularly in a frontier market like Kenya, where foreign portfolio investments are significantly influenced by interest rate differentials.

This finding is aligned with Mogire (2022), who recorded intricate short-term interactions between interest rates and the Nairobi Securities Exchange, observing that rate increases often coincided with favorable market sentiment due to heightened foreign portfolio inflows. Adegbite and Omodero (2020) similarly discovered evidence from specific African stock markets showing that interest rates may positively correlate with equity performance in some settings, mostly influenced by capital mobility and speculative opportunities. Njoroge and Kamau (2021) showed that foreign investors often shift capital between fixed-income assets and stocks in Kenya, resulting in temporary favorable impacts on stock indices during phases of mild interest rate tightening.

In contrast, other recent studies show an opposing trend. Waweru and Mutiso (2020) illustrated that in Kenya, sustained elevated interest rates displace equity investment, diminishing stock returns in the medium to long term. Similarly, Owolabi and Okonkwo (2022), in their analysis of Nigerian markets, confirmed the Keynesian perspective by proving that elevated interest rates consistently adversely affect equity values due to heightened borrowing costs and diminished consumption demand. This study shows that the Kenyan stock market proves short-term resilience to interest rate increases, attributable to capital flow dynamics and investor portfolio adjustments; however, this does not invalidate the Keynesian claim of suppressed investment in the long term. The conclusion highlights the significance of context-specific

institutional and market conditions in influencing the relationship between interest rates and the stock market.

4.5.3 Exchange rate volatility and stock Market performance

The Baseline Model showed a negative contemporaneous effect (-0.5409 , $p < 0.01$) and a positive lagged effect ($+0.4923$, $p < 0.01$), indicating that currency depreciation initially weakens the market through inflationary pressures but subsequently supports export-oriented sectors. This finding addresses the third research objective and confirms that exchange rate movements influence stock market dynamics through both cost and competitiveness channels. On the moderate model Exchange rates proved a slight impact on stock market performance. The contemporaneous coefficient was negative yet statistically insignificant (coef. = -0.4217 , $p = 0.281$), showing that immediate variations in the exchange rate do not have a quantifiable effect on the Nairobi Securities Exchange (NSE). The lagged exchange rate was positive and statistically significant (coef. = 0.5440 , $p < 0.001$), suggesting that exchange rate depreciation enhances stock market performance with a temporal delay. This dynamic suggests that although the short-term effects of currency rate volatility are subdued, prolonged depreciation may increase the competitiveness of export-driven companies, enhance profit potential, and draw speculative capital inflows, hence strengthening equity prices.

These findings theoretically correspond with the Purchasing Power Parity (PPP) theory presented by Gustav Cassel in 1918, which asserts that exchange rate modifications aim to equalize purchasing power among nations. In this respect, depreciation enhances price competitiveness in international trade, potentially boosting profitability and increasing the valuation of enterprises listed on the NSE. Moreover, speculative capital may enter stocks due to expected profits from currency fluctuations, enhancing stock performance. The conclusions are empirically corroborated

by Kima, Kiptoo, and Ngetich (2022), who identified currency rate volatility as a crucial driver of NSE performance, especially for enterprises with substantial international trade exposure. Omondi and Mutuku (2020) illustrated that in Kenya, the lagged impacts of exchange rate fluctuations often result in modifications within the equity market, whereby a depreciation of the shilling benefits firms dependent on export revenues. Bonga-Bonga and Mwamba (2019) shown that in African frontier markets, exchange rate volatility typically exerts a delayed yet favorable influence on equities performance, as international investors adjust their portfolios in reaction to relative price fluctuations.

Nonetheless, not all studies corroborate these conclusions. Otieno and Onyuma (2021) discovered that the prolonged depreciation of the Kenyan shilling diminished investor confidence by elevating import expenses and diminishing the profitability of companies' dependent on foreign inputs, thus lowering stock valuations. Munyua (2023) contended that sustained exchange rate volatility typically deters foreign portfolio investment in the NSE due to heightened risk, opposing the noted beneficial lagged effect. The data show that in the Kenyan stock market, the effects of exchange rates are not immediate but develop over time. Although short-term volatility may not alter market dynamics, ongoing depreciation provides conditions helpful for specific enterprises and speculative investments, hence strengthening the delayed beneficial effect seen in this study.

4.5.4 Moderation effect of institutional quality on microeconomic variables and stock market performance

The direct effect of the composite index on institutional quality was statistically insignificant (coef. = 0.0350, $p = 0.553$), showing that institutional structures, when evaluated independently, do not significantly influence stock market results in Kenya. The interaction between exchange rate and institutional quality was found to be minor ($\beta = -0.006$, $p = 0.648$), showing that enhancements in

governance do neither worsen nor alleviate the direct impact of exchange rate volatility on equity market results. This suggests that currency rate fluctuations in the Kenyan market are autonomous from institutional frameworks in the short term.

However, the moderating effect of institutional quality is clear through interaction terms involving inflation and interest rates. The relationship between inflation and institutional quality was positive and significant at the first lag (coef. = 0.00067, $p = 0.019$), but negative at the second lag (coef. = -0.00008 , $p = 0.003$). The twofold effect shows that robust institutional frameworks initially mitigate the negative impacts of inflation by bolstering policy legitimacy and diminishing uncertainty; nevertheless, their stabilizing influence diminishes or may even reverse if inflationary pressures endure. This corresponds with the Monetarist perspective, which emphasizes inflation's detrimental influence on asset values, while simultaneously illustrating how institutional capacity may temporarily mitigate these consequences.

The relationship between interest rates and institutional quality showed a negative immediate effect (coef. = -0.00153 , $p = 0.046$) but became positive in the following period (coef. = 0.0036, $p = 0.024$). This shows that, in the short term, governance frameworks worsen the costs associated with higher interest rates, through stricter enforcement of financial laws and heightened borrowing limitations. Nonetheless, over time, institutional frameworks stabilize investment flows by enhancing transparency, enforcing contracts, and keeping investor confidence, so mitigating the first adverse effects.

These findings theoretically align with Institutional Theory (North, 1990), which emphasizes the significance of formal regulations, the quality of governance, and regulatory procedures in influencing economic results and mitigating external disturbances. Robust institutions diminish transaction costs, enhance market predictability, and cultivate resilience

against macroeconomic disruptions. The findings align with Khandaker and Al Farooque (2021), who showed that institutional quality strongly influences the relationship between macroeconomic fundamentals and stock market development in emerging economies. Mwangi and Omondi (2022) noted that in Kenya, strong governance bolsters investor confidence by mitigating the negative effects of inflation and interest rate fluctuations. Nonetheless, there is contradictory data present. Nyongesa and Mutuku (2020) contended that inadequate enforcement of governance frameworks in frontier markets frequently undermines their efficacy in alleviating financial shocks, whereas Akinlo and Apanisile (2019) posited that the influence of institutional quality is frequently eclipsed by external shocks, such as global commodity price volatility, in African economies. Collectively, these data show that although institutional quality does not independently influence Kenyan stock market performance, its moderating effects are essential in finding the short-term transmission of inflationary and interest rate shocks. Robust governance frameworks bolster market resilience and promote financial stability, however their impact is not consistent across all macroeconomic variables.

4.5.5 Control Variables and stock market performance

The control variables yielded significant insights into the short-term dynamics of the Kenyan stock market. Market liquidity was contemporaneously negligible (coef. = 0.0018, $p = 0.665$), however its lagged impacts were significant. In the first lag, liquidity showed a positive correlation with stock market performance (coef. = 0.0113, $p = 0.032$), showing that heightened trading activity and improved entry and exit conditions facilitate price discovery and encourage investor engagement. At the second lag, liquidity had a substantial negative impact (coef. = -0.0132 , $p = 0.001$), suggesting that after a first increase, market corrections or speculative reversals typically diminish returns. This cyclical liquidity effect corresponds with the microstructure theory of

financial markets, which posits that although liquidity improves efficiency in the short term, excessive trading can worsen volatility and lead to later price corrections. Munyoki and Muriithi (2021) found that liquidity shocks in the Nairobi Securities Exchange (NSE) produce transient positive effects, which are then reversed in the following months.

Political events have also been a crucial factor influencing stock market performance. The coefficient for political events was positive and statistically significant (coef. = 0.0366, $p = 0.034$), showing that intervals associated with major political occurrences, such as general elections and governmental transitions influence investor expectations and trading behavior. This result highlights the significance of political cycles in frontier markets, where investor sentiment is acutely responsive to changes in governance and the reliability of institutions. The discovery aligns with the research of Bialkowski, Gottschalk, and Wisniewski (2008), which shown that election-related uncertainty markedly affects stock returns in emerging markets. Recent studies, such Ochieng and Kinyua (2020) and Adeniran and Bello (2021), corroborate this perspective, showing that political risk influences stock prices both directly and indirectly by changing investor confidence and directing capital flows.

The control variables show that liquidity and political events are significant short-term determinants of stock market performance in Kenya. Liquidity shocks increase trading volume but can induce momentary volatility, while political cycles introduce uncertainty that investors rapidly incorporate into stock valuations. These findings underscore the necessity of incorporating non-macroeconomic variables alongside conventional fundamentals when evaluating financial markets in politically and economically volatile contexts such as Kenya.

4.5.6 Summary of the Hypotheses tested.

The result findings of the hypotheses testing and decisions are summarised in Table 4.14

Table 4.14: Summary of Hypothesis Testing Results

Hypothesis Statement	Short-run Result	Decision
H₀₁ There is no significant relationship between inflation and stock market performance in Kenya.	Lagged inflation significant (coef. = -0.0171, p = 0.029)	Reject H₀₁
H₀₂ There is no significant relationship between interest rates and stock market performance in Kenya.	Significant contemporaneous effect (coef. = 0.0417, p = 0.040)	Reject H₀₂
H₀₃ There is no significant relationship between exchange rate volatility and stock market performance in Kenya.	Positive lagged effect (coef. = 0.5440, p < 0.001)	Reject H₀₃
H₀₄ Institutional quality does not significantly moderate the relationship between selected macroeconomic factors and interest rates in Kenya.	Significant moderation with inflation (L1 = 0.00067, p = 0.019; L2 = -0.00008, p = 0.003); Significant moderation with interest rates (coef. = -0.00153, p = 0.046; coef. = 0.0036, p = 0.024), insignificant for Exchange rate	Partially Reject H₀₄

Source: Author's study data (2025)

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the final part of the study by providing a synthesis of the findings, conclusions, and recommendations. The purpose of this chapter is to highlight the key outcomes that appeared from the analysis, to connect them with the research objectives, and to find their broader implications for policy and practice. The chapter begins with a summary of the findings, where the results obtained from the ARDL model and supporting diagnostic tests are discussed considering each research question. This is followed by the conclusions that can be drawn from the evidence, with attention to how macroeconomic and institutional factors influence stock market performance in Kenya. The chapter then sets out recommendations that are intended to inform policymakers, regulators, and market participants on how to strengthen the resilience of the stock market. Finally, suggestions for future research are made to expand the scope of inquiry and provide a foundation for further academic and policy-oriented studies.

5.2 Summary of Findings

The overall objective of this study was to examine the effect of macroeconomic factors and institutional quality on stock market performance in Kenya. The findings supported the existence of a relationship, with the short-run ARDL model showing that variations in key macroeconomic predictors significantly explained fluctuations in stock market performance. The ARDL approach was employed for the analysis and was found to be a proper and statistically significant at the 5% level of significance in explaining variations in the dependent variable. The study employed both descriptive and econometric research designs, drawing on monthly time series data covering the period under review. Diagnostic tests were performed to confirm the assumptions of the ARDL

model, ensuring the robustness of the results. Conclusions on the statistical significance of the various macroeconomic factors including inflation, interest rates, and exchange rate volatility on stock market performance were drawn, while the moderating role of institutional quality was also assessed. The summary of findings is presented in line with the specific objectives of the study.

5.2.1 Effect of inflation on stock market performance in Kenya.

The first specific objective was to examine the effect of inflation on stock market performance in Kenya. The study proved that inflation exerts a delayed yet statistically significant negative effect on stock market performance in Kenya. Specifically, the lagged coefficient of inflation was negative and significant, implying that inflationary shocks erode stock market value over time rather than instantaneously. This finding is consistent with Monetarist Theory, which argues that excessive money supply and persistent inflation reduce real returns on financial assets and distort investment decisions (Friedman, 1963). The negative lagged effect seen here aligns with the monetarist assertion that inflation expectations and liquidity tightening eventually depress market activity as purchasing power declines. Empirically, the results resonate with studies such as Musembi, Simiyu, and Njoka (2020), who documented a significant inverse relationship between inflation and the Nairobi Securities Exchange (NSE) All Share Index. Similarly, Ngetich and Mbuva (2023) found that a 1% increase in inflation led to a proportional reduction in stock returns, showing that rising consumer prices diminish equity value and investor confidence. The current findings also validate Odhiambo (2023), who reported that inflation-induced volatility undermines liquidity and elevates uncertainty in Kenya's capital markets.

The moderating effect of institutional quality revealed a nuanced relationship: strong governance indicators (political stability and regulatory quality) temporarily cushioned inflation's negative effect, as shown by the positive interaction term in the first lag. This proves that

transparent and credible institutions enhance market resilience by bolstering investor confidence during inflationary episodes. However, the negative coefficient in the second lag implies that prolonged inflationary pressures outweigh institutional buffers. This aligns with Institutional Theory (North, 1990), which posits that strong institutions can mitigate but not end macroeconomic vulnerabilities. It also parallels Khandaker and Al Farooque (2021), who observed that effective governance reduces the negative impact of macroeconomic volatility on financial markets. Overall, these results underscore that while Kenya's institutional frameworks have strengthened the transmission of monetary policy and partially stabilized the stock market, persistent inflation is still a critical deterrent to long-term investor confidence and market valuation.

5.2.2 Effect of interest rates on stock market performance in Kenya.

The second specific objective was to establish the effect of interest rates on stock market performance in Kenya. The ARDL results of the analysis revealed a positive and statistically insignificant short-run relationship between interest rates and stock market performance, showing that short-term monetary adjustments have limited influence on stock market returns. But when incorporating the moderation effect, the analysis revealed a positive and statistically significant short-run relationship between interest rates and stock market performance. Contrary to conventional expectations from classical and early Keynesian perspectives which typically predict a negative association, this finding reflects the Keynesian Theory of Interest Rates when contextualized within liquidity preference and investor sentiment. In Kenya's case, moderate increases in the Central Bank Rate (CBR) appear to signal monetary discipline and inflation control rather than restrictive credit conditions, thereby attracting investors who interpret these adjustments as indicators of macroeconomic stability.

This interpretation aligns with Mogire (2022), who found that moderate interest rate increases sometimes correlate positively with stock indices in Kenya due to improved investor confidence in monetary policy credibility. Similarly, Otieno, Ngugi, and Wawire (2017) proved a causal relationship between short-term interest rates and stock market returns, suggesting that rational monetary adjustments provide informational cues that guide investment decisions. Conversely, the result diverges from Kengere, Kimani, and Manyaga (2023) and Ngaruiya, Mathuva, and Obi (2025), who reported negative or insignificant associations, highlighting the importance of policy timing and market expectations in shaping investor responses.

The interaction term between institutional quality and interest rates was negative and significant, suggesting that as governance and regulatory quality improve, the direct sensitivity of the market to interest rate changes declines. This implies that under robust institutions, investor confidence is grounded more in structural and regulatory predictability than in short-term monetary adjustments. This observation strongly supports Institutional Theory, emphasizing that credible institutions reduce uncertainty and stabilize market expectations. It also corroborates Mensah et al. (2022), who found that institutional reforms enhance the efficiency and responsiveness of Sub-Saharan African capital markets to macroeconomic policy signals. In summary, the results suggest that Kenya's stock market perceives modest monetary tightening as a positive signal of stability an effect reinforced, though eventually moderated, by the strength of institutional frameworks.

5.2.3 effect of exchange rates on stock market performance in Kenya.

The third specific objective was to examine the effect of the exchange rate on stock market performance in Kenya. The findings show that exchange rate volatility has an insignificant contemporaneous impact but a positive and highly significant lagged effect on stock market

performance. The short-term insignificance reflects the initial uncertainty and portfolio rebalancing associated with currency depreciation, while the positive lagged coefficient suggests that after adjustment, depreciation enhances market performance, through export competitiveness and improved earnings for export-oriented firms. This dynamic conforms to the Purchasing Power Parity (PPP) Theory (Cassel, 1918), which posits that exchange rate movements eventually adjust to equalize price levels and restore competitiveness, thereby generating long-term equilibrium benefits for the economy.

These findings are consistent with Koech (2021), who reported that exchange rate movements Granger-cause changes in the NSE performance and have long-term equilibrium relationships with stock market indicators. Similarly, Kima, Kiptoo, and Ngetich (2022) found a significant positive long-term association between exchange rate volatility and the NSE 20 Share Index, suggesting that once the market adjusts, depreciation stimulates stock returns. The positive lagged response seen in this study further supports Akidi and Nwankwo (2024), who found short-term disruptions followed by long-run stabilization effects of exchange rate changes in Nigeria, a comparable emerging economy.

However, the interaction term between exchange rate volatility and institutional quality was statistically insignificant, implying that governance and regulatory strength in Kenya have limited capacity to moderate the exchange rate–stock market linkage. This result suggests that external forces such as global commodity prices, capital flow volatility, and exchange rate speculation continue to dominate Kenya’s currency dynamics, overshadowing the stabilizing influence of domestic institutions. These findings echo Lin, Inam, and Law (2021), who noted that while institutional quality directly promotes market development, its moderating influence on currency-driven macroeconomic shocks is still minimal in emerging markets. Overall, the study

concludes that exchange rate effects on Kenya's stock market are nonlinear and time-dependent: initial depreciation induces uncertainty, but as investors adjust to new equilibrium levels, the market benefits from improved trade competitiveness. Nonetheless, enhancing institutional capacity is still crucial for mitigating the adverse short-term effects of currency volatility.

5.2.4 Moderating effect of institutional quality on the relationship between macroeconomic factors and stock market performance in Kenya.

The fourth specific objective was to assess the effect of institutional quality on stock market performance in Kenya, the findings demonstrate that institutional quality does not exert a direct, statistically significant impact on stock market performance but significantly moderates the effects of key macroeconomic variables particularly inflation and interest rates. The insignificant main effect of institutional quality implies that Kenya's institutional frameworks alone do not at once translate into stock market gains. Instead, their contribution lies in enhancing market stability and moderating macroeconomic shocks. This supports the Institutional Theory (North, 1990; Acemoglu & Robinson, 2012), which posits that institutions function as the "rules of the game," shaping how economic agents respond to incentives and uncertainties rather than directly driving financial outcomes.

Specifically, the significant positive moderating effect of institutional quality on inflation suggests that robust governance mechanisms such as regulatory consistency, and political stability temporarily buffer inflation's adverse impacts on the Nairobi Securities Exchange (NSE). However, the negative second-lag coefficient reveals that prolonged inflation eventually surpasses institutional resilience, reaffirming that governance quality mitigates but cannot fully neutralize sustained macroeconomic instability. Similarly, the significant negative moderation between interest rates and institutional quality shows that stronger institutions reduce excessive market

sensitivity to monetary policy shocks, enabling more stable, expectation-driven market adjustments.

These results align with Khandaker and Al Farooque (2021), who found that sound institutional frameworks attenuate the negative effects of inflation and interest rate volatility on capital markets. They also parallel Mensah, Osei-Fosu, and Asante (2022), who noted that although institutional quality enhances stock market development across Sub-Saharan Africa, its moderating effects differ by country due to variations in governance maturity. In Kenya's case, political stability and regulatory quality have improved since the 2010 constitutional reforms, yet institutional fragility is still a constraint during periods of fiscal stress or electoral uncertainty. Therefore, the study concludes that institutional quality works as a stabilizing and moderating force enhancing the market's resilience to inflationary and monetary disturbances while promoting policy credibility. This confirms that macroeconomic stability and institutional governance are complementary rather than substitute mechanisms for sustaining investor confidence and market growth in emerging economies like Kenya.

5.2.5 Control Variables and Stock Market Performance

The inclusion of control variables market liquidity and political events offers further insight into non-macroeconomic factors shaping Kenya's stock market dynamics. Market liquidity showed a positive and significant short-run relationship with stock performance in its first lag, showing that higher trading activity enhances investor confidence and improves price discovery mechanisms. However, the second lag turned negative, suggesting that excessive liquidity may induce speculative trading and short-term corrections. These results are consistent with Chen, Liao, and Tsai (2020) and Mensi et al. (2022), who seen that while liquidity initially strengthens market efficiency, uncontrolled trading surges can heighten volatility and distort valuation signals. This

cyclical pattern of liquidity influence also aligns with the Efficient Market Hypothesis (EMH), implying that Kenyan markets tend to overreact to temporary information shocks but revert toward equilibrium as speculative effects dissipate. It further emphasizes the importance of keeping an optimal level of liquidity that supports price discovery without amplifying volatility, a critical balance for developing exchanges like the NSE.

The results for political events were unexpectedly positive and significant. This suggests that periods surrounding major political occurrences such as elections are associated with temporary increases in market activity. While such findings might appear counterintuitive given the usual link between political risk and volatility, they reflect speculative repositioning and heightened trading in anticipation of post-election policy changes. Comparable patterns have been seen by Owusu and Frimpong (2021) and Adegbite, Anyanwu, and Okafor (2019), who found that African stock markets often experience short-term surges during political cycles as investors speculate on policy outcomes or capital inflows. Nonetheless, these bursts are typically followed by market corrections once political uncertainty resolves. Overall, the control variable findings confirm that both liquidity dynamics and political cycles play significant roles in shaping short-term stock performance. Ensuring steady market liquidity and minimizing electoral uncertainty through transparent governance are therefore essential for stabilizing investor sentiment and reducing cyclical volatility in the NSE.

5.3 Conclusions

The following conclusions are derived from this study. First, the results confirm the inertial nature of stock market performance in Kenya, where lagged values of stock market performance were highly significant. This shows that the market shows strong persistence and path dependence, meaning past performance exerts a powerful influence on current movements. Such inertia

suggests that investor expectations and trading behaviors are shaped by historical performance, reinforcing momentum effects in the short run. Second, the results affirm that inflation is still a critical macroeconomic determinant, exerting delayed but persistent negative effects on stock market performance. This reinforces Monetarist Theory, which associates excessive inflation with monetary instability and declining real asset values. However, the moderating effect of institutional quality shows that strong governance can temporarily shield the market from inflation-induced uncertainty by enhancing policy credibility and investor trust.

Third, the positive short-run impact of interest rates highlights the signaling role of monetary policy in Kenya's financial markets. Consistent with the Keynesian liquidity preference framework, moderate rate increases are interpreted as evidence of macroeconomic discipline, thereby attracting investment flows. Yet, this relationship is moderated downward under high institutional quality, implying that well-functioning governance reduces reliance on short-term monetary signals by fostering structural market confidence. Fourth, exchange rate volatility showed a short-run neutral but lagged positive influence, consistent with Purchasing Power Parity (PPP) Theory. The result suggests that currency depreciation initially generates uncertainty but later benefits export-oriented firms as competitiveness improves. Institutional quality did not significantly moderate this relationship, implying that Kenya's currency dynamics are still largely driven by external rather than domestic institutional factors.

Fifth, institutional quality itself plays a crucial moderating role dampening the adverse effects of inflation and interest rate fluctuations. This substantiates Institutional Theory, which posits that credible governance frameworks enhance market stability by reducing transaction costs, promoting transparency, and strengthening investor protection. The Kenyan experience proves that institutional development is still a gradual yet powerful driver of market resilience. Finally, the

control variables emphasize that liquidity and political conditions significantly influence stock performance. Market liquidity improves price discovery and investor confidence but must be managed to prevent speculative volatility. Political events, though associated with short-term trading surges, underscore the sensitivity of capital markets to governance and policy uncertainty.

In summary, the study concludes that the Nairobi Securities Exchange's performance is shaped by both economic fundamentals and institutional dynamics. Sustained market stability in Kenya requires coordinated efforts to keep macroeconomic discipline particularly price and monetary stability while simultaneously strengthening institutional quality through regulatory reforms, transparency, and political stability. These dual levers of macroeconomic management and institutional integrity are indispensable for deepening investor confidence, reducing volatility, and promoting sustainable growth in Kenya's capital markets.

5.4 Recommendations

Drawing from the study's findings, several policy implications appear for the Central Bank of Kenya (CBK), the Capital Markets Authority (CMA), the Nairobi Securities Exchange (NSE), and other key economic stakeholders. These recommendations aim to strengthen Kenya's macro-financial stability, deepen capital market development, and enhance the resilience of the stock market against both domestic and external shocks.

5.4.1 Strengthening Inflation Management and Monetary Policy Transmission

Given the study's evidence that inflation has a delayed yet significant negative effect on stock market performance, CBK should continue prioritizing price stability as a cornerstone of monetary policy. However, inflation control should be complemented by improved policy communication and transparency to anchor investor expectations and minimize uncertainty. Policymakers should also enhance coordination between fiscal and monetary authorities to prevent conflicting signals

that might destabilize markets. For example, while CBK tightens policy to contain inflation, fiscal authorities should avoid expansionary spending that undermines these efforts. Establishing more credible inflation-targeting frameworks could strengthen Kenya's monetary transmission mechanism, aligning with Monetarist principles that stable money supply growth supports both price and financial market stability.

5.4.2 Ensuring Predictable and Credible Interest Rate Policy

The positive short-run association between interest rates and market performance implies that moderate rate adjustments are interpreted as signs of policy credibility. CBK should, therefore, keep a predictable interest rate regime that balances inflation control with the need to sustain investment momentum. Abrupt or inconsistent rate changes can erode investor confidence, while gradual, well-communicated adjustments promote financial stability. CMA and NSE should also expand fixed-income and derivative markets, enabling investors to better hedge against interest rate risk. Such developments would enhance financial intermediation efficiency and align with Keynesian insights emphasizing the role of liquidity preference and market instruments in stabilizing investment behavior.

5.4.3 Stabilizing the Exchange Rate and Managing External Shocks

Although the study found that exchange rate volatility has a lagged positive effect, excessive fluctuations continue to generate short-term uncertainty. The CBK should adopt targeted foreign exchange interventions to smooth volatility while avoiding unsustainable exchange-rate pegs. Strengthening foreign reserve buffers and diversifying the export base will further insulate the Kenyan economy from external commodity and capital flow shocks. In line with Purchasing Power Parity Theory, keeping relative price stability vis-vis trading partners would help achieve a more stable long-term exchange rate equilibrium. Policies that enhance export competitiveness such as

improving infrastructure, trade facilitation, and productivity can sustain the positive effects of currency depreciation on the stock market over time.

5.4.4 Enhancing Institutional Quality and Regulatory Governance

The study underscored institutional quality as a significant moderating factor, strengthening market resilience against inflation and interest rate shocks. Consequently, Kenya's financial regulators should intensify efforts to improve governance, regulatory transparency, and enforcement mechanisms within capital markets. This involves modernizing disclosure standards, enhancing corporate governance compliance, and ensuring prompt publication of financial data to promote investor trust. CMA and NSE should collaborate with the World Bank's WGI framework and international best practices to periodically assess Kenya's institutional performance indicators, particularly political stability, regulatory quality, and corruption control. Implementing reforms that enhance judicial efficiency, reduce policy uncertainty, and safeguard property rights will reinforce the stabilizing role of institutions, consistent with Institutional Theory.

5.4.5 Managing Market Liquidity and Electoral Cycles

Market liquidity was found to have a dual effect on enhancing stock performance in the short run but potentially inducing volatility in later periods. The NSE should therefore promote balanced liquidity management by encouraging long-term institutional participation (e.g., pension funds and insurance firms) rather than short-term speculative trading. Introducing liquidity-based circuit breakers and advanced market surveillance systems could further mitigate excessive short-term fluctuations. Additionally, the positive but fragile influence of political events on stock performance underscores the importance of political stability and policy continuity. Electoral cycles should be managed through transparent, credible, and peaceful processes to preserve

investor confidence. Collaboration between electoral bodies, policymakers, and financial regulators is vital to minimize disruptions during transitions.

5.4.6 Fostering Investor Education and Market Deepening

Finally, given that macroeconomic and institutional dynamics interact to influence market outcomes, sustained investor education and market literacy initiatives are essential. Educating investors on inflation hedging, interest rate cycles, and currency exposure can improve portfolio diversification and market efficiency. Expanding financial inclusion through digital trading platforms and regional integration initiatives (such as the East African Securities Exchange Association) will further deepen Kenya's capital markets and attract a more diversified investor base.

5.5 Limitation of the study and Recommendations for Future Research

Although this study has offered important insights into the relationship between macroeconomic factors, institutional quality, and stock market performance in Kenya, certain methodological and contextual limitations should be acknowledged. Recognizing these constraints provides a foundation for improving future research and extending the robustness of the findings.

The study used a composite institutional quality index based on aggregated measures of governance. While this approach captures the general institutional environment, it may obscure the unique effects of specific dimensions such as regulatory quality, corruption control, government effectiveness, or rule of law. Future research should therefore disaggregate institutional indicators to find which specific governance dimensions most strongly influence market outcomes. Comparative studies across East African countries could also provide valuable cross-country perspectives on how institutional diversity shapes capital market performance.

The use of the Autoregressive Distributed Lag (ARDL) framework, while proper for small-sample and mixed-order integration data, assumes a linear relationship between variables. This may not fully capture nonlinear or asymmetric responses, for instance, how sudden inflationary spikes or large exchange-rate shocks affect stock market behavior differently from smaller, gradual changes. Future studies could employ Nonlinear ARDL (NARDL), Threshold VAR, or Markov-Switching models to account for these asymmetric dynamics and capture turning points in macro-financial relationships.

This study analyzed the overall market index (NSE 20 Share Index), which aggregates data from all listed firms. While this provides a useful macro-level overview, it potentially masks sectoral or firm-specific differences in sensitivity to macroeconomic and institutional factors. To address this limitation, future research should conduct sectoral (banking, manufacturing, agriculture, and other sectors) or firm-level analyses, which could reveal industry-specific channels of influence and better inform targeted investment and policy interventions.

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APPENDICES

Appendix I: Data collection sheet

Year	Month	Average Monthly NSE Index	Exchange Rate	Interest Rate	Inflation Rate	Institutional Quality (PV)
2005	January					
	February					
	March					
	April					
	May					
	June					
	July					
	August					
	September					
	October					
	November					
	December					
2015	January					
	February					
	March					
	April					
	May					

	June					
	July					
	August					
	September					
	October					
	November					
	December					
2024	January					
	February					
	March					
	April					
	May					
	June					
	July					
	August					
	September					
	October					
	November					
	December					

Appendix II: Ethics Clearance Certificate



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KCA UNIVERSITY SCIENTIFIC & ETHICS REVIEW COMMITTEE

REF: KCAU/SERC/SOB0278

Date: 8TH SEPTEMBER, 2025

TO: NORMAN MOSIOMA KOBI (20/00694)

Dear Sir/Madam,

RE: MACROECONOMIC FACTORS, INSTITUTIONAL QUALITY, AND STOCK MARKET PERFORMANCE IN KENYA

This is to inform you that the KCA University Scientific Ethics Review Committee (KCAUSERC) has reviewed and approved your research proposal. Your application approval number is *KCAUSERC/SOB0278*. The approval period is *8th September, 2025 – 8th September, 2026*. This approval is subject to compliance with the following requirements.

- i. Only approved documents, including informed consents, study instruments, and MTAs, will be used.
- ii. All changes, including (amendments, deviations, and violations), are submitted for review and approval by *KCAUSERC*.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events, whether related or unrelated to the study, must be reported to *KCAUSERC* within 72 hours of notification.
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to *KCAUSERC* within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days before expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to *KCAUSERC*.

Before commencing your study, you will be expected to obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

Dr. Caroline Ntara,
Chairperson,
KCA University Scientific & Ethics Review Committee.



Appendix III: Introduction Letter



Thika Road, Ruaraka
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BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2025

Date: Friday, September 19, 2025

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: NORMAN MOSIOMA KOBI- REG NO. 20/00694

It is my distinct pleasure to introduce Norman Mosioma Kobi, a student at our institution pursuing Master of Science in Commerce- Finance and Investment degree in the School of Business.

Norman is conducting research on the topic "*Macroeconomic factors, institutional quality, and stock market performance in Kenya*" which is part of the requirements of the program he is pursuing. The research as well as the data procured thereof shall be used for academic purposes only. Any assistance accorded to him is highly appreciated.

~ 1 9 8 9 ~

In case of further inquiry, do not hesitate to contact the undersigned.

Yours faithfully,

DR. JACKSON NDOLO
DIRECTOR, BOARD OF POST GRADUATE STUDIES

Appendix III: NACOSTI Introduction Letter



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BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2025

Date: Friday, September 19, 2025

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION (NACOSTI)
P.O BOX 30623-00100
NAIROBI

Dear Sir/Madam,

RE: NORMAN MOSIOMA KOBI- REG NO. 20/00694


It is my distinct pleasure to introduce Norman Mosioma Kobi, a student at our institution pursuing Master of Science in Commerce- Finance and Investment degree in the School of Business.


Norman is conducting research on the topic "Macroeconomic factors, insitutional quality, and stock market performance in Kenya." His study has been reviewed and approved by the University's Ethics Review Committee, Approval No. KCAUSERC/SOB0278. The Approval period is from 8th September 2025 – 8th September 2026. Any assistance accorded to him is highly appreciated.

Yours faithfully,

DR. JACKSON NDOLO
DIRECTOR, BOARD OF POST GRADUATE STUDIES


Appendix IV: NACOSTI Research Permit


REPUBLIC OF KENYA


**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: 329812 **Date of Issue: 29/September/2025**


RESEARCH LICENSE




This is to Certify that Mr. Norman Mosioma Kobi of KCA University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: MACROECONOMIC FACTORS, INSTITUTIONAL QUALITY, AND STOCK MARKET PERFORMANCE IN KENYA for the period ending : 29/September/2026.

License No: NACOSTI/P/25/4180114

329812
Applicant Identification Number


Ag. Director General
**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

Verification QR Code


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See overleaf for conditions

Appendix V: Correlogram of Log of Stock Market Performance

LAG	AC	PAC	Q	Prob>Q	-1	0	1	-1	0	1	
					Prob>Q	[Autocorrelation]			[Partial Autocor]		
1	0.9894	0.9970	237.88	0.0000							
2	0.9749	-0.3035	469.81	0.0000							
3	0.9580	-0.0547	694.72	0.0000							
4	0.9392	-0.0434	911.79	0.0000							
5	0.9194	0.0095	1120.7	0.0000							
6	0.8987	-0.1018	1321.2	0.0000							
7	0.8776	-0.0282	1513.2	0.0000							
8	0.8554	-0.0352	1696.4	0.0000							
9	0.8330	0.0094	1870.8	0.0000							
10	0.8107	0.0654	2036.8	0.0000							
11	0.7872	-0.0527	2194	0.0000							
12	0.7638	0.0170	2342.6	0.0000							
13	0.7401	-0.0469	2482.7	0.0000							
14	0.7180	0.1828	2615.2	0.0000							
15	0.6973	0.0046	2740.7	0.0000							
16	0.6781	0.0264	2860	0.0000							
17	0.6594	-0.0748	2973.2	0.0000							
18	0.6422	0.1087	3081.1	0.0000							
19	0.6254	-0.0194	3183.9	0.0000							
20	0.6073	-0.1042	3281.3	0.0000							
21	0.5912	0.0785	3374	0.0000							
22	0.5754	-0.0204	3462.2	0.0000							
23	0.5610	0.0445	3546.4	0.0000							
24	0.5473	0.0042	3627	0.0000							
25	0.5333	-0.0142	3703.8	0.0000							
26	0.5209	0.1182	3777.5	0.0000							
27	0.5082	-0.0753	3847.9	0.0000							
28	0.4967	0.0897	3915.5	0.0000							
29	0.4861	0.0532	3980.5	0.0000							
30	0.4743	-0.0931	4042.7	0.0000							
31	0.4613	-0.0617	4101.9	0.0000							
32	0.4482	0.0185	4158	0.0000							
33	0.4360	-0.0153	4211.3	0.0000							
34	0.4234	-0.0229	4261.8	0.0000							
35	0.4104	-0.0246	4309.5	0.0000							
36	0.3970	-0.0088	4354.4	0.0000							
37	0.3825	-0.0035	4396.3	0.0000							
38	0.3678	-0.0247	4435.2	0.0000							
39	0.3526	-0.0228	4471.1	0.0000							
40	0.3387	0.1185	4504.4	0.0000							

Appendix VI: ARDL STATA Results without Moderation

ARDL(2,2,0,1) regression

Sample: 2005m3 - 2024m12

Number of obs = 238
 F(8, 229) = 2638.65
 Prob > F = 0.0000
 R-squared = 0.9893
 Adj R-squared = 0.9889
 Root MSE = 0.0417

Log likelihood = 423.09626

ln_SMP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_SMP						
L1.	1.236174	.061478	20.11	0.000	1.115039	1.357309
L2.	-.2630257	.0606452	-4.34	0.000	-.3825196	-.1435318
inf						
--.	-.0003722	.000773	-0.48	0.631	-.0018952	.0011508
L1.	.0008246	.0007699	1.07	0.285	-.0006924	.0023416
L2.	-.0021896	.0007697	-2.84	0.005	-.0037063	-.000673
int_rate	.0007957	.0012174	0.65	0.514	-.001603	.0031943
ln_EXR						
--.	-.540858	.1466952	-3.69	0.000	-.829903	-.2518131
L1.	.492264	.1498076	3.29	0.001	.1970865	.7874415
_cons	.4448677	.1907671	2.33	0.021	.0689845	.820751

Appendix VII: ARDL STATA Results with Moderation

ARDL(2,1,0,1,0,0,2,0,2,0) regression

Sample: 2005m3 - 2024m12	Number of obs	=	238
	F(17, 220)	=	1346.12
	Prob > F	=	0.0000
	R-squared	=	0.9905
	Adj R-squared	=	0.9897
Log likelihood = 437.32861	Root MSE	=	0.0401

ln_SMP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_SMP						
L1.	1.197365	.0606975	19.73	0.000	1.077742	1.316988
L2.	-.2249017	.0622325	-3.61	0.000	-.34755	-.1022535
inf						
--.	-.0022712	.0097029	-0.23	0.815	-.0213938	.0168513
L1.	-.0171048	.007765	-2.20	0.029	-.0324081	-.0018015
int_rate	.0417331	.0202302	2.06	0.040	.0018633	.0816028
ln_EXR						
--.	-.4217291	.3906035	-1.08	0.281	-1.191533	.3480745
L1.	.5440459	.1476798	3.68	0.000	.2529977	.8350941
iq_composite	.0350151	.0588768	0.59	0.553	-.0810195	.1510498
exr_iq	-.0059773	.0130722	-0.46	0.648	-.0317401	.0197855
inf_iq						
--.	.000059	.0003583	0.16	0.869	-.0006472	.0007651
L1.	.0006725	.0002848	2.36	0.019	.0001113	.0012337
L2.	-.0000818	.0000271	-3.02	0.003	-.0001353	-.0000284
int_iq	-.0015316	.0007626	-2.01	0.046	-.0030345	-.0000287
mkt						
--.	.0017764	.0040976	0.43	0.665	-.0062992	.009852
L1.	.0113126	.0052498	2.15	0.032	.0009664	.0216589
L2.	-.0131901	.0038484	-3.43	0.001	-.0207746	-.0056057
pol_event	.0365697	.017135	2.13	0.034	.0028	.0703394
_cons	-.5363996	1.693668	-0.32	0.752	-3.87429	2.801491