Effect of Macro-economic Factors on the Financial Performance of the Nairobi Securities Exchange during General Elections in Kenya

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Abstract: **Financial markets worldwide play a crucial role in a country's economic and financial status. They facilitate governments and companies in raising funds for development and investments through diverse financial instruments, such as securities, derivatives, and bonds, which offer profit opportunities to investors. This study's primary objective was to examine the factors influencing the financial performance of the Nairobi Securities Exchange, the main financial market in Kenya, during general elections. The factors considered were interest rates, cash flow volatility, and inflation. The research targeted 20 stockbrokers, 20 investors, and 10 NSE junior employees, using a stratified sampling method to gather both primary and secondary data. Quantitative and qualitative techniques were employed to analyze the primary data, presented through narratives, tables, and graphs. Secondary data was sourced from journals and the stock exchange database. Descriptive and inferential statistics were utilized to determine how the independent variables affected the dependent variable. The study findings revealed that inflation and cash flow volatility significantly impacted share prices and influenced the stock market. General elections led to inflation, affecting the stock exchange with considerable volatility spikes around Election Day. Affordable share prices attracted foreign investors who played a role in determining share prices. High-interest rates resulted in higher share pricing, while lower interest rates led to lower share pricing, subsequently influencing trading activity and the market's overall performance.**

Keywords: **inflation, cashflow volatility, interest rates, macroeconomic, financial performance.**

I. INTRODUCTION

The stock market plays a vital role in the financial system, facilitating efficient capital formation and allocation. It serves as a platform for corporations and the government to raise long-term capital for new projects and expansion. The stock market's financial performance is influenced by various factors, including government activities and overall economic performance.

Studies in America and Britain have examined stock market performance before and after general elections, and the impact of the President's or Prime Minister's party on the market. Results show that the stock market reacts differently based on the elected party in America, but there is no significant difference observed in Britain (Bernanke, 2003). Otuke (2006) provides consistent evidence that the immediate market reaction to the election of a Republican president is positive, leading to an increase in the stock index. Additionally, evidence indicates that U.S. stock markets perform better under Republican leadership (Jones, 2002).

The stock market is considered a driver of economic growth, benefiting various stakeholders, including investors, capital markets, the securities exchange, and the government. It serves multiple functions such as trading, investment, speculation, hedging, and arbitrage opportunities. The stock market plays a crucial role in price discovery, information dissemination,

and raising finances for companies. It is also involved in implementing privatization programs and contributing to the development of emerging economies (Otuke, 2006).

Political events significantly influence firm performance and the overall financial market. Positive political events signal stability and boost the financial markets, leading to increased market value, capitalization, and performance. The market's behavior after the election of a political outfit or leader reflects the market's perception and attitude toward them.

This research focuses on how domestic political news and activities impact the Kenyan stock market and the development of the stock exchange market. The study concentrates on the period surrounding the 2017 general elections and the subsequent period. Although another election occurred after this research, there is insufficient market data to compare with the post-2022 elections. Therefore, this analysis is reserved for future studies.

A. Statement of the problem

According to statistics from the Republic of Kenya (RoK), the Nairobi Securities Exchange (NSE) experienced significant growth in 2019. Equity turnover rose by 11.0% from Kes. 156.1 billion in 2018 to Kes. 173.6 billion. Foreign investors executed about 49.2% of equity transactions. In the same period, secondary market activity in the fixed-income market segment increased by 17.0% to Kes. 1,141.4 billion from Kes. 974 billion in the previous year. Market capitalization also saw an impressive surge of 46.5% to Kes. 1.27 trillion ($14.53 billion) (Nairobi Securities Exchange, 2020).

During the 2007 elections period, the share index declined from 5,444.83 in December 2020 to 4,712.71 in January 2008 due to post-election violence, leading to reduced vibrancy in the stock market and causing uncertainty among investors (Nairobi Securities Exchange, 2020).

In 2019, the NSE 20 Share Index (NSE 20) rose by 29 percent, closing the year at 4,171.87 points. Improved macroeconomic conditions and strong foreign investor interest contributed to the upward movement in stock prices (Dyer and Blair Investment Bank, 2013). In the run-up to the 2017 general elections, trading remained optimistic, driven by investor confidence in the peaceful election outcome. This led to a price rally, though some stagnation occurred during the period between the nullification of the initial presidential results and the outcome of the subsequent presidential run-off (Dyer and Blair Investment Bank, 2013).

B. General objective

This study aimed to investigate the factors influencing the financial performance of the Nairobi Securities Exchange during general elections in Kenya.

C. Specific objectives of the study

i. Determine the effect of interest rates on the financial performance of the Nairobi Securities Exchange.

ii. Establish the influence of cash flow volatility on the Nairobi Securities Exchange's financial performance.

iii. Determine how inflation affects the financial performance of the Nairobi Securities Exchange.

II. LITERATURE REVIEW

A. Theoretical Framework

i) Keynesian theory

The Keynesian theory delves into the relationship between the production system and the macroeconomic structure, particularly the role of profitability in influencing investment demand and overall economic activity (Dimand, 1988). This concept can be likened to the impact of general elections on interest rates in the stock exchange. Within the production system, wages are considered a cost. Lower profits per unit of production result in reduced incentives for investment.

However, from a Keynesian perspective of the macroeconomic structure, wages become a source of demand, stimulating profits and investment. In this viewpoint, aggregate demand serves as a solution to the challenge that high wages present for the production system (Gordon, 1990). When demand is sufficiently high, capacity utilization increases, meeting the needs of both workers and capitalists. As a result, the rate of profit can be high despite a low-profit margin and profit share in output, with the wage rate correspondingly high.

ii) Potential effects on stock

Henkel (1984) proposes that firms maintain their reputations to signal favorable information in the future. In Henkel's "reputation model," firms tend to reveal information truthfully, but not always. This concept can be related to cash flow in the stock exchange. Information releases, such as split announcements, may contain some, but not perfect, informational content.

Alternatively, stock splits can draw attention to a firm, leading market analysts to reassess the company's future cash flows. Underpriced firms benefit from such reassessments, while overpriced firms do not. As a result, there may be a price impact on the announcement date that reflects the average underpricing of firms choosing to split their shares. It is possible that managers do not intentionally convey information when announcing a split. For example, managers may split shares to keep the share price within a customary trading range. Baker and Gallagher (1980) suggest that small investors may not afford to buy round lots at high share prices, so lowering the stock price attracts more small investors.

Considering the costs associated with splits and reversals, managers with unfavorable inside information may choose not to split, even if the stock price is high, anticipating that future events will drive the share price below the customary trading range. Investors, noticing the correlation between splits and subsequent stock performance, might use the split announcement to make inferences about this information.

iii) The Signaling Theory

The theory proposed by Brennan and Copeland in 1988 suggests that managers possess private information about their firm's prospects. If a firm with promising prospects undergoes a stock split, its percent spread (bid-ask) will temporarily increase. Eventually, the market will grasp the same positive information known to the managers, leading to a rise in the firm's price and a return of the percent spread to an even range.

In contrast, Naidu (2008) argues that if a company with average or weak fundamentals splits its stock, the percent spread will permanently increase. This cost difference allows strong firms to signal their positive prospects through a split while preventing average or weak firms from mimicking such signals. According to the signaling theory, firms announcing splits should receive positive returns. Empirical evidence indeed indicates a positive abnormal return upon a split announcement. However, one challenge for the signaling theory is the lack of evidence showing that split firms experience a temporary increase in percent effective spread compared to non-split firms.

B. *Empirical Review*

i) Interest rates on the financial performance of the NSE

Valkanov's (2003) study in the US revealed that the market excess return was higher during Democratic presidencies compared to Republican presidencies from 1927 to 1998. This anomaly couldn't be explained solely by variations in business condition proxies. Supporting evidence from Nofsinger (2004) suggests that the stock market serves as a barometer of public sentiment and its movements can indicate the likelihood of incumbents being re-elected.

Interest rate changes are widely recognized as a major source of uncertainty for corporations. According to Graham and Harvey (2001), U.S. firm managers perceive interest rate risk as the second most important risk factor, following market risk. Financial theory suggests that interest rate movements impact a firm's expectations about future corporate cash flows and the discount rate used to value these cash flows, consequently influencing the firm's value. While much of the empirical research on the impact of interest rate fluctuations has focused on financial institutions due to their interest rate sensitivity, non-financial corporations can also be significantly affected.

First, rising interest rates increase the interest expense of highly leveraged companies, reducing cash flows available for future dividends and negatively impacting share prices. Second, interest rate fluctuations influence the market value of financial assets and liabilities held by non-financial firms. Third, changes in interest rates affect the opportunity cost of equity investments. Higher interest rates make bonds more appealing due to their risk-return characteristics, leading investors to adjust their portfolios by favoring bonds over stocks, subsequently depressing stock prices (Flannery and James, 1984; Hahm, 2004).

ii) Cash flow volatility on the financial performance of the NSE

Based on the empirical findings of DeAngelo, DeAngelo, and Stulz (2006), our model suggests that equity in a firm distributes dividends when the cumulative performance reaches a certain threshold, and the firm's cash reserves reach a target level. Conversely, new equity is issued when the firm runs out of cash. Therefore, equity trades optimally balance shareholders' desire to obtain cash from the firm to mitigate the free cash flow problem against the costs of issuing new shares to maintain operations when cash reserves are depleted. If issuing activity involves fixed costs, equity adjustments occur in lumpy and infrequent issues, as supported by Bazdresch (2005) and Leary and Roberts (2005). Our analysis highlights that the firm's value is an increasing and concave function of its cash reserves, causing it to respond less to changes in cash reserves when past performance has been high.

Hau's (2006) study on the French stock market indicates a positive relationship between transaction costs and volatility. Our model predicts a similar relationship in the context of primary markets. When new securities' issuance costs are high, profitable firms' survival may be at risk due to liquidity problems. In such cases, the firm's continuation value, even when profitable, might not be sufficient to outweigh the costs of raising new funds. However, when issuance costs are lower, and the firm's survival is not at stake, further reductions in issuance costs lead to the firm's value being less sensitive to current liquidity problems, resulting in reduced stock price volatility.

iii) Inflation on the financial performance of the NSE

Reilly (2007) found that inflation has a significant impact on the performance of stock markets. It leads to differences between real and nominal interest rates, influencing consumer and corporate spending and saving behaviors. Unexpected changes in inflation rates make it challenging for firms to plan effectively, hindering growth and innovation. In addition to its impact on the domestic economy, differential inflation and interest rates also influence trade balances between countries and currency exchange rates.

The stock market is a specialized and complex arena that might be difficult for most people to understand. It serves as a means for raising funds for trading securities, including futures and derivatives, enabling investors to generate returns. This chapter provides insight into the history, participants, operations, and importance of the stock market, aiming to enhance understanding of its functioning.

Country politics can significantly influence income distribution and prosperity. In democratic states, voters elect parties that represent their beliefs and interests. According to the partisan theory proposed by Hibbs (2001), leftist governments prioritize reducing unemployment, while right-wing governments associate higher social costs with inflation. Kibuthu (2005) presents another influential theory, suggesting that incumbents, regardless of their political orientation, pursue policies to maximize their chances of re-election. They might stimulate the economy with expansionary policies before elections, followed by measures to curb inflation at the beginning of the new term. However, this policy-induced cycle in real activity may be short-lived if economic agents and voters have rational expectations (Wang, 2001). Several recent studies explore the impact of politics on security returns.

Booth and Booth (2003) report that the U.S. stock market tends to perform better in the second half of a presidential term. This phenomenon may be related to the political business cycle or behavioral factors. Investors might be overly optimistic about the implications of impending elections, but their optimism fades once the new administration fails to fulfill its campaign promises.

This inquiry contributes to the discussion on the interplay between politics and stock prices in meaningful ways. Unlike previous studies that focus solely on U.S. data, this analysis concentrates on return variability around election dates. Evidence of extreme price movements during these periods supports the idea that market participants are surprised by actual election results. Investigating return volatility is essential because uncertainty about election outcomes has significant implications for risk-averse investors.

III. METHODOLOGY

The study employed a descriptive research design, which was appropriate for investigating the factors influencing the financial performance of the Nairobi Securities Exchange (NSE) during general elections in Kenya. This design involved the use of a questionnaire as a data collection tool and allowed for precise information gathering to test hypotheses effectively, as supported by Gall et al. (2003).

The target population for the study comprised 20 stock brokers, 20 investors, and 10 NSE junior employees. The NSE index was used to measure the performance of the exchange. The participants included stock brokers, investors, and junior staff from Dyer and Blair, as well as Suntra Investments. The sample size consisted of 50 respondents.

Both primary and secondary data were utilized in this study. Primary data was collected from the respondents using a questionnaire administered by the researchers, along with semi-structured interviews that included structured and open-ended questions. The data collected through these methods focused on interest rates, inflation, and cash flow volatility. Secondary data, obtained from NSE reports and the website, was used to gather information on the financial performance of the Nairobi Stock Exchange, specifically the NSE20 share index, from November 1, 1997, to December 31, 2018. This period covered five general elections and three changes of government, with four different political parties or coalitions winning the elections.

Descriptive statistics, such as means, standard deviation, and frequency distribution, were employed to analyze the data statistically. Data presentation involved the use of pie charts, bar charts, graphs, percentages, and frequency tables. Regression analysis was used to show the relationship between variables and ascertain the causal effect of one variable on another. Pearson's product-moment method was applied to determine the strength of the relationship, aiding in assessing the level of influence the independent variables had on the dependent variable (Patton, 2002).

The regression was calculated using the basic regression model $P_{NSE} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$

Where

X_1 – Interest rates (IR)

X_2 - Cash flow volatility (CF)

X_3 - Inflation (IN)

β_0 - Constant

$\beta_{1,2,3}$ – Regression coefficients

e – Error term

IV. RESULTS AND DISCUSSION

i) Correlation Analysis

The correlation matrix shows significant relationships between the financial performance of the Nairobi Securities Exchange (NSE) and various factors. At a 95% significance level, there is a positive correlation of 0.484 between NSE's financial performance and interest rates. This suggests that changes in interest rates have an impact on the performance of the NSE.

Furthermore, the foreign investors market is positively correlated with interest rates and cash flow volatility at a 5% significance level, with correlation coefficients of 0.382 and 0.434, respectively. This indicates that foreign investors' activity in the market is influenced by changes in interest rates and cash flow volatility.

Additionally, the correlation matrix reveals a relationship between NSE's financial performance and inflation. However, the strength and significance of this correlation are not specified in the provided information.

Overall, the correlation matrix provides valuable insights into how interest rates, cash flow volatility, and inflation relate to the financial performance of the Nairobi Securities Exchange. These findings can help in understanding the interplay of these factors and their influence on the stock market.

ii) Regression analysis

The regression was calculated using the basic regression model

$P_{NSE} = \beta_0 + \beta_1 IR + \beta_2 CF + \beta_3 IN$

Where;

IR - Interest rates

CF - Cash flow volatility

IN - Inflation

B0 - Constant

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TABLE I: REGRESSION COEFFICIENTS

Model		Unstandardized coefficients		Standardized coefficients		
		B	Std. Error	Bet	T	Sig.
	(Constant)	0.512	0.160		3.4	0.022
	Interest rates	1.237	0.541	0.082	2.438	0.025
	Cash flow volatility	1.281	0.471	0.490	2.720	0.011
	Inflation	1.271	0.357	0.234	2.433	0.046

iii) Cash flow volatility

The analysis demonstrates a significant and positive relationship between cash flow volatility and the financial performance of the Nairobi Securities Exchange (NSE). The statistically significant coefficient, with a p-value of 0.011, supports this finding. This implies that changes in cash flow volatility have a meaningful impact on the NSE's financial performance.

Furthermore, the coefficient value of 1.924 indicates that for every one-unit change in cash flow volatility, the financial performance of the NSE changes by approximately 1.924 units. This indicates a relatively strong influence of cash flow volatility on the NSE's performance.

In summary, the study provides evidence that cash flow volatility plays a crucial role in determining the financial performance of the NSE. The significant and positive relationship between these two factors suggests that changes in cash flow volatility can significantly impact the NSE's overall performance, making it an essential factor for investors and market participants to consider in their decision-making processes.

iv) Interest rates

The analysis reveals a positive relationship between interest rates and the financial performance of the Nairobi Securities Exchange (NSE). The positive sign of the coefficient suggests that as interest rates increase, the performance of the NSE tends to improve.

Additionally, the statistical significance of the coefficient is confirmed by the p-value of 0.025. This p-value is below the typical significance level of 0.05, indicating that the relationship between interest rates and NSE's financial performance is unlikely to be due to chance.

In conclusion, the study provides evidence that interest rates have a significant and positive impact on the financial performance of the NSE. This finding suggests that as interest rates rise, the NSE experiences improved performance, which can be valuable information for investors and market participants in understanding the dynamics of the stock market about changes in interest rates.

v) Inflation

The analysis indicates a positive relationship between inflation and the financial performance of the Nairobi Securities Exchange (NSE). The positive sign of the coefficient suggests that as inflation increases, the performance of the NSE tends to improve.

Moreover, the statistical significance of the coefficient is confirmed by the p-value of 0.046. This p-value is below the typical significance level of 0.05, indicating that the relationship between inflation and NSE's financial performance is not likely to be due to chance.

In conclusion, the study provides evidence that inflation has a significant and positive impact on the financial performance of the NSE. This finding suggests that as inflation rises, the NSE experiences improved performance, which can be of interest to investors and market participants in understanding the dynamics of the stock market concerning inflationary trends.

V. CONCLUSION

The main objective of the study was to investigate the macroeconomic factors, namely interest rates, cash flow volatility, and inflation, influencing the performance of the Nairobi Securities Exchange (NSE) during the general elections in Kenya. Based on the findings, several conclusions were made.

Interest rates have a significant impact on share pricing in the stock market. Higher interest rates attract higher pricing of shares, while lower interest rates lead to lower pricing of shares. Fluctuations in share prices are influenced by changes in interest rates.

Cash flow volatility also affects share prices in the stock market. Historical cash flow volatility is negatively associated with future returns, indicating that higher cash flow volatility leads to lower stock returns.

Inflation has an impact on share prices and affects the overall stock market. General elections lead to inflation, resulting in substantial volatility hikes around Election Day. Investors tend to be over-optimistic about the implications of impending elections.

Based on these findings, the researchers recommend that the Nairobi Securities Exchange (NSE) should closely monitor changes in the economy, particularly about the factors influencing its performance during general elections in Kenya. Standardization of deviation of operating cash flows and the use of alternative standard deviation of residuals from various time-series models are also suggested to assess cash flow volatility more accurately.

Furthermore, the management of inflation should be carefully considered to minimize its effect on share prices in the stock market, especially during the period around general elections. Taking these recommendations into account can help optimize the performance of the NSE and provide valuable insights for investors and market participants in making informed decisions.

REFERENCES

[1] Alesina, A., & Sachs, J. (1988). "Political Parties and the Business Cycle in the United States, 1948- 1984", Journal of Money, Credit and Banking, 20, 63-82.

[2] Alesina, A. (1987). "Macroeconomic Policy Convergence in a Two-Party System with Rational Voters", Quarterly Journal of Economics, 102, 651-678.

[3] Bailey, W., & Chang, P. (1995). "Exchange Rate Fluctuations, Political Risk, and Stock Returns: Some Empirical Evidence", Journal of Financial and Quantitative Analysis, 541-61.

[4] Barako, D. G., Hancock, P., & Izac, H. Y. (2006). Relationship between Corporate Governance Attributes and Voluntary Disclosures in Annual Reports: The Kenyan Experience. Financial Reporting, Regulation, and Governance, Vol. 5 (1): 1-26.

[5] Bartram, S. M. (2002). The Interest Rate Exposure of Nonfinancial Corporations. European Finance Review, 6, 101–125.

[6] Bazdresch, S. (2005). Financial Lumpiness and Investment," mimeo, Carlson School of Management, University of Minnesota.

[7] Bernanke B.S. & K. N. Kuttner, (2003). What Explains the Stock Market's Reaction to Federal Reserve Policy? Federal Reserve Bank of New York.

[8] DeAngelo, H., DeAngelo, L., & Stulz, R. M. (2006). Dividend Policy and the Earned/Contributed Capital Mix: A Test of the Life-Cycle Theory," Journal of Financial Economics, 81(2), 227{254.

[9] Dimand, R. W. (1988). The Origins of the Keynesian Revolution. Stanford: Stanford University Press.

[10] Gordon, R. J. (1990). "What Is New-Keynesian Economics?". Journal of Economic Literature.

[11] Graham, J. R., & Harvey, C. R. (2001). The Theory and Practice of Corporate Finance: Evidence from the Field. Journal of Financial Economics, 60, 187- 243.

[12] Hahm, J. H. (2004). Interest Rate and Exchange Rate Exposures of Banking Institutions in Pre-Crisis Korea. Applied Economics, 36, 1409-1419,

[13] Hau, H. (2006). The Role of Transaction Costs for Financial Volatility: Evidence from the Paris Bourse," Journal of the European Economic Association, 4(4), 862{890.

[14] Jabarin, M., Nour, A., & Atout, S. (2019). Impact of Macroeconomic Factors and Political Events on The Market Index Returns At Palestine And Amman Stock Markets (2011–2017). Investment Management and Financial Innovations, 16(4), 156-167. doi:10.21511/imfi. 16(4).2019.14

[15] Jones, T. (2002). Presidential Election Cycles and Stock Market Returns. Conference Paper for the American Academy of Accounting and Finance.

[16] Kabiru, N. K., Ochieng, D. E. & Kinyua, H. W. (2015). The Effect of General Elections on Stock Returns at the Nairobi Securities Exchange. European Scientific Journal October 2015 edition vol.11, No.28 ISSN: 1857 – 7881 (Print) e - ISSN 1857- 7431.

[17] Kibuthu, W. (2005). Capital Markets in Emerging Economies: A Case Study of the Nairobi Stock Exchange. Unpublished MA dissertation, Tufts University.

[18] Lakhani, S. A. (2019). Effect of Macroeconomic Factors on Stock Market Performance of NSE 20 Constituent Companies. Unpublished MBA thesis, United States International University – Africa

[19] Leary, M.T., & Roberts, M. R. (2005). Do Firms Rebalance their Capital Structure?" Journal of Finance, 60(6), 2575{2619.

[20] Liew, V. K., & Rowland, R. (2016). The Effect of Malaysia General Election on Stock Market Returns. Springer Plus (2016)5:1975. DOI 10.1186/S40064—016-3648-5.

[21] Minton, B., & Schrand, C. (1999). The Impact of Cash Flow Volatility on Discretionary Investment and the Costs of Debt and Equity Financing, Journal of Financial Economics 54, 423-460.

[22] Nairobi Securities Exchange (2020) http://www.nse.co.ke Nairobi Stock Exchange Website. http://africaneiectioas. tripod.com/ke - African Election Database website.

[23] Nofsinger, J.R., (2004). The Stock Market and Political Cycles. Paper presented at the Annual Meeting of the Financial Management Association, October 6-9, 2004, New Orleans, LA.

[24] Otuke, J. (2006). Impact of Central Depository System on the Performance of NSE. Unpublished MBA Dissertation, University of Nairobi

[25] Reilly, F. K., Wright, D.J., & Johnson, R.R. (2007). Analysis of the Interest Rate Sensitivity of Common Stocks. Journal of Portfolio Management, 33, 85-107.

[26] Wang, F.A. (2001). Overconfidence, Investor Sentiment and Evolution, Journal of Financial Intermediation, 10, 138-170.

[27] Wesonga, B. E. (2016). Effects of Political Risk and Macroeconomic Factors on Stock Market Returns at Nairobi Securities Exchange in Kenya. Unpublished Masters' Thesis, Kenyatta University.