
Effect of Market Returns and Macroeconomic Factors on Stock Prices of Nestle Nigeria PLC

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Abstract

This study investigated the effect of market returns and macroeconomic factors on the stock prices of Nestle Plc in Nigeria. The main objective was to examine the impact of external macroeconomic shocks on equity valuation, considering the critical controlling roles of internal profitability and operational scale. Specifically, the study analyzed the trends of equity pricing; determined the effect of market returns, inflation, and interest rates on stock prices; and assessed the impact of firm-specific characteristics, such as firm size and earnings per share, on these market valuations.

The study adopted an ex-post facto research design. Time-series quarterly data covering a fifteen-year period from 2010 to 2024 were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, the Nigerian Exchange Group (NGX), and the published audited financial reports of Nestle Nigeria Plc. Data were analyzed using descriptive statistics, Augmented Dickey-Fuller unit root tests, the Autoregressive Distributed Lag (ARDL) bounds testing approach, and the Error Correction Model (ECM). All hypotheses were tested at the 0.05 level of significance.

Results from the ARDL long-run estimation showed that the inflation rate had a highly significant negative impact on Nestle's stock price ($\beta = -0.0620$, $p = 0.0000$), while market returns ($\beta = 0.0170$, $p = 0.0021$) and interest rates ($\beta = 0.0423$, $p = 0.0259$) exhibited significant positive impacts. Regarding the internal firm-specific controls, firm size had a highly significant positive impact on the stock price ($\beta = 0.7541$, $p = 0.0000$). The model yielded an $R^2 = 0.9745$. Furthermore, the ARDL bounds test established a significant long-run equilibrium relationship among the variables (F-statistic = 5.23), with an error correction adjustment speed of 38.58% per quarter following macroeconomic shocks.

The study concluded that massive operational scale and internal efficiency serve as the primary drivers of market valuation for Nestle Plc, whereas severe domestic inflation operates as a value-

destroying force, invalidating the premise of equities as a natural inflationary hedge. Recommendations include advising investors to aggressively prioritize highly capitalized entities to buffer against systemic volatility, urging corporate management to pursue supply-chain efficiency to insulate internal profitability from inflation, and directing economic policymakers to prioritize strict inflation targeting to prevent the continuous erosion of corporate equity value.

Keywords Earnings per share, Firm size, Inflation rate, Interest rate, Market returns, Stock price.

Introduction

In the rapidly evolving global financial ecosystem, the stock price of a publicly traded corporate entity is the ultimate barometer of its market valuation, encapsulating investor sentiment, intrinsic financial health, and the broader economic realities in which the firm operates. As the dependent variable of profound interest to investors, portfolio managers, and policymakers alike, stock prices represent the present value of expected future cash flows, heavily discounted by external risk factors. Globally, the pricing of shares does not occur in a vacuum; it is highly susceptible to systematic risk the unavoidable, market-wide volatility triggered by macroeconomic fluctuations. As Roy, Marshall, Nguyen, and Visaltanachoti (2025) demonstrated, systematic default risk surges significantly following broad stock price crashes, directly increasing the cost of equity financing for firms regardless of their initial beta classifications. Consequently, understanding the specific macroeconomic determinants that drive these stock price fluctuations is vital for stakeholders seeking to optimize returns and mitigate portfolio exposure. This dynamic is observable across various international markets. For instance, in an analysis of the Jordanian banking sector, Al Salamat, Momani, and Batayneh (2021) established that while firm-specific factors like return on assets negatively dictate stock price volatility, macroeconomic elements such as Gross Domestic Product (GDP) and trading volume exert a profound positive influence on market fluctuations.

Transitioning to the African continent, emerging markets exhibit a heightened sensitivity to macroeconomic indicators due to structural economic vulnerabilities, reliance on commodity exports, and fluctuating monetary policies. In South Africa, a mixed-method exploration of the Johannesburg Stock Exchange (JSE) by Robbette and Van der Niet (2025) revealed that a staggering 97.1% of the variations in the share prices of top-tier listed firms could be accurately estimated through the modelling of consumer price indices, exchange rates, and repurchase rates. Their findings underscore a critical reality for African capital markets: macroeconomic forces dictate market capitalization to an extent that individual firms simply cannot circumvent. Within the Nigerian economic landscape, the Nigerian Exchange Group (NGX) serves as a critical mechanism for resource allocation and capital formation. However, the Nigerian macroeconomic environment is historically characterized by persistent volatility, specifically double-digit inflation and aggressive monetary policy adjustments by the Central Bank of Nigeria (CBN).

Despite the extensive body of empirical literature exploring the nexus between macroeconomic variables and capital market performance in Nigeria, a definitive consensus remains elusive, creating a distinct gap in localized, firm-specific financial modeling. The empirical evidence

regarding how these domestic macroeconomic variables interact with the NGX is extensive, yet often contradictory. Agunobi, Efonayi, and Akutson (2024) found that lagged broad money supply significantly influences total market capitalization, while interest rates showed no significant effect. Conversely, Babbuli and Mohammed (2025) argued that the CBN's interest rate adjustments have a significant negative relationship with stock returns, directly increasing market uncertainty and reducing trading activity. Inflation, in particular, remains a highly contentious variable. Traditional economic theory suggests that high inflation erodes consumer purchasing power and corporate profitability, theoretically driving down stock prices. However, Shittu and Adaramola (2025) tested Fisher's hypothesis during the volatile COVID-19 pandemic era and found that inflation maintained a positive and significant relationship with stock returns in the long run, implying that Nigerian equities can uniquely serve as a hedge against inflation. Yet, this is aggressively challenged by Abu and Ibekwe (2023), whose time-series analysis concluded that inflation rates exert a significant and negative impact on the NGX's performance in both the short and long term.

To isolate these broad economic shocks and resolve these empirical contradictions, it is imperative to drill down into specific sectors. The consumer goods sector in Nigeria is highly sensitive to macroeconomic shifts because it relies directly on the discretionary income of the populace and often involves the heavy importation of raw materials. At the micro-level, isolating a blue-chip conglomerate like Nestle Nigeria Plc provides a robust foundation for econometric analysis. Nestle Nigeria operates as a bellwether for the consumer goods sector, and its stock pricing behavior offers a pristine lens through which to view the collision of internal corporate efficiency and external macroeconomic pressure. However, an accurate assessment of how external market returns, inflation, and interest rates affect Nestle's stock price cannot be conducted without accounting for the firm's internal financial baseline. If a regression model omits firm-specific characteristics, it risks attributing changes in stock price solely to the economy when, in reality, the changes may stem from the company's internal operational success. Firm size has been proven by Olojede, Eze, and Awokoya (2025) to have a highly significant and positive impact on financial performance, allowing massive conglomerates to leverage their asset bases to absorb macroeconomic shocks.

Consequently, investors and portfolio managers are left with broad generalizations that are difficult to apply to specific equity selection and risk management. If market returns, inflation, and interest rates are highly volatile, it is fundamentally imperative to determine their exact mathematical impact on Nestle's stock price, controlling for the firm's specific asset size and profitability. Without isolating these variables through rigorous ex-post facto analysis over a robust timeframe, the true drivers of equity valuation remain obscured. This study, therefore, seeks to fill this crucial gap in the literature by investigating the precise effect of market returns, inflation, and interest rates on the stock prices of Nestle Plc, utilizing firm size and Earnings Per Share as critical control variables.

Literature Review

Conceptual and Theoretical Underpinnings

Conceptually, a stock price represents the present value of a publicly traded company's anticipated future cash flows, heavily discounted by prevailing market risks and investor expectations. It serves as the ultimate financial barometer of a firm's operational efficiency and its capacity to create long-term shareholder wealth (Oyasor, 2025). The pricing of shares is inextricably linked to market returns, which capture the aggregate, systematic performance of all equities listed on a formal stock exchange. In Nigeria, the All-Share Index (ASI) is the standard metric utilized to compute these market returns, representing the undiversifiable, inherent risk of participating in the broader market (Adewale, 2025; Balogun et al., 2026). Furthermore, inflation the persistent increase in the general price level and interest rates the fundamental lever of monetary policy act as profound macroeconomic stressors that alter consumer purchasing behavior, escalate corporate production costs, and heavily influence equity discount rates.

To anchor these concepts, this study relies on the Arbitrage Pricing Theory (APT), originally developed by Stephen Ross (1976). Unlike the traditional Capital Asset Pricing Model (CAPM), which restricts the explanation of asset pricing to a single market-risk factor, the APT proposes a robust, multi-factor pricing model. It posits that the expected return of a financial asset can be accurately modeled as a linear function of various macroeconomic, systematic risk factors. In the context of African emerging markets, the APT becomes exceedingly relevant due to pronounced structural vulnerabilities. Researchers have demonstrated the theory's precise applicability, revealing that combinations of macroeconomic variables almost entirely account for the share price movements of top-listed African firms (Robbette & Van der Niet, 2025). Consequently, the APT provides the ideal theoretical baseline for this study, confirming that Nestle Plc's stock price is not merely a reflection of internal accounting metrics, but is fundamentally driven by varying sensitivities to aggregate market returns, domestic inflation, and prevailing interest rates.

Empirical Review

Adaramola (2011) investigated the direct impact of prominent macroeconomic indicators on the individual stock prices of selected firms in Nigeria spanning from 1985 to 2009. Unlike broader aggregate market studies, this research uniquely utilized a pooled panel model to examine micro-level firm sensitivities to six specific macroeconomic variables, including money supply, interest rate, and inflation rate. The empirical analysis decisively revealed that macroeconomic forces exerted varying, yet highly significant impacts on the stock valuations of individual Nigerian firms. The study concluded with robust empirical evidence that historical trends in systemic macroeconomic variables reliably predict the future movement of individual corporate stock prices.

Ibrahim et al. (2015) critically examined the specific effects of internal operational efficiency, focusing on inventory control, on the performance of Nestle Nigeria Plc. As a major manufacturing conglomerate, the study purposefully sampled a ten-year longitudinal period from 2004 to 2013. The researchers gathered quantitative data concerning inventory holdings,

investment income, and profit after tax directly from Nestle's published annual reports. Surprisingly, the empirical findings indicated that physical inventory holdings had no significant effect on either the profit after tax or the investment income of Nestle Nigeria Plc, suggesting that overall profitability and market value are driven by broader factors beyond simple inventory retention.

Oyedele (2017) investigated the complex impact of both internal characteristics and external macroeconomic factors on the financial performance of listed consumer goods firms in Nigeria. Selecting fifteen companies over an eleven-year period spanning from 2006 to 2016, the researcher employed multiple regression techniques to analyze secondary financial statement data. The empirical results clearly established that internal firm-specific variables namely liquidity, leverage, and overall firm size were the most critical determinants, all demonstrating positive and highly significant relationships with financial performance. Conversely, macroeconomic indicators like inflation showed no significant correlation with profitability, indicating that scale and liquidity buffer firms against external shocks.

Usman (2019) examined the profound impact of internal capital structure on the financial performance of the consumer goods industry in Nigeria. Focusing on a five-year period from 2012 to 2016, the researcher utilized an ex-post facto design to sample six prominent listed companies. Financial performance, proxied by return on assets, was systematically regressed against long-term debt, short-term debt, and shareholders' equity. The empirical results discovered that neither short-term nor long-term debt possessed any statistically significant impact on the financial performance of the listed firms. In stark contrast, shareholders' equity demonstrated a highly significant positive impact on performance and valuation.

Izunobi et al. (2019) evaluated the persistent existence of high stock market volatility and the specific impact of exchange rates, interest rates, and inflation on Nigerian stock returns. Utilizing Generalized Autoregressive Conditional Heteroskedasticity techniques, the researchers analyzed monthly series data spanning from 1995 to 2014. The comprehensive findings established that the Nigerian stock market suffered from high and persistent volatility, fundamentally hindering capital mobilization. The regression results indicated that while interest rates maintained a significant negative relationship with stock returns, the inflation rate demonstrated a positive relationship, suggesting complex reactions to monetary policy shifts.

Adoke and Abdulaziz (2021) conducted an empirical investigation into the effects of corporate financial decisions on the performance of fifteen consumer goods firms listed on the Nigerian Stock Exchange. Utilizing an ex-post facto research design with a longitudinal panel of time series data, the researchers analyzed the impact of liquidity, dividend payouts, leverage, and working capital decisions. The regression analysis revealed that dividend decisions and leverage policies possessed insignificant effects on overall financial performance. However, liquidity and working capital decisions demonstrated a profoundly positive and significant impact, establishing that internal operational frameworks heavily dictate firm success.

Al Salamat et al. (2021) explored the internal firm-specific and external macroeconomic determinants driving stock price fluctuations for conventional banks in Jordan between 2010 and 2019. Recognizing that stock volatility crucially impacts investment decisions, the researchers applied ordinary least squares multiple regression to panel data. The empirical results demonstrated that macroeconomic factors positively escalated stock price volatility, while internal firm metrics behaved differently. Specifically, return on assets and dividend payout ratios statistically and negatively affected stock price volatility, effectively stabilizing the equities against severe macroeconomic and external market fluctuations.

Ogiemudia et al. (2022) investigated the dynamic link between overarching market risk factors and equity returns in the Nigerian bourse from 1980 to 2019. The researchers deployed a rigorous vector error correction model to determine both the short-run dynamics and long-run effects of systemic risk. The empirical findings confirmed that a highly dynamic relationship existed between market risk and stock returns. Specifically, global oil price shocks demonstrated significant influence over stock returns. Conversely, domestic inflation and interest rate fluctuations exhibited statistically non-significant impacts on overall market returns during the evaluated period.

Abu and Ibekwe (2023) analyzed how critical macroeconomic variables dictated the overarching performance of the Nigerian stock market. The researchers designated the All-Share Index as the dependent variable and sourced secondary time series data covering 1999 to 2021 from the Central Bank of Nigeria. Utilizing the autoregressive distributed lag technique, the empirical analysis provided counter-intuitive insights into market behavior. The study found that interest rates did not significantly affect the Nigerian stock market's short-term or long-term performance. In stark contrast, the inflation rate exerted a significant and distinctly negative effect on market performance.

Lenyie (2023) examined the detrimental effect of systemic risk on stock market returns in Nigeria, utilizing comprehensive time series data spanning from 1990 to 2021. The researcher modeled stock market returns as a direct function of exchange rate risk, commodity price risk, equity price risk, and interest rate risk. Applying ordinary least square methods alongside a vector error correction estimate, the study discovered that systemic risk explained over sixty-two percent of the total variation in stock market returns. Specifically, equity price risks exerted positive and significant effects, whereas interest rate risks remained insignificant.

Agunobi et al. (2024) evaluated the direct effect of macroeconomic variables on stock market performance in Nigeria, utilizing total market capitalization as the primary dependent variable. The researchers collected extensive time series secondary data covering a robust thirty-two-year period from 1990 to 2022. Employing the Auto-regressive Distributed Lag modeling technique, the empirical findings revealed that lagged broad money supply and financial deepening exerted a highly significant positive effect on the total market capitalization. Surprisingly, the study found that interest rate adjustments possessed no statistically significant effect on the performance of the Nigerian Exchange.

Ogbonna and Omoke (2024) evaluated the profound impact of macroeconomic determinants on the stock prices of ten listed consumer goods firms in Nigeria. Leveraging an *ex-post facto* research design, the researchers extracted time series datasets spanning a seven-year period from 2016 to 2023. The study employed pooled multiple regression to rigorously estimate the empirical relationships. The analysis revealed that interest rates exerted positive and statistically significant effects on the stock prices of the sampled consumer goods firms. Furthermore, while economic growth significantly boosted stock valuations, the inflation rate demonstrated a positive but statistically insignificant effect.

Adewale (2025) examined the impact of central bank monetary policy rates and inflation on stock market performance in Nigeria over the period spanning from 1990 to 2023. Utilizing the All-Share Index as a proxy for market performance, the researcher employed the Autoregressive Distributed Lag model to carefully assess economic relationships among the variables. The Treasury Bill Rate was purposefully utilized as a proxy for the central bank's policy rate. The empirical findings revealed that both the monetary policy rate and the inflation rate exerted negative but statistically insignificant effects on stock market performance in the short and long run.

Oyasor (2025) investigated the firm-specific and macro-economic determinants of share pricing among listed firms in Nigeria, focusing specifically on the consumer goods sector. The study extracted longitudinal data from the audited annual reports of eighteen firms spanning from 2010 to 2022, alongside Central Bank of Nigeria macro-economic data. Using the Two-step System Generalized Method of Moments, the findings showed that dividend payouts and firm leverage had significant positive effects on share prices. Conversely, money supply demonstrated significant negative effects on stock pricing, confirming that both internal characteristics and broader macro-economic variables simultaneously influence share prices.

Shittu and Adaramola (2025) examined the relationship between stock returns and inflation in Nigeria, specifically testing the applicability of Fisher's hypothesis during the unprecedented COVID-19 pandemic. The researchers utilized weekly time series data covering the volatile period between February 2020 and February 2021. After conducting unit root tests, the study applied the Autoregressive Distributed Lag estimation technique. Strikingly, the empirical findings revealed that despite the severe economic downturn caused by the pandemic, inflation maintained a positive and significant relationship with stock returns in the long run, concluding that Nigerian equities served effectively as a reliable hedge against inflation.

Methodology

This study adopts an *ex-post facto* research design to retrospectively analyze historical data, utilizing secondary, time-series data covering a fifteen-year period from 2010 to 2024. Macroeconomic data, specifically the Inflation Rate and Interest Rate, are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, while Market Returns (NGX All-Share Index) and Nestle Plc's Stock Prices are retrieved from the Nigerian Exchange Group (NGX). The firm-specific control variables, Total Assets (used to calculate Firm Size) and Earnings Per

Share (EPS) are extracted directly from the audited annual financial reports of Nestle Nigeria Plc.

Model Specification

To empirically investigate the relationship between the independent macroeconomic variables and the dependent variable, this study adapts the Autoregressive Distributed Lag (ARDL) bounds testing approach introduced by Pesaran, Shin, and Smith (2001). This method is superior as it does not strictly require all variables to be integrated of the same order, seamlessly accommodating the mixture of I(0) and I(1) variables identified in the unit root tests.

The ARDL representation of the Error Correction Model (ECM) is specified as follows:

$$\Delta \text{LOGSP}_t = \beta_0 + \sum(\beta_{1i} \Delta \text{LOGSP}_{t-i}) + \sum(\beta_{2i} \Delta \text{MR}_{t-i}) + \sum(\beta_{3i} \Delta \text{INF}_{t-i}) + \sum(\beta_{4i} \Delta \text{INT}_{t-i}) + \sum(\beta_{5i} \Delta \text{LOGFSIZE}_{t-i}) + \sum(\beta_{6i} \Delta \text{EPS}_{t-i}) + \lambda_1 \text{LOGSP}_{t-1} + \lambda_2 \text{MR}_{t-1} + \lambda_3 \text{INF}_{t-1} + \lambda_4 \text{INT}_{t-1} + \lambda_5 \text{LOGFSIZE}_{t-1} + \lambda_6 \text{EPS}_{t-1} + \varepsilon_t$$

Where Δ denotes the first difference operator; β_0 is the drift component; β_{1i} to β_{6i} represent the short-run dynamics of the model; λ_1 to λ_6 represent the long-run multipliers; p and q are the optimal lag lengths determined by the Akaike Information Criterion (AIC); and ε_t is the white noise error term.

Technique of Data Analysis

Data analysis was executed using EViews econometric software. The estimation commenced with the Augmented Dickey-Fuller (ADF) Unit Root Test to ascertain data stationarity and confirm that no variable was integrated at order I(2). Following this, the ARDL Bounds Test was applied to verify the existence of a long-run equilibrium relationship by comparing the F-statistic against the critical bounds tabulated by Pesaran et al. (2001). Subsequently, the study extracted the ARDL long-run coefficients and the short-run Error Correction Model (ECM). The robustness of the ARDL estimates was verified through post-estimation diagnostics, including the Breusch-Godfrey LM test for serial correlation, Breusch-Pagan-Godfrey test for heteroskedasticity, Jarque-Bera test for residual normality, and the CUSUM test for parameter stability.

Results and Discussion

Descriptive Statistics and Pre-Estimation Diagnostics

Before evaluating the inferential regression estimates, it is imperative to analyze the distributional properties and the time-series stationarity of the dataset. This foundational analysis ensures that the subsequent econometric modeling is not subject to spurious or biased outcomes. Table 1 synthesizes the descriptive statistics capturing the mean, maximum, minimum, and standard deviation alongside the Augmented Dickey-Fuller (ADF) unit root test results for the forty-quarter period spanning from 2010Q1 to 2024Q4.

Table 1: Descriptive Statistics and Unit Root Test Summary

Variable	Mean	Maximum	Minimum	Std. Dev.	ADF Level (Prob.)	ADF 1st Diff. (Prob.)	Order of Integration
LOGSP	7.0387	7.3498	6.5510	0.2505	-1.7881 (0.3805)	-4.7294 (0.0005)***	I(1)
MR	3.6125	39.8000	-15.3000	11.6039	-5.0315 (0.0002)***	-	I(0)
INF	17.3275	34.2000	8.5000	7.1405	-0.3268 (0.9114)	-3.4127 (0.0166)**	I(1)
INT	14.9750	27.2500	11.0000	4.3466	1.6037 (0.9993)	-4.7805 (0.0004)***	I(1)
EPS	1.2100	15.5000	-51.9000	21.2995	0.3726 (0.9791)	-4.3778 (0.0013)***	I(1)
LOGFSIZE	5.4814	6.5417	4.6867	0.5373	0.4156 (0.9811)	-2.7422 (0.0267)**	I(1)

Note: *** and ** denote statistical significance at the 1% and 5% levels, respectively. Source: EViews 12 Output (2026).

An analysis of the descriptive statistics reveals the fundamental macroeconomic volatility characterizing the Nigerian economic landscape. The natural logarithm of Nestle's Stock Price (LOGSP) maintained a relatively stable trajectory, evidenced by a mean of 7.0387 and a notably low standard deviation of 0.2505. This suggests that despite broader economic turbulence, the firm's equity valuation remained structurally resilient. Conversely, the overarching macroeconomic variables exhibited aggressive fluctuations. Market Returns (MR) swung violently between a peak of 39.80% and a trough of -15.30%, yielding a high standard deviation of 11.6039. Similarly, the domestic Inflation Rate (INF) and the Monetary Policy Rate (INT) displayed elevated volatility, climbing to severe maximums of 34.20% and 27.25%, respectively. The Earnings Per Share (EPS) metric highlights a severe operational shock during the review period, plunging to an unprecedented minimum of -51.90, which generated a massive standard deviation of 21.2995.

To prevent the estimation of a spurious regression, the Augmented Dickey-Fuller (ADF) unit root test was applied. The decision rule mandates rejecting the null hypothesis of non-stationarity if the probability value is less than 0.05. As shown in Table 1, only Market Returns (MR) achieved stationarity at level ($p = 0.0002$), integrating at order zero, I(0). All other variables LOGSP, INF, INT, EPS, and LOGFSIZE yielded probabilities exceeding the 0.05 threshold at level, indicating the presence of unit roots. However, upon first differencing, these variables generated probabilities well below 0.05, confirming them as integrated of order one, I(1). Because the dataset comprised a mixture of I(0) and I(1) series, the ARDL Bounds Testing approach was employed.

Correlation Analysis

To detect preliminary associations and evaluate potential multicollinearity before advancing to the formal ARDL regression, a Pearson Correlation Matrix was generated.

Table 2: Correlation Matrix

Variable	LOGSP	MR	INF	INT	EPS	LOGFSIZE
LOGSP	1.0000					
MR	0.1002	1.0000				
INF	-0.2967	0.3603	1.0000			
INT	-0.3443	0.1709	0.7738	1.0000		
EPS	0.4506	-0.2475	-0.7711	-0.7293	1.0000	
LOGFSIZE	0.0789	0.3674	0.7918	0.7451	-0.7081	1.0000

Source: EViews Output (2026).

Discussion of Correlation:

The correlation matrix reveals a moderate positive relationship between Earnings Per Share (EPS) and the stock price proxy (LOGSP), evidenced by a correlation coefficient of 0.4506. This provides a preliminary indication that internal corporate profitability aligns with upward equity valuation. Conversely, the core macroeconomic stressors Interest Rate (INT) and Inflation Rate (INF) exhibit negative correlations with LOGSP at -0.3443 and -0.2967, respectively, aligning with theoretical expectations that elevated borrowing costs and inflationary pressures depress corporate market valuations. Importantly, while strong inter-correlations exist among some independent variables (such as 0.7918 between Inflation and Firm Size), none exceed the critical 0.80 benchmark, indicating that severe multicollinearity is unlikely to distort the subsequent regression estimates.

ARDL Bounds Test for Cointegration

Because the unit root tests established that the dataset contains a mixture of I(0) and I(1) variables. Therefore, the ARDL Bounds Testing approach was employed to determine if a stable, long-run equilibrium relationship exists among the variables.

Table 3: ARDL Bounds Test Results

Test Statistic	Value	Signif.	I(0) Bound	I(1) Bound
F-statistic	5.2309	10%	2.226	3.241
k (Regressors)	5	5%	2.617	3.743
		1%	3.543	4.839

Source: EViews Output (2026).

Discussion:

The decision rule for the bounds test states that if the calculated F-statistic is strictly greater than the Upper Bound I(1) critical value, the null hypothesis of "no long-run relationship" is rejected. The F-statistic generated by the model is 5.2309. This value comprehensively exceeds the stringent 1% critical upper bound of 4.839. Consequently, the study confirms the existence of a robust, long-run cointegrating equilibrium among Market Returns, Inflation, Interest Rates, EPS, Firm Size, and Nestle's Stock Price.

ARDL Long-Run Estimation Results

Having confirmed cointegration, the specific long-run impacts of the macroeconomic and firm-specific variables on equity valuation were extracted using the ARDL Levels Equation.

Table 4: ARDL Long-Run Coefficients (Dependent Variable: LOGSP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Market Returns (MR)	0.017007	0.005223	3.256117	0.0021
Inflation (INF)	-0.062078	0.011935	-5.201358	0.0000
Interest Rate (INT)	0.042336	0.018385	2.302740	0.0259
Earnings Per Share (EPS)	0.008568	0.003881	2.207381	0.0323
Firm Size (LOGFSIZE)	0.754131	0.111357	6.772162	0.0000
Constant (C)	3.381955	0.335400	10.08336	0.0000

Model Diagnostics: R-squared = 0.9745; Adjusted R-squared = 0.9684; F-statistic = 160.007 (Prob = 0.0000). Source: EViews Output (2026).

Discussion:

The ARDL model exhibits phenomenal explanatory power. The R-squared value of 0.9745 dictates that 97.45% of the total long-run variations observed in Nestle's equity pricing are jointly explained by the specified variables. The F-statistic of 160.007 (p=0.0000) unequivocally validates the overall model at the 1% level of significance.

Analyzing the specific regressors reveals that in the long run, *all* variables significantly determine equity valuation. Firm Size (LOGFSIZE) recorded a highly significant positive coefficient of 0.7541 (p=0.0000). This confirms that massive operational scale acts as the primary buffer against economic turbulence, aggressively pushing the stock price upward. Similarly, Earnings Per Share (EPS) recorded a significant positive coefficient of 0.0085 (p=0.0323), validating that internal profitability fundamentally dictates intrinsic market value.

Regarding the macroeconomic variables, Inflation (INF) yielded a highly significant negative coefficient of -0.0620 (p=0.0000). This proves that inflation acts as a severe value-destroying force, heavily compressing equity valuations and refuting the premise that equities serve as an automatic inflationary hedge. Conversely, both Market Returns (MR) and Interest Rates (INT) recorded positive and statistically significant coefficients (p=0.0021 and p=0.0259, respectively)

in the long run. This indicates that sustained systemic market momentum and long-term monetary policy shifts significantly and positively integrate into Nestle's valuation over time.

ARDL Short-Run Dynamics and Error Correction Model (ECM)

The Error Correction Model captures the short-run dynamics and measures the speed at which the variables converge back to their long-run equilibrium following a macroeconomic shock.

Table 5: Error Correction Term

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CointEq(-1)	-0.385854	0.087731	-4.398134	0.0001

Source: EViews Output (2026).

Interpretation:

For an Error Correction Model to be valid, the coefficient of the Error Correction Term (CointEq(-1)) must be negative and statistically significant. As shown in Table 5, the coefficient is -0.3858 with a highly significant probability of 0.0001. This perfectly validates the model. Econometrically, it implies an adjustment speed of 38.58%. Therefore, whenever there is an external macroeconomic shock (such as a sudden inflation spike), approximately 38.58% of the disequilibrium in Nestle's stock price is corrected in the current quarter as the variables adjust back towards their stable, long-run equilibrium.

Post-Estimation Diagnostic Tests

To guarantee the absolute econometric robustness, validity, and reliability of the Autoregressive Distributed Lag (ARDL) estimates, a comprehensive battery of post-estimation diagnostic checks was executed. The Variance Inflation Factor (VIF) test definitively dispelled concerns of multicollinearity, as the maximum recorded VIF was 7.00 (associated with Earnings Per Share), sitting safely below the stringent critical benchmark of 10.0. Furthermore, the Breusch-Godfrey Serial Correlation LM Test yielded a Chi-Square probability value of 0.4248, confirming that the model is entirely free from first-order serial correlation and validating the temporal independence of the error terms. The Breusch-Pagan-Godfrey test produced a probability of 0.2996, verifying that the residual variance is strictly homoskedastic and stable. The residuals were also confirmed to be perfectly normally distributed, evidenced by a Jarque-Bera probability of 0.3407. Finally, to ensure that the econometric model did not suffer from structural breaks during the review period, the Cumulative Sum of Recursive Residuals (CUSUM) plot was examined. The plotted CUSUM trajectory remained strictly within the 5% critical boundaries throughout the entire timeframe, proving that the estimated long-run and short-run ARDL coefficients are structurally stable and highly reliable for policy inference.

Discussion and Economic Implications

The empirical results derived from the ARDL model provide profound insights into the structural dynamics of equity valuation within the Nigerian consumer goods sector, fundamentally validating the Arbitrage Pricing Theory (APT). The model achieved an outstanding explanatory

power (R-squared = 0.9745), proving that 97.45% of the long-run variations in Nestle's stock price are simultaneously dictated by external macroeconomic pressures and internal operational scale.

Analyzing the firm-specific controls reveals them as the most aggressive drivers of stock pricing. Firm Size recorded a highly significant positive coefficient of 0.7541 ($p = 0.0000$). This empirically establishes that massive operational scale acts as the primary buffer against external economic turbulence. This robustly supports the findings of Olojede, Eze, and Awokoya (2025) and Oyasor (2025), confirming that sheer corporate scale and asset accumulation effectively insulate blue-chip conglomerates from the volatility that bankrupts smaller competitors. Similarly, Earnings Per Share (EPS) recorded a significant positive long-run impact (0.0085, $p = 0.0323$). This validates traditional accounting theory, demonstrating that regardless of macroeconomic noise, internal profitability fundamentally dictates intrinsic market value, directly aligning with the conclusions of Uzakah and Bingilar (2025) and Adoke and Abdulaziz (2021).

Conversely, an examination of the macroeconomic variables reveals the stark realities of the Nigerian economic environment. The domestic Inflation Rate yielded a negative coefficient of -0.0620 and is highly statistically significant ($p = 0.0000$). This robust inverse relationship indicates that as domestic inflation rises, Nestle's stock price systematically contracts. This finding is of paramount theoretical importance because it empirically refutes the application of the Fisher Hypothesis within this specific context, contradicting Shittu and Adaramola (2025) who posited that equities serve as an inflationary hedge. Instead, for manufacturing entities like Nestle, hyper-inflation translates directly to rapidly escalating costs for imported raw materials and a severe contraction in consumer discretionary income. This compresses profit margins and destroys equity value, completely corroborating the time-series analyses of Abu and Ibekwe (2023) and Adesokan et al. (2025).

Interestingly, the broader market trajectory, represented by Market Returns, exhibited a highly significant positive long-run coefficient of 0.0170 ($p = 0.0021$). This perfectly aligns with the systematic risk frameworks established by Roy et al. (2025) and Robbette and Van der Niet (2025), proving that individual equities cannot entirely decouple from the overarching momentum of the stock exchange. Finally, Interest Rates recorded a positive and significant long-run coefficient of 0.0423 ($p = 0.0259$). This specific finding aligns with Ogbonna and Omoke (2024), who also found that interest rates exert positive effects on the stock prices of Nigerian consumer goods firms in the long run, suggesting that highly capitalized firms like Nestle can aggressively pass increased financing costs down to consumers without sacrificing long-term equity valuation.

Conclusion and Recommendations

Conclusion

Based on the robust empirical evidence generated through the ARDL bounds testing framework, this study concludes that macroeconomic factors and internal firm characteristics uniquely, significantly, and simultaneously dictate the equity pricing of Nestle Nigeria Plc. The econometric analysis establishes that massive operational scale (Firm Size) and internal efficiency (Earnings Per Share) act as aggressive, positive drivers of market valuation.

Conversely, the study conclusively demonstrates that domestic inflation operates as a severe, value-destroying macroeconomic force, significantly suppressing equity prices and invalidating the theoretical assumption that consumer goods equities serve as a natural inflationary hedge within the Nigerian landscape. However, unlike short-term analyses, the long-run estimates confirm that overarching market returns and monetary policy adjustments (interest rates) significantly and positively influence equity pricing over time. Ultimately, these findings validate the Arbitrage Pricing Theory, proving that stock prices do not react to macroeconomic risks in a vacuum; rather, they are continuously re-priced by a complex intersection of specific systematic shocks and robust internal operational resilience, with any short-term disruptions correcting at a quarterly speed of 38.58%.

Recommendations

In light of the empirical findings, the following actionable recommendations are prescribed:

1. **For Investors and Portfolio Managers:** Investment strategies within the Nigerian Exchange Group must aggressively prioritize fundamentally sound, highly capitalized entities like Nestle Plc. Investors should utilize Firm Size and robust Earnings Per Share as primary screening criteria, as massive asset bases are required to absorb systemic shocks. Furthermore, investors must strictly monitor national inflation trends, as hyper-inflationary periods will severely erode equity values over time.
2. **For Corporate Management:** The management of consumer goods firms must treat inflation not merely as an external fluctuation, but as a core strategic risk. Firms must prioritize aggressive cost-management, local raw material sourcing, and supply-chain efficiency to insulate internal profitability against inflationary pressures. Maintaining a massive, robust asset base is critical for sustaining high market valuations during periods of economic turbulence.
3. **For Economic Policymakers:** The Central Bank of Nigeria and relevant fiscal authorities must prioritize aggressive macroeconomic stabilization, with a specific focus on strict inflation targeting. The empirical evidence proves that unabated domestic inflation inherently destroys corporate equity value, which subsequently stifles the capital formation and financial deepening required for long-term national economic expansion.

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