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Dynamics of Nepalese Stock Market Performance: An Analysis of Macro-economic, Firm-specific, Size, and Event Factors

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ABSTRACT

This study examines the multifaceted dynamics influencing the performance of the Nepalese stock market employing time-series ARDL analysis techniques. The study investigates the influence of macroeconomic indicators (gross domestic product, gross domestic savings, interest rates), firm-specific factors (total assets, return on equity), market size (number of listed companies), and event factors (political instability, policy changes) on stock market performance, measured by the stock market index. The ARDL bounds test (F-statistic = 8.378, df = 6, I(0) = 2.88, I(1) = 2.88, α = 1%) indicates the presence of long-run interrelationships among the variables of interest. Additionally, the significant negative coefficient of the error correction term (etc. (-1) = -0.527, $p < 0.01$) suggests a long-run convergence towards equilibrium. In the short run, political instability exhibits an adverse effect on stock market activities (β = -0.347, $p < 0.01$), while favorable policy changes demonstrate a positive impact (β = 0.369, $p < 0.01$). The study emphasizes that authorities and market actors must address the complex linkages of these dynamics impacting Nepal's stock market functioning. It improves the literature on emerging equity markets and informs government and investment decisions in Nepal's fast-changing financial landscape by highlighting stock market performance's many factors.

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1. INTRODUCTION

In the dynamic financial environment of the present day, stock market performance has served as an essential barometer for economic well-being and investors' confidence. Scholars have explored the multifaceted interactions that form the fundamental basis for understanding the dynamics of stock markets. Shiller [1], for instance, contended that favorable economic indicators and investors' positive sentiment typically lead to market upturns; conversely, adverse investors' sentiment and economic difficulties often induce

market downturns. An efficient stock market has claimed a key for future economic growth, as it channels savings from the economy into the stock market, thereby enhancing capital productivity and, in turn, promoting overall public well-being [2], [3], among others.

Exploring the factors associated with equity market performance is a prominent area of research in the developing economies of Nepal. Even though the Nepalese capital market began issuing shares in 1937, it was in a state of stagnation until the regulatory and security exchange operating bodies were formally established. The modern history of the security market in Nepal is notably brief; however, it has experienced a remarkable transformation over the last three decades. The market capitalization, for instance, increased by an incredible 227 times, from NPR 12.698 billion in the fiscal year 1996/97 to NPR 2,879.34 billion by 2021/22, and more than a double of listed companies, rising from 95 to 236 (Economic Survey, 2001/2002; 2021/22). This indicates the growing depth and broadening of the market with diverse companies and industries. Moreover, SEBON (2021/22) highlights a notable jump in investors' participation, recording a 438.21% increase over two years, reaching 1,037,381 by 2021/22. These changes, continuous reforms, and infrastructural developments have facilitated the market, provided real-time service benefits, and transformed the country's stock market into an attractive investment option. The growing number of market intermediaries and other participants has further supported this transformation.

Despite the expected stock market price movement trends, the Nepalese stock market has demonstrated volatile behavior, characterized by unusual fluctuations that commonly do not align with perceived vital indicators. This unpredictability implies that the equity market's effectiveness is not merely the result of isolated factors but the complex interaction of multiple forces. The impact of macroeconomic indicators, company performance, market size, and event-driven factors such as political and government policies on stock market performance is multifaceted and, while potentially interrelated, necessitates a thorough inquiry. Therefore, this study explores the multidimensional influence of macroeconomic forces, company-specific factors, stock market size, two event-driven political factors, and government policies on stock market performance. The analysis is vital for enriching the literature with insightful analyses and informing various stakeholders, including investors, policymakers, and market participants.

Theoretical arguments suggest that the performance of stock markets is shaped by a multidimensional array of forces, each contributing to the complex dynamics driving the market outcomes. Scholars argued that the stock market reflects a country's economic well-being and prospects [4], [5]. A strong economic performance with higher GDP growth attracts investment and increases stock prices. An increase in demand for a company's stock is expected to correspond with its strong financial performance and promising prospects, which will likely cause a rise in stock prices and vice versa [6]. Fama [7] advocates that the larger stock market, characterized by a greater breadth and increased number of market participants, may be more efficient, resulting in a more stable performance. The larger stock markets tend to provide greater liquidity, contributing to improved market performance by stimulating higher demand for equity [8]. Stock prices

reveal event-related information. However, the degree to which markets can process this information may largely depend on the market's transparency and ability to assess the consequences thereof [9], [10].

Sukmayana et al. [11] discovered that G and money supply positively influence equity market outcomes, but interest and exchange rates tend to have the opposite effect. Other studies, such as those by Gupta and Kumar [12] and Agwu and Haydar [13], studied the impact of macroeconomic forces on equity market performances, revealing substantial associations between economic indicators and market performance. Milosevic-Avdalovic and Milenković [14] examined how company-specific factors, including size, profitability measures, and valuation ratios, affect stock prices on the Belgrade Stock Exchange, highlighting the diverse and substantial influence of both macroeconomic and company-specific components on equity market performance in various geographical regions.

Bhattacharya et al. [15] and AI-Dwiry et al. [16] evidenced the dynamics between market performance indicators such as earnings, sales revenue, and transaction volume that stress stock market behavior. The studies emphasized the significance of firm performance measures and market activity in impacting stock prices in specific environments. Anwaar [17], in panel data regression, demonstrated that net profit-to-sales ratio and ROA positively influence stock returns, but EPS negatively impacts them. Faniband, Jadhav, and Marulkar [18] revealed that net income and earnings per unit share usually have a favorable impact.; however, net sales have a negative impact. This fluctuation emphasized the importance of company-specific characteristics and their varying impact on different market groups, showcasing the complex connection between financial health indicators and stock market performance. Shrestha and Lamichhane [19] argued Nepalese commercial banks and found that dividend-to-price and EPS benefit stock returns. Conversely, earnings per share to price, net profit to total assets, and unit sales to stock price ratio hurt equity returns. These studies emphasized company-specific variables' complex and diverse impact on stock market performance.

Utamaningsih [20] concluded that uncertainty in elections and policy swings related to the economy significantly impact the behavior of the equity market, and stability in the economic framework tends to lead to favorable market performance. Audi, Sulehri, Ali, and Al-Masri [21] showed that political events such as government takeovers and judiciary suspensions significantly affect the stock market. Political stability is essential for the well-being of financial markets. Kwon and Kim [22] analyzed the broader consequences of political uncertainty in developing nations, finding a detrimental link between political unrest and significant stock indexes. These findings suggest the significance of a stable political environment and the consistency of economic policy in impacting stock market performance. They stress the need for investors to evaluate political events in their investment decisions carefully.

Emamian and Mazlan [23], Lee, Ng, Koh, and Ahmad [24], and Menike [25] have investigated how fiscal and monetary policy variables, including gross domestic product, interest rates, and money circulation, impact investors' investment performance in various regions. Moreover, Abdullah [26] and Song, Cao, and Lin [27] revealed that the economic decision-making instability shifts in the US harm the equity market returns of the Gulf

Cooperation Council (GCC) nations. Despite numerous studies that have explored various macroeconomic, firm-specific, and market factors influencing stock market performance, there is a notable lack of research investigating the combined effects of these factors in the context of Nepal, mainly using advanced time-series methodologies such as ARDL.

Figure 1 provides a research framework demonstrating the relationship between four distinct categories of independent variables – macroeconomic variables, company-specific variables, market size, and event factors – and the dependent variable, the stock market performance. Each group is chosen for its important effect on the equity market, exhibiting a multifaceted understanding of market dynamics. The stock market index (lnIND) measures the equity activities at the stock exchange. It is considered vital to gauge economic well-being and investor assurance, and it seeks to recognize changing aspects of stock market movements and their probable indicators.

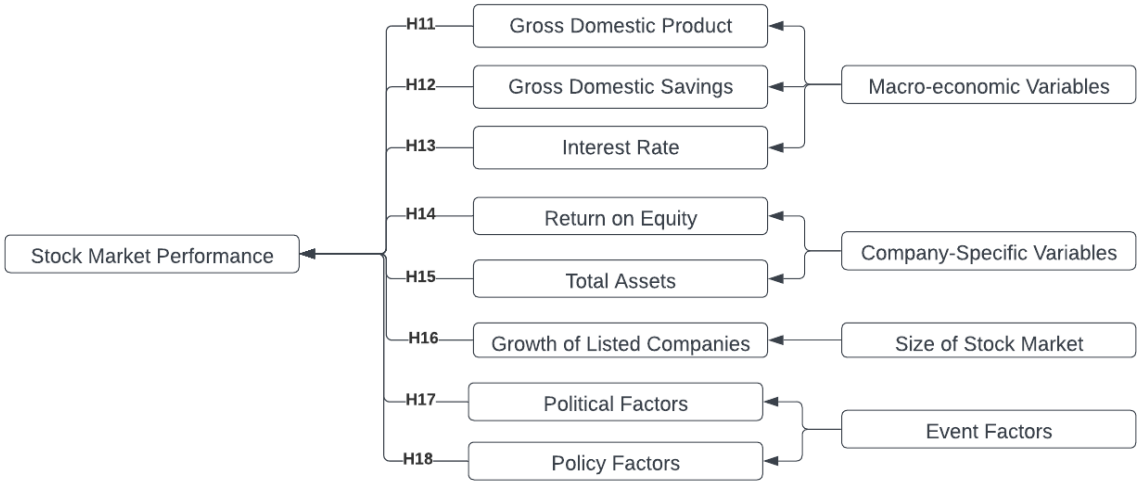

Figure 1. Research Framework

The macroeconomic variables are crucial as they provide an overall idea regarding the economy of a particular nation within which the equity markets operate. They are measured by the gross domestic product (lnG), gross domestic savings by gross levels (lnS), and bank deposit rate (I). Gross domestic product quantities are the total output of goods and services within the economy, expressed in terms of their market value, which is a crucial indicator of the economy's overall health and is usually linked to stock market performance. The first measures the total output generated within an economy, expressed in terms of its market value, which is a crucial indicator of the economy's overall health and is usually linked to stock market performance. Gross domestic savings indicates the excess of total income within an economy after accounting for consumption expenditures. Increased rates for domestic savings indicate the availability of investable funds, possibly promoting the equity market in the country. On the contrary, the interest rate means the cost of borrowing funds. Investors often use it as an alternative investment to the stock market, influencing its performance.

The company-specific variables correspond to the characteristics and performance of individual equity listed on the exchanges and the aggregate assets (lnA) and profitability

on equity (R) of the companies used for this purpose. Total assets replicate the size of companies listed on stock exchanges, with more prominent companies holding more significant resources and strong market positions that benefit from economies of scale, promoting market stability. The profitability on equity refers to the sum of net profit after tax relative to the shareholders' equity funds, and a higher return can appeal to more investors, possibly causing a rise in stock prices due to increased demand forces. The increase in the number of firms (LC) registered at the country's organized stock exchange represents the size of the equity market, reflecting market growth or shrinkage over a period that influences stock market performances. Finally, one of the event factors considered is the political condition and policy changes, while another factor applied in the study. The political factors include the various events and their consequences on the country's political stability, which are supposed to influence the investors' confidence and stock market performance significantly. The dummy variable (d1) for political events is assigned a value of 1 in unfavorable scenarios and 0 otherwise. On the other hand, policy factors refer to changes in government policy affecting the share market directly and indirectly. The dummy variable (d2) associated with policy change events is assigned a value of 1 in favorable scenarios and 0 in all other cases.

Hypotheses of the Study

H11: A positive association exists between gross domestic product and the performance of the equity market

H12: A positive association exists between gross domestic savings and the performance of the equity market

H13: A negative association exists between the interest rate and the performance of the equity market

H14: A positive association exists between the total assets of a company and the performance of the equity market

H15: A positive association exists between return on equity and performance of the equity market.

H16: A positive association exists between the size of the stock market and its performance

H17: Political factors significantly influence the performance of the stock market.

H18: Policy factors significantly influence the performance of the stock market.

2. METHOD

This study employed quantitative analysis to assess the influence of variables of interest on equity market performance from the fiscal year 1988/89 to 2022/23, based on data availability. The econometric ARDL model has been employed, and it is re-parameterized to distinguish between short-run variations and the error adjustment process to ensure the long-term linkage within the attributes selected.

2.1 Unit Root Test

Time series with changing patterns are argued to give misleading inferences regarding the relationships between time series variables since they tend to permanently

produce shocks in the series [28]-[30]. The Augmented Dickey-Fuller (ADF) test, prescribed by Dickey and Fuller [31], is recommended for conducting the unit root test, as presented in equation (1).

$$\Delta Y_t = \alpha_1 + \beta_{1t} + \beta_2 Y_{t-1} + \sum_{i=1}^{m} \delta_i \Delta Y_{t-1} + \varepsilon_t \quad (1)$$

The parameters α, β, and δ in equation (1) represent the variables being examined. The symbol t indicates the error component of white noise, whereas m marks the maximum lag length of the series, determined by empirical investigation. The symbol Δ indicates the operator used for differencing, whereas Yt represents a variable in a time series. The null hypothesis implies the time series Yt possesses a non-stationary (H0: $\beta 2 = 0$) in contrast to the alternative hypothesis, which proposes that the variable Yt exhibits stationary, denoted as H1: $\beta 2 < 0$. When the coefficient β2 has a statistically significant negative value, it rejects the null hypothesis, providing evidence supporting the alternative hypothesis H1: $\beta 2 < 0$. Furthermore, rejection is justified if the magnitude of the Augmented Dickey-Fuller (ADF) test statistics is beyond the critical values proposed by MacKinnon [32] or if the p-value appears below the 5 percent threshold. When these requirements are met, the time series is deemed stationary and classified as integrated of order zero, denoted as I(0). Conversely, if there is a failure to reject the null hypothesis, it suggests that the time series continues to lack stationarity. This indicates the need to examine the variations within the series until stationarity is attained, ultimately rejecting the null hypothesis. '

2.2 Lag Length Selection Criterion

Determining the proper lag length ensures the econometric models' reliability. Woodridge [33] stated that the selection of lags can be largely empirical and depends on the characteristics of the time-series data. Having too many lags reduces the degrees of freedom, results in insufficient observations for research models, and thus recommends a maximum number of lags of 2 for yearly time series. Akaike Information Criterion (AIC) has been employed, as Gutierrez et al. [34] proposed this criterion as a better model selection method than conventional criteria. In the analysis, political instability and policy variables are treated as fixed regressors rather than dynamic regressors.

2.3 ARDL Bounds Test for Cointegration

According to econometric theory, combining several non-stationary time series with unit roots tends to revert to a stable state to gain prolonged equilibrium. The phenomenon is known as cointegration. The co-integrated time series enables the reparameterization of the econometric models into short-run movements and the error adjustment process to ensure the long-run relationship. It used an ARDL-bound testing technique, as described by Pesaran et al. [35], to investigate the long-term connection between time series that exhibit non-stationarity on an individual level. Equation (2) introduces the ARDL (p, q) bound testing method for variable Y and variable X with their respective number of lags of p and q for the determination of long-term association.

$$\Delta Y_t = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{q} \beta_{2i} \Delta X_{t-i} + \delta_1 Y_{t-1} + \delta_2 X_{t-1} + e_t \quad (2)$$

The coefficients δ_1 and δ_2 denote the long-run relationship, whereas the coefficients β_{1i} and β_{2i} in the model show the short-term effect. The F-statistic is employed to examine the combined null hypothesis that the coefficients (δ_1 and δ_2) of the previous period variables Y_{t-1} and X_{t-1} are equivalent to zero (H_0: $\delta_1 = \delta_2 = 0$). This hypothesis suggests that the variables X and Y exhibit no long-run relation. The alternative hypothesis, by contrast, assumes that H_0 is not true. The obtained F-statistic is matched to the lower bound threshold I (0) and upper bound threshold I (1), proposed by Pesaran et al. [35], assuming that all variables have an integration order of 0 and 1. The alternative hypothesis rejects the null hypothesis (H0) of no cointegration when the F-statistic surpasses the upper limit threshold. Thus, the F-statistics values between these two crucial limits are indecisive.

The ARDL bound tests are designed through an unrestricted error adjustment model, incorporating the coefficients to detect the long-term association. Stock market performance, ln(IND), is the response variable, and its one-year lag, ln(INDt-1), in addition to other regressors, are independent variables. Equation (3) presents the extended form of the ARDL-bound test technique employed to examine long-term relationships among the variables.

$$\begin{aligned}\Delta \ln IND_t = {} & C_0 + \sum_{i=1}^{p} \beta_{1i} \Delta lnIND_{t-i} + \sum_{i=0}^{q} \beta_{2i} \Delta lnG_{t-i} + \sum_{i=0}^{r} \beta_{3i} \Delta lnS_{t-i} + \sum_{i=0}^{s} \beta_{4i} \Delta I_{t-i} + \\ & \sum_{i=0}^{u} \beta_{5i} \Delta lnA_{t-i} + \sum_{i=0}^{v} \beta_{6i} \Delta R_{t-i} + \sum_{i=0}^{w} \beta_{7i} N_{t-i} + \varphi_{1\ln} IND_{t-1} + \varphi_2 \ln G_{t-1} + \varphi_3 \ln S_{t-1} + \\ & \varphi_4 I_{t-1} + \varphi_5 \ln A_{t-1} + \varphi_6 R_{t-1} + \varphi_7 N_{t-1} + \eta_1 d_{1t} + \eta_2 d_{2t} + \varepsilon_t \quad (3)\end{aligned}$$

The symbol Δ represents the first difference operator, while ln(INDt) is the notation that represents the natural logarithm of the stock market index, serving as a proxy for stock market performance. C0 represents the constant term, whereas the coefficients (β_{1i}–β_{7i}) represent the short-run coefficients in the ARDL framework, whereas (φ_1–φ_7) indicate the short-run coefficients. The η1 and η2 represent the short-run coefficients for dummy variables used directly without differentiation. The symbol ε_t represents the error term. As the time series data in this research are gathered yearly, the maximum number of lags for the differenced series (p, q, r, s, u, v, and w) is limited to 2. The null hypothesis, which posits that there is no long-term relationship, is confirmed through testing if the combined coefficients of the lagged variables are zero, H_0: φ1 = φ2 = φ3 = φ4 = φ5 = φ6 = φ7 = 0; contrary to the alternative hypothesis that suggests an existence of a long-term relationship, H1: φ1 ≠ φ2 ≠ φ3 ≠ φ4 ≠ φ5 ≠ φ6 ≠ φ7 ≠ 0. Threshold values are evaluated with the F-statistic to ascertain if a long-term association exists.

2.4 ARDL Short-Run Dynamics and Error Correction Mechanism (ECM)

Pesaran also argued that the ARDL bound test, when supported for cointegration, needs to be transformed into short-term dynamics and error adjustment mechanisms for the examination of the variables and to determine the presence of a long-run relationship. In this case, the unrestricted ECM of the equation's lag long-term variables is substituted by the one-period lag of error correction (adjustment) terms (ect_{t-1}), estimating the restricted

vector auto-regressive model. The long-run associations between variables, when found in equation (3), allow further reformulate into equation (4) as:

$$\Delta Yt = \beta_0 + \sum_{i=1}^{p} \beta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{q} \beta_{2i} \Delta X_{t-i} + \lambda e_{t-1} + e_t \quad (4)$$

Whereas λ in equation (4) represents the adjustment speed parameter, it quantifies how much of the past period's disequilibrium is adjusted in the Yt at present. Conceptually, the coefficient of error adjustment term is anticipated to fall within the range of -1 to 0 (i.e., $-1 < \lambda < 0$), signifying a move toward stability, while an opposite coefficient indicates a move away from equilibrium. The error correction representation from equation (4) is rewritten in equation (5) to predict the error adjustment model needed to find the correction needed to reoccurrence to equilibrium from any disequilibrium position. This creates a meaningful long-run link among the variables being studied.

$$\Delta \ln IND_t = C_0 + \sum_{i=1}^{p} \beta_{1i} \Delta lnIND_{t-i} + \sum_{i=0}^{q} \beta_{2i} \Delta lnG_{t-i} + \sum_{i=0}^{r} \beta_{3i} \Delta lnS_{t-i} + \sum_{i=0}^{s} \beta_{4i} \Delta I_{t-i} + \sum_{i=0}^{u} \beta_{5i} \Delta lnA_{t-i} + \sum_{i=0}^{v} \beta_{6i} \Delta R_{t-i} + \sum_{i=0}^{w} \beta_{7i} N_{t-i} + \eta_1 d_{1t} + \eta_2 d_{2t} + \lambda ect_{t-1} + \varepsilon_t \quad (5)$$

3. RESULTS AND DISCUSSION

3.1 Results of Unit Root Test

Table 1 reports the outcome of the unit root test applied to equation 1. ADF test examines the alternative hypothesis (H1) that a non-stationary does not exist ($\beta 1 = 0$) to the null hypothesis (H0) that one exists ($\beta 2 = 0$). For all variables of interest exhibiting the stationary at the first difference, except listed companies (LC), the level tests failed to provide adequate evidence of null hypothesis rejection.

Table 1. Unit root tests

Variables	ADF Test		Order of Integration
	Level	First Difference	
lnind	-2.363	-4.586*	I(1)
lnG	-4.586	-5.823*	I(1)
lnA	-2.189	-2.189	I(1)
R	-6.955	-2.924	I(1)
LC	-3.148**	-4.120*	I(1)

(*) and (**) signify at a 1 percent level

3.2 Results of Long-Run Association

Table 2 presents the bound test outcomes and the variables' joint integration. The stock market index indicates the predicted variable, and the stock market size, company-specific indicators, and macroeconomic factors are the independent variables. It presents three critical value ranges applicable at the 1%, 5%, and 10% significance levels for an unrestricted intercept and no trend. The lower critical bounds are calculated when variables applied in the model demonstrate stationarity at level I(0). Conversely, the upper critical bounds consider the variables categorized into the first order, I(1).

Table 2. The outcome of joint integration bound tests

Null Hypothesis: Absence of level relationship			
F-statistic	Alpha Level	Critical Value for Bound Test	
		Lower I(0)	Upper I(1)
8.378* (k=6)	10%	1.99	2.94
	5%	2.27	3.28
	1%	2.88	3.99

Dependent variable: Stock market index, lnind
(*) signifies significance at a 1 percent level

The F-statistic value of 8.378, derived from a regression model incorporating six variables (k = 6) for analyzing the stock exchange index, is considered significant at the 1% level. This significance leads to the denial of the null hypothesis in support of the substitute hypothesis that suggests a significant relationship exists among the variables: stock market index, macroeconomic variables, the size of the stock market, and company-related components. A long-run association enables the model to be reformulated into an error adjustment mechanism, thereby enduring prolonged relationships and temporary movements between various indicators.

3.2 Output of Long-Run Model Estimation

The estimates of the long-term coefficient within the equity market index and its various constituents of predicted variables, mainly gross domestic product, gross domestic savings, and net profit to equity, have demonstrated a notable positive association with the equity index. At the same time, listed companies' interest rates, total assets, and growth exhibited a significant negative association.

Table 3. ARDL long-run coefficient estimation

Variable	Coefficient	Std. Error	t-Statistic	p-value
lnG	10.474***	5.178	2.023	0.071
lnS	2.802**	1.062	2.638	0.025
I	-0.477**	0.173	-2.763	0.020
lnA	-3.149	1.938	-1.625	0.135
R	0.077*	0.020	3.822	0.003
LISTCOM	-4.148	1.436	-2.889	0.016
C	-109.373	51.540	-2.122	0.060

Dependent variable: stock market index, lnIND
(*), (**), and (***) signify at 1%, 5%, and 10% level, respectively

The positive coefficient for gross domestic product indicated that, leaving all other variables unchanged, a one-percentage-point increase in this variable is linked with a 10.474 percentage-point increase in the stock index. Similarly, an increase of one percentage point in actual gross domestic savings results in a long-term increase of 2.802 percentage points in the equity market index. Conversely, a 0.477 percent point drop in the equity index corresponds to a one percent point reduction in interest rate. Regarding company-specific variables, a 0.077 percentage point rise in the equity exchange index is

accompanied by a one percentage point increase in return on equity, all else equal. The negative relationships identified between the stock index and total assets and the size of the equity market deviated from the prior positive relationship; however, their relationship is not significant.

3.3 Results of Short-Run Patterns and Error Adjustment Mechanism

The results of transforming the ARDL model (2,2,2,2,2,2,2) into a study of short-term variations and the error correction mechanism presented in Table 4 confirm the long-lasting connection between equity market index and specific variables of interest. Fixed regressors, namely political (d1) and policy (d2) variables, are incorporated into this model as they are fundamental to the short-term dynamics. Differentiating is denoted by the delta symbol (Δ), and the error adjustment term ect_{t-1} is derived from an equation developed for long-term relationships.

Table 4. ARDL short-run patterns and error adjustment coefficient estimate (2,2,2,2,2,2,2)

Variable	Coefficient	Std. Error	t-Statistic	p-value
D(lnind(-1))	-0.017	0.075	-0.227	0.825
D(lnG)	-2.434	1.361	-1.788	0.104
D(lnG(-1))	-8.176*	1.439	-5.684	0.000
D(lnS)	0.163	0.132	1.229	0.247
D(lnS(-1))	-0.312**	0.122	-2.563	0.028
D(I)	-0.258*	0.031	-8.235	0.000
D(I(-1))	-0.041	0.024	-1.716	0.117
D(lnA)	-2.251*	0.431	-5.228	0.000
D(lnA(-1))	-1.441*	0.413	-3.487	0.006
D(R)	0.017*	0.003	6.401	0.000
D(R(-1))	-0.002	0.002	-0.823	0.430
D(listcom)	-3.003*	0.453	-6.624	0.000
D(listcom(-1))	-2.056*	0.493	-4.167	0.002
d1	-0.347*	0.078	-4.431	0.001
d2	0.369*	0.085	4.328	0.002
ect(-1)	-0.527*	0.049	-10.675	0.000

Adj R^2 = 0.896

F-statistics = 18.255*

Serial Correlation (Breusch Godfrey) LM test (χ^2_{SC}) = 0.482

Heteroscedasticity (Breusch-Pagan-Godfrey) (χ2Het) = *0.656*

Normality Test (χ^2_{Norm}) = 0.759

N (after adjustment) = 33

Dependent variable: stock market index, lnIND
(*) and (**) signify at 1% and 5% level, respectively

The adjusted R^2 value indicated that the regressors account for 89.6% of the variance in a stock market index, implying a high degree of interpretive power. The significant value of the F-statistic further demonstrated the model's overall robustness. Moreover, the diagnostic tests for residuals do not indicate problems associated with the

variable characteristics. LM test for serial correlation reveals its absence, as the estimated Chi-square (χ^2_{SC} = 0.482) is higher than the 5 percent alpha value. The Jarque-Bera normality test (χ^2_{Norm} = 0.759) indicates that the residuals adhere to a normal pattern in their distribution. The distributions of residuals are homoscedastic as the Breusch-Pegan test for heteroscedasticity (χ^2_{Het} = 0.759) is insignificant at a 5 percent level.

Political instability is allied with a decline in equity market performance; the negative coefficient of 0.347 suggests that all else being equal, market performance is predicted to be 0.347 units lower during political instability than during periods of stability. The coefficient for the policy change dummy variable (d2) has a positive and statistically significant ($\beta = 0.369$, $p < 0.01$), pointing to the fact that holding every other factor constant, the presence of stock market policy changes is connected with a rise in the stock market index when compared to periods without such policy changes.

The error correction mechanism retains short-term dynamics while aligning economic variables with long-term equilibrium. The negative sign of the lag of error adjustment term (ect(-1)) coefficient shows that roughly 53% of the preceding period's disequilibrium is rectified annually, restoring the model to long-term equilibrium. This, thus, confirms that the variables, including stock market performance, GDP, domestic savings, interest rates, asset size, return on equity, and stock market size, are co-integrated, demonstrating their long-term convergence to equilibrium.

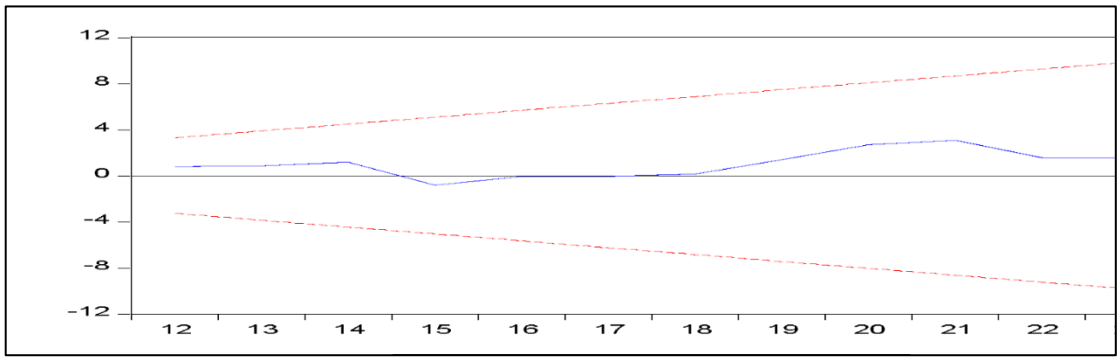

Figure 2. Cumulative sum of square (CUSUM) Test

The CUSUM plot (Figure 2) falls inside the critical limits at the 5 percent significance level, implying that any deviations are temporary and do not persist over time. This study integrates the stock market performance with the macroeconomic indicators, firm-specific variables, market size, and event factors. The results confirmed H11, highlighting the role of economic output in driving equity market growth. Theoretically, it suggests a positive association between stock market performance and economic output generated within a country over a specific period, and it is premised on the notion that new information about future GDP trends is reflected in stock prices. Additionally, increased borrowing costs for firms, leading to reduced investment, can slow GDP growth, causing a decline in stock prices. The conditions and contexts of the nation should lead to favorable economic transformations, and their change influences the prices of common stocks [36], [37]. Several results have confirmed an affirmative interaction between economic expansion and stock market results [38]. The findings support H12, confirming a positive

relationship between domestic savings and equity market performance. Yartey [39] argued that saving fosters investment and economic growth, and it encourages physical capital accumulation, supporting the growth and efficiency of the economy [40]. Studies have consistently proven a positive association between savings and stock market output [41], [42]. The negative linkages between the interest rate and equity market outcomes (H13) confirm that the interest rate serves as a critical indicator of macroeconomics, impacting the expansion of the equity market in Nepal.

Increased interest rates elevate the rate of return on investments, leading to a subsequent reduction in stock values [43], and their reduction would encourage investment and boost the economic process, leading to an increase in stock values [43]. In Nepal, market participants often consider bank deposit rates an appealing alternative to investing in stocks [44]. Empirically, a consistent finding about the relationship between movements of stock prices and shifts in interest rates has been documented across studies, including by [45]-[50].

The findings also revealed that companies with greater earnings immensely boost their market value (H15). Companies with increased profitability attract investors' attraction and confidence, positively supporting stock prices [51]. A higher return on equity is viewed as providing higher dividends, leading to increased equity prices in Nepal. Ou and Penman [52] and Wibowo [53] furnished evidence supporting the positive results of equity return on the price of common stock. The negative association of the equity market's size with its performance's effectiveness is contrary to prior research expectations; however, the prolonged relationship lacks significance.

In contrast, research scholars asserted that larger firms gain advantages of cost efficiencies, easy market access, reduced informational asymmetry, and an influential role in earnings performance and market capitalization [54], [55]. Despite fewer listed companies, the growing market capitalization stems from the strategic delisting of underperforming firms and a notable increase in mergers and acquisitions, particularly within the banking and finance sectors. Evidence supports that corporate restructuring and mergers lead to a contrary relationship between the number of listed firms and overall capitalization [56], [57] and consistent with the outcome of rejection of the association between the size of the stock market and stock market performance hypothesized in H16. Furst [58] further highlighted that their relationship is not uniform across all stocks.

Political instability negatively impacted stock market activities (H17) and its role in the country's financial market performance, leading Nepalese investors to perceive increased uncertainty about the future. This upholds the rational theory that unfavorable political scenarios negatively affect stock market performance. Political stability reduces uncertainty and makes investors tend to diversify their investment funds [59] - [61], and unstable political conditions cause stock price instability because of uncertainty linked with the projected cash streams and the increasing average costs [62], [63].

The changes in government policies were found to influence equity market performance, as indicated in H18 favorably. The promising association of government policy revisions with capital market performance has been substantiated on theoretical and practical grounds, often leading to Nepalese investors' positive perceptions of market

stability and optimism about the future economy in the country. The policy issuances reshape financial system accountability [64], [65]. An advanced legal and regulatory framework is essential for the efficient functioning of the financial system and for fostering the expansion and progress of the securities market [66], [67]. Additionally, government actions, such as enforcing stay-at-home mandates and offering financial support to households during COVID-19, have substantially impacted economic and stock market activity.

4. CONCLUSION

This study has examined Nepalese stock market performance dynamics over the past three decades, employing an ARDL approach to analyze the influence of multifaceted factors, including macroeconomic indicators, firm-specific variables, market size, and event factors. The findings highlight the complex interplay of these diverse factors in shaping the effectiveness of Nepal's equity market.

The analysis revealed a positive association between stock market performance economic output (GDP) and domestic savings, underscoring the importance of favorable macroeconomic conditions in promoting a thriving capital market. Conversely, higher interest rates were found to exert a negative influence, suggesting that increased borrowing costs deter stock investments. At the firm level, profitability, as measured by return on equity, positively impacted stock market performance, emphasizing the role of financial health in signaling investor confidence.

Stabilizing the political environment is essential for fostering investor trust and promoting market growth in the country, where investors feel confident in making long-term investments. Policymakers should focus on enhancing political stability and reducing uncertainty to strengthen market participation. Meanwhile, changes in government policies have been found to impact equity market performance favorably, underlining the importance of supportive legal and regulatory frameworks. Despite existing provisions for transparency, investor-friendly regulations, and corporate governance standards, their enforcement remains weak. This necessitates a more robust legal framework to ensure these regulations are adopted and effectively implemented, with strict actions against malpractices to protect investors and maintain market integrity. Moreover, specific sectors aligned with national priorities should be identified to actively support and drive the country’s capital market, attracting domestic and foreign investment.

While this study provides valuable insights into Nepal's stock market dynamics, it is essential to acknowledge its limitations. The specific period and geographical focus may limit the generalizability of the findings to other contexts. Additionally, the study's scope was confined to the variables examined, and future research could explore additional factors that may influence stock market performance, such as liquidity, volatility, market structure, and investor sentiment.

By investigating the multidimensional influences on stock market performance in Nepal, this study contributes to the literature on emerging equity markets and informs policymaking, investment decisions, and the development of a robust and efficient capital market in the country. The findings underscore the need for policymakers and market

participants to consider the complex interactions of macroeconomic, firm-specific, market size, and event factors in fostering a conducive environment for equity market growth and stability.

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