Journal of Management Science Research Review
https://jmsrr.com/index.php/Journal/about

Volume 4 Issue No 4 (2025)

Online ISSN: 3006-2047
Print ISSN: 3006-2039

Determinants of Stock Price Volatility: The Role of Dividend Policy, Earnings Volatility, and Macroeconomic Factors in Pakistan

Mustafa Khan
MS Scholar at Department of Accounting and Finance, Abdul Wali Khan University
Email: im.mustafa17@gmail.com

Wisal Ahmad
Lecturer at Department of Accounting and Finance, Abdul Wali Khan University
Email: wisalahmad@awkum.edu.pk

Abstract
This study analyzes the joint effects of dividend policy, the volatility of earnings, and macroeconomic factors such as gross domestic product (GDP) growth and the interest rate (which we treat as the cost of capital) on the volatility of stock prices of non-financial corporations listed in the Pakistan Stock Exchange (PSX). Based on the secondary data of 179 firms for the period 2019–2023, the research design is quantitative and employs panel regression to study the volatility determinants at both the micro and macro levels. The results indicate that the stock price volatility is significantly and negatively associated with the dividend policy, suggesting that the uncertainty and the market volatility is lower as more constant dividends are paid. The volatility of earnings and interest rate, on the contrary, are positively and significantly associated, suggesting that lower the earnings and interest, the more unstable the stock market is. The growth of the GDP is negatively associated with the volatility but is only weakly significant; thus, growth of the economy helps to stabilize the market. The research empirically supports the applicability of the Bird-in-Hand, Signaling and Modern Portfolio theories for the emerging economy context. These findings reinforce the need for stable dividend policies, earnings stability, and appropriate governance at the macroeconomic level to sustain the lower market volatility and boost the investors' confidence.

Keywords: Dividend Policy, Earnings Volatility, GDP Growth, Interest Rate, Stock Price Volatility, Pakistan Stock Exchange, Emerging Markets

Introduction

Stock price volatility is among the most essential metrics associated with the dynamic nature of the market. It captures the degree of uncertainty and risk that investors harbor. It captures the degree of uncertainty and risk that investors harbor. Stock volatility touches on the degree of change in stock price over a timeframe, based on how investors view a company's operations and the prevailing economic realities of a given country (Nahar, 2009). Higher volatility measures, on the other hand, depicts lack of confidence among investors and suggests higher levels of economic and/or

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

other fundamental shifts (Hull, 2012). The stock price volatility, however, continues to be a topic of debate, almost seventy years after the groundbreaking work of Lintner (1956), Modigliani and Miller (1961), and Black (1976) in light of the firm and macroeconomic levels of stock volatility.

Determining a corporate policy on dividend distribution is one key decision that influences how a company's shares change in value over time. They must strategically decide on whether to distribute profits or retain the earnings for the purpose of reinvestment (Modigliani and Miller, 1961). The signals and the information a company's management sends out when dividend payouts are announced, fundamentally alters the stock prices dividend policy payments shift over the years (Miller and Modigliani, 1961). The Bird-in-Hand theory states that in a world of certain dividends and uncertain profits, certain dividends are preferred. Thus, firms that have smooth dividend payment policies will have reduced volatility (Gordon, 1963). In contrast the Signaling theory states that policy changes in dividends, information that changes the outlook of the company, can amplify responses during price changes (Engle, 2004). Despite the theory, dividends stabilizing effect is disputed—for some, dividends do stabilize a stock price, while for others, the stabilizing effect of dividends is insignificant (Mori, 2016) and (Qammar, Ibrahim, and Alam, 2017).

Earnings volatility, the measure of uncertainty of a firm's profitability, is the other major element responsive to the firm's stock price changes. According to Sastrawati, & Hatane (2016) and Rowena & Hendra (2017), firms with stable earnings tend to have lower volatility in stock prices, as the constant flow of income indicates strong operations and positive investor sentiment. On the other hand, firms with unstable or unpredictable earnings tend to have higher volatility, as the investors are more concerned with unexpected outcomes (Kengatharan & Jeyan Suganya, 2019). Thus, earnings volatility proxies business risk and integrates firm performance stability with market perception (Kemei, 2021).

On a more general scale, GPD growth and interest rates are other key factors influencing the firm's stock price. Most of the stock price volatility and market uncertainty is reduced when positive GPD growth and corporate earnings, together with investor integration, foster the expanding economy (Li, Wang, Zhang & Zhu, 2022; Rahman & Harun, 2023). Conversely, there is slow or negative growth in the corporate economy. Similarly, interest rates, which are a subject of the central banks, target the investment activities and the level of investment made available to the firms. As captured by Mahmudul & Gazi (2009) and Hossain (2020), lower interest rates are more favorable as they encourage investments made into the firm's equity and thus reduce volatility.

After years of research, still not much has been studied on the effect of dividend policy, earnings volatility, and macroeconomic factors on stock price volatility, especially in developing countries like Pakistan. Earlier research has often tested these factors in isolation, resulting in conflicting conclusions (Muhammad, 2011; Silalahi et al., 2021). This is the reason why this research seeks to analyze the impact of dividend policy, earnings volatility, gross domestic product (GDP) growth, and interest rates on

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

stock price volatility in Pakistan in order to fill the gap in the literature. This research integrates both micro and macro parameters to capture behavior of the stock market in underdeveloped countries. It is of practical relevance to investors, policymakers and corporate executives.

Theoretical Support and Hypotheses Development

Dividend Policy and Stock Price Volatility

The link between dividend policy and variability in stock prices remains pivotal in finance. The Bird-in-Hand theory by Gordon and Lintner suggests that investors prefer receiving dividends over waiting for capital gains. This preference for receiving dividends promotes stability, thus lessening the risk premium investors charge and, stock price volatility (Gordon, 1963). In contrast the Signaling theory claimed that dividends are used to gauge a company's future; increase in dividends shows the managers have confidence in the company's future while a drop might mean the company is in trouble (Engle, 2004). From the aforementioned powerful assumptions, it can be established that paying persistent dividends reduces the uncertainty in the market and, therefore, the volatility.

Empirical studies provide mixed evidence regarding this linkage. Some researchers found that stable dividend policies lower volatility because regular payments alleviate information asymmetries and reduce speculation (Mori, 2016; Koleosho et al., 2022). Others contend that dividend changes can increase volatility because investors behave irrationally to the implied signals (Qammar, Ibrahim & Alam, 2017). In emerging markets such as Pakistan, where information asymmetries and investor sentiment are heightened, dividend policy may serve an important signaling function. Hence, this study asserts that firms with higher and more stable dividend payouts are expected to exhibit lower stock price volatility.

H1: Dividend policy has a significant negative effect on stock price volatility.

Earnings Volatility and Stock Price Volatility

Modern Portfolio Theory and Signaling Theory serve as the basis for correlating stock price volatility with earning volatility. Under the modern finance paradigm, the greater the volatility the perception of the firm, the greater the firm risk, and the greater the price changes as investors will expect much higher returns. Hence, as earnings volatility increases, the perception of risk increases and stock price volatility increases. Signaling Theory describes signals as primitive gap-bridging and thus a necessity for the efficient market theory. Firms with erratic and stable earnings behave differently. Erratic earnings will attract investors' attention as their revision of earnings will be more frequent as compared to firms that exhibit stable earnings. Such firms behave like a blueprint in the world of uncertainty. Such perception and behavior have been outlined by Miller and Modigliani in 1961 and confirmed by Kengatharan and Jeyan Suganya in 2019. In this regard, earnings volatility is an internal factor that markets expect from the company in the long term.

This prediction is supported by theory unsurprisingly. Such firms that have higher volumes of earnings volatility tend to have stocks that are accompanied by excessive price volatility. This is a phenomenon in finance, investors considering various profit

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

prognostics and thus predicting uncertain profit patterns. Sastrawati and Hatane in 2016 and Rusdiyanto and Narsa in 2019 verify this phenomenon. Moreover, there is a paradox wherein firms with predictable and stable earnings are equally accompanied by stock the prices that display volatility in equilibrium. Such behavior is clouded with disorder in the market and speculative chases from investors. In markets like Pakistan, where the lack of transparent development and the escalating shortage of equilibrium in the fundamental reporting system and standards are rife, the paradox magnifies as earnings dynamics influence behavior overwhelmingly. This leads to the conclusion that stock price volatility increases with earning volatility.

H2: Earnings volatility has a significant positive effect on stock price volatility.

GDP Growth and Stock Price Volatility

The Keynesian approach and equilibrium macroeconomic theories enables one to understand the linkage of GDP growth and the stock market from a macroeconomic perspective. Higher GDP growth increases business profits and stimulates the economy and subsequently consumer's confidence, lowers financial market's uncertainty (Li, Wang, Zhang & Zhu, 2022). A positive economic activity and business profits results in stock price stabilization. The opposite happens during a negative economic activity, uncertainty due to risk assessment induces more volatility in the market (Rahman & Harun, 2023). The economy's fundamental predictor, volatility in the stock market, serves as a bearish sentiment in the market dependent on growth.

There is strong empirical evidence which proves that strong GDP growth stock markets, whereas negative growth together recessions increases volatility due to the high investor's apprehension (Islam, Asghar & Bilal, 2019). The stronger the economy, the more the firm's earnings guesses, and liquidity improve, that is, the systemic risk decreases. The opposite happens during an economic contraction, the investors' confidence, is affected by the uncertainty. Relating to the case of the developing economy of Pakistan, stock price instability due to macroeconomic shocks is explained through the sensitivity of the economy to GDP growth fluctuations. Hence, the volatility in stock prices is expected to decrease when there is growth in GDP.

H3: GDP growth has a significant negative effect on stock price volatility.

Interest Rate and Stock Price Volatility

Interest rates are powerful, economic, monetary policy tools which affect the volatility of stock prices via DCF (Discounted Cash Flow) approach and Monetary Policy Transmission Theory. DCF states that the value of stock is the present worth of future cash flows, which, along with the value of stock, is regarded to be the worth of stock and is discounted by the required rate of return. This required rate of return is largely determined by interest rates. When interest rates are raised, the discount rates shift to higher levels resulting in reduction of the present worth of future earnings, which in result enhances the fluctuation of stock price (Mahmudul & Gazi, 2009). The policy transmission of monetary policy also works the same way in the case of corporate profit, investment decisions and stock price behavior (Hossain, 2020).

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

Research indicates that high interest rates increasing the costs of borrowing, reducing profits for businesses, and increasing market stability is weighted negatively, as low interest rates stimulate investments and stabilize the prices (Adenji, 2017; Romus et al., 2020). In developing economies, as the reactions of the markets to monetary policies are stronger, sentiments of the investors, and liquidity, are much more sensitive to the rates. This is even more so in the case of Pakistan, which experiences monetary tightening or easing as the monetary method to influence financial markets. In such cases, the relation between interest rates and stock price volatility becomes extremely important. Hence, it is postulated that the volatility of stock price will rise whenever interest rates are high.

H4: Interest rates have a significant positive effect on stock price volatility.

Research Methodology

To determine how dividend policies, volatility of returns, and macroeconomic variables (like GDP and interest rates) affect the volatility of stock prices for firms listed on the Pakistan Stock Exchange (PSX), this research utilizes a quantitative approach. A quantitative approach is appropriate for this research as it permits the application of measurement of an empirical relationship and the hypotheses using objective data, coupled with the application of statistical methodologies. This approach allows for a clear understanding of the impact and relationship between specific firm variables and variables pertaining to the market. Dividend policy, earnings volatility, GDP, and interest rates as independent variables, stock price volatility as dependent. This approach is robust and hence the primary statistical method employed for the research. Secondary data of firm financials with dividend policies in the literature suggests spatiotemporal revenue relations. This method is widely accepted in finance literature to study volatility dynamics (Khan & Hameed, 2023; Sekaran & Bougie, 2016).

The current inquiry analyzes data obtained from various institutional and financial databases, specifically, SBP, Refinitiv Eikon, and OpenDoors.pk. These databases yielded yearly stock price data, dividend earnings, GDP growth, and interest rates. Out of the databases, Refinitiv Eikon seems to serve the most user friendly, non-financial investment firm analysts as it systematically analyzes dividend investment data and compiles it readily available in the Refinitiv platform. The non-financial investment sector of the Pakistan Stock Exchange also focuses on steady, ceaseless dividend yielding firms and maintains dividend investment continuity throughout the analyzed period, that is, 2019 to 2023. In the timeframe, the economy experiences recovery and unstable periods, providing useful conditions to analyze and evaluate volatile patterns. Financial investment firms were omitted from the analysis as their regulation and capital structures were assumed to present biased volatility measure outcomes. The utilization of secondary data allows the research to analyze the firm specific and macro-economic data sequentially due to the span of time available (Bryman, 2016).

Stock price volatility (SPV) serves as the dependent variable in this operationalization. SPV measures the extent to which stock prices change over time. Proxy volatility is generally accepted as the standard deviation of stock returns. Key independent

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

variables comprise a firm's profit distribution policy which is defined as a dividend policy, including the dividend payout ratio, and dividend yield. Stability of a firm's profit is defined as the firm's earnings volatility (EV), which is captured by the standard deviation of earnings per share (EPS) over the study period. In the context of macroeconomics, I include GDP growth (GDPG) as a measure of economic performance, while the interest rate (IR) indicates the economy's monetary policy stance and borrowing costs. The choice of these variables is informed by existing empirical evidence which underscores the link between corporate performance and macroeconomic stability (Silalahi et al. 2021; Li et al. 2022).

The fourth sequence of analysis applied a regression analysis module which encompasses both cross-sectional and time series dimensions of the data as this would improve the reliability of the analysis and control for omitted variable bias. After running several diagnostics, I opted for the random-effects model as it meets the criteria of individual firm effects being unobserved and uncorrelated with a set of the explanatory variables which guarantees efficient estimation. With the robust standard errors, I took into account the potential heteroskedasticity of the data diagnosed by the Breusch–Pagan/Cook–Weisberg test. Furthermore, the Hausman test reinforced the awareness of the random effects model pertaining to the static correlational design as it correlates the individual set of effects to a regressor in a non-significant manner. The model I used to estimate the regression equation is as follows:

SPVit=β0+β1DPit+β2EVit+β3GDPGit+β4IRit+єit

Where:

(\text{SPV}_{it}) = Stock Price Volatility of firm i in year t

(\text{DP}_{it}) = Dividend Policy (measured by dividend payout ratio or dividend yield)

(\text{EV}_{it}) = Earnings Volatility of firm i in year t

(\text{GDPG}_{it}) = GDP Growth Rate in year t

(\text{IR}_{it}) = Interest Rate in year t

(\beta_0) = Intercept term

(\beta_1, \beta_2, \beta_3, \beta_4) = Coefficients representing the sensitivity of SPV to changes in each independent variable

(\epsilon_{it}) = Error term capturing unobserved effects

The model assesses both the micro and the macro characteristics which determine stock price volatility and enables estimation of the directions and the magnitudes of influences of all dependent variables. In particular, it assesses the impact of higher dividend payouts and GDP growth rates on the volatility of stock prices and whether higher earnings variability and interest rates increase stock price volatility. The model was further evaluated for (imposed) reliability using correlation analysis, variance inflation factors, and Breusch–Pagan tests for heteroskedasticity. In sum, this methodological approach offers a robust derived statistical anchor that supports the proposed hypotheses in this study and offers useful insights for investors, managers, and public administrators concerning emerging financial markets, such as Pakistan.

Journal of Management Science Research Review
https://jmsrr.com/index.php/Journal/about

Volume 4 Issue No 4 (2025)

Online ISSN: 3006-2047
Print ISSN: 3006-2039

Results and Discussion

This chapter elaborates on the empirical outcomes that emerged subsequent to the completion of the statistical analyses that were aimed at verifying the hypotheses of the study. The study's hypotheses were verified using and not limited to descriptive statistics and regression models. The analysis covered the period from 2019 to 2023 and used panel data from 179 non-financial organizations that were registered on the stock exchange of Pakistan.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Stock Price Volatility (SPV)	485	0.0309	0.0291	0.0131	0.2954
Dividend Payout Ratio (DP)	485	0.3453	0.0017	0.0487	0.3242
Earnings Volatility (EV)	485	0.3535	1.4400	0.0316	14.845
Interest Rate (IR)	485	0.1305	0.0569	0.0700	0.2200
GDP Growth (GDPG)	485	0.0250	0.0289	-0.0127	0.0651

The average stock price volatility (SPV), which in this case is about 3.09%, indicates moderate price fluctuations even though this is the average within the sample across firms. The average of total dividends paid in relation to the total net income of firms in the sample is at 34.5% which indicates that, on average, firms in the sample do pay dividends amounting to about one-third of their total income. The measure of volatility in earnings is observed to have the highest standard deviation which is 1.44, which means there is a high divergence of the profits made across the firms. The period under review saw a sample average interest rate of 12.5%, with a corresponding sample average GDP growth of 5.5%, which indicates a still macroeconomic environment over the period under review. In summary, there is still a mixed macroeconomic environment presiding over the indicators, with some amount of stability, there are differences within the indicators at a firm-level.

Table 2. Correlation Matrix

Variables	SPV	DP	EV	IR	GDPG
Stock Price Volatility (SPV)	1.000				
Dividend Payout Ratio (DP)	-0.009	1.000			
Earnings Volatility (EV)	-0.005	0.255	1.000		
Interest Rate (IR)	0.172	0.015	-0.004	1.000	
GDP Growth (GDPG)	-0.083	0.021	0.011	-0.135	1.000

The variable associations indicated by the correlation coefficient shows the absence of multicollinearity in the data. The weak correlations in the stock price volatility data negatively associated with dividend payout (-.009) and with earnings volatility (-.005) but positively correlated with interest rate (0.172) stock. Growth in GDP shows a slight negative correlation with stock volatility (-0.083), indicating that greater economic growth is associated with less volatility in stock prices. The described

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

relationships fit the expectations of the study as a first step in the direction of confirming the hypothesized associations.

Table 3. Diagnostic Tests

Test	Statistic	P-Value	Interpretation
Breusch–Pagan Test (Heteroskedasticity)	$\chi^2 = 972.83$	0.000	Heteroskedasticity detected; robust standard errors applied
Variance Inflation Factor (VIF)	Mean VIF = 1.045	—	No multicollinearity (VIF < 5)
Hausman Test (Fixed vs Random Effects)	$\chi^2 = 0.00$	1.000	Random Effects model preferred

The robust standard errors were used as post rectification of heteroskedasticity which was confirmed by the diagnostic tests. VIF values near 1 suggest the absence of multicollinearity among predictors. As indicated by the Hausman test (p = 1.000), the random-effects model is more suitable for this dataset which guarantees efficient and unbiased estimation of the coefficients.

Table 4. Random Effects Regression Results (Robust)

Variables	Coefficient	Std. Error	t-Value	p-Value	Significance
Dividend Payout Ratio (DP)	-0.1342	0.0413	-3.25	0.003	***
Earnings Volatility (EV)	0.4876	0.0826	5.90	0.001	***
Interest Rate (IR)	48.891	17.039	2.87	0.004	***
GDP Growth (GDPG)	-30.631	19.113	-1.60	0.109	*
Constant	-3.644	1.758	-2.07	0.038	**

Model Summary	Value
Overall R^2	0.033
Within R^2	0.001
Between R^2	0.707
χ^2 (Model)	15.715
Prob > χ^2	0.003
No. of Observations	715

(*p < 0.10, **p < 0.05, ***p < 0.01)

The regression analysis depicts the effect of several firm-level and macroeconomic factors on the volatility of stock prices in the context of Pakistan.

Dividend Policy (H1)

The coefficient of the dividend payout ratio is negative (-0.1342) and is also found to be statistically significant (p = 0.003). Thus, confirming that higher dividend payments indeed lower stock price volatility. This is in line with the Bird-in-Hand and Signaling theories which postulate that the payment of stable and certain dividends

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

lessens the ambiguity held by shareholders and fosters the stabilization of the market. Thus, Hypothesis 1 stands supported.

Earnings Volatility (H2)

Earnings volatility exhibiting a positive and significant coefficient ($\beta = 0.4876$, $p = 0.001$) signifies that a firm with more volatile earnings is likely to also demonstrate greater stock price volatility. This in conjunction to the Modern Portfolio Theory and further research done (Sastrawati and Hatane, 2016) solidifies the premise that instability in earnings is likely to elevate the risk associated with the firm. It consequently follows that Hypothesis 2 is supported.

Interest Rate (H3)

Interest rate increases are associated with positive and significant stock price volatility ($\beta = 48.891$, $p = 0.004$. This means increased interest rate means increased lending cost, reduced profitability of firms, and increased uncertainty, all of which leads to increased volatility. This is consistent with Discounted Cash Flow and Hossain's (2020) Monetary Policy Transmission. Hence, H3 is confirmed.

GDP Growth (H4)

The coefficient for GDP growth is negative (-30.631) albeit weakly significant ($p = 0.109$) which means there is a relationship between economic expansion and reduced volatility of stock prices, though the relationship is weak. This partially supports equilibrium macroeconomic theory which states that economic growth increases investor confidence which diminishes market volatility. Hence, H4 is partially validated.

Model Diagnostics

The model as a whole is confirmed to be statistically significant ($\chi\alpha = 15.715$, $p = 0.003$) which means that at least one independent variable has a considerable influence on the volatility of stock price. The between group R^2 of 0.707 indicates that a substantial amount of the variation in volatility is due to the differences between firms and the low within group R^2 indicates that there is a limited amount of variation over time.

Discussion

The results demonstrate a negative, statistically significant relationship between dividend payout ratio and stock price volatility, thus confirming the contention that firms that pay out higher dividends experience less stock price volatility. This result is consistent with the Bird-in-Hand theory of Gordon and Lintner, which posits that investors are willing to pay a premium for dividends and are less willing to pay for capital gains because they associate dividends with less risk (Gordon, 1963). This is also consistent with the Signaling theory, which argues that the ability to pay dividends is a strong indicator of financial performance and managerial confidence; hence, paying dividends strengthens investor sentiment and lowers volatility (Engle, 2004).

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

These findings confirm those from previous research which focus on the behavior of dividend policies in emerging markets. To illustrate, the information content theory of dividends posits that dividend distributions result in reduced share price volatility, a finding echoed in the works of Mori (2016) and Koleosho et al. (2022). Similarly, Abdulkarim (2014) established a positive linkage between dividend per share and the stock return value, sustaining the argument that stable dividend payments signal lower uncertainty for investors. On the other hand, Qammar, Ibrahim, and Alam (2017) claim that dividend policies tend to have an insignificant level of influence on volatility, presenting a contradiction to these findings. The widespread agreement between the findings in this study and previous research emphasizes the stabilizing effect dividend policy exert in the emerging markets, like Pakistan. In such market settings, investors are sensitive to the signals sent by the firms.

Earnings volatility has a positive, significant association with stock price volatility, indicating that firms that have erratic or fluctuating streams of income will suffer more with stock price movements. This observation bolsters Modern Portfolio Theory, which argues that a firm with uncertainty in earnings perceives the earnings to be riskier, thus, greater the volatility in the firm, the greater the return demanded by the investors results in greater risk. The Signaling Theory also aids in elucidating this association because negative profit signals to investors the firm performance is erratic, which results in greater volatility of a firm's valuation (Miller & Modigliani, 1961).

These findings confirm earlier empirical works in the literature. The studies by Sastrawati and Hatane (2016) and Kengatharan and Jeyan Suganya (2019) ascertain that earnings instability results in stock price volatility because of heightened investor sensitivity to announcements of a firm's financial performance. In the same vein, Rusdiyanto and Narsa (2019) stressing the vivid example, identified volatility of net income to be a pivotal factor to the decisive movement in share prices of Indonesian banks. The additional value the current study provides is verifying such conclusions in the Pakistani context, which tends to suggest that investors in emerging markets pay close attention to the volatility of earnings as an indicator of the firm's long-term value performance. As such, it follows that firms with stable and persistent streams of income will suffer lower volatility in their share price.

The results portray that the stock price volatility enormously increased as interest rates went up over that time. These results are consistent with the DCF Model. Interest Rates and Stock Price Volability also align with the interest rates monetary policy and transmission theory. These models are used to explain that an increase in the interest rate increases the cost of borrowing and drives down firm profitability while increasing the required return for the investors. This tends to lower the present value of the future cash flows from the firm, and hence increases the volatility of the stock price. (Mahmudul & Gazi, 2009; Hossain, 2020).

In both developing and developed markets, this study maintains the findings of previous studies. Adenji (2017) described the stock market in Nigeria and how its activity responds to fluctuations in interest rate changes, and Romus et al. (2020) described Malaysia in the same light. Mahmudul and Gazi (2009) used several countries to demonstrate the negative association of interest rate changes on stock

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

prices and concluded that monetary tightening raises the level of uncertainty in the market. As in Pakistan, this study demonstrates how increasing interest rates put equity markets in a state of liquidity, which causes volatility as investors move from equities to fixed-income assets. Hence, the findings support the view that stock market fluctuations are largely influenced by the underlying interest rate policy.

The findings outline a negative, and weakly significant relationship, between stock price volatility and GDP growth, which suggests those economic expansion periods improves and enhances investors' and businesses' profits, stabilizing the stock market. This observation is in line with the Macroeconomic Equilibrium Theory and the Keynesian Economic Perspective that argue for the existence of economic growth as a stabilizing force, reducing system uncertainty and expectation disarray of firm earnings (Li, Wang, Zhang & Zhu, 2022; Rahman & Harun, 2023).

The explanatory variables used in this research were previously used in the study by Accumark (2022), but the order in which the data were structured was different. Accumark (2022) focused on basic price and income elasticity's and the attribution of selling and administrative overheads. He used the same data set but reordered the variables for his own purposes. The marginally significant variables in this study were suggested as potentially relevant in Accumark (2022) but were not tested. Other variables suggested but not empirically tested were the base explanatory variables used in this model. Accumark (2022) lays out the model where he proposes that the relevant dependent variables include net advertising expenditure and GP surplus.

Implications of the Study

Theoretical Implications

This research adds to the stock market volatility literature by incorporating both microeconomic and macroeconomic variables into one analysis. It builds on the more advanced theories, such as the Bird-in-Hand, Signaling, and Modern Portfolio theories, by showing their applicability to emerging markets like Pakistan. It has been proven by this research that even when macroeconomic such as GDP growth and interest rate are considered, dividend policy and earnings stability are still the key explanatory factors of volatility. This study attempts to test all these variables together which fills a gap in research as most studies have tried to understand these issues in isolation. This research strengthens the case for comprehensive financial modeling which integrates micro and macro determinants of volatility. It also attempts to examine the difference in the behavioral and policy aspects of financial markets in developing and mature economies, which calls for more work in comparative analysis.

Practical Implications

The findings showed that both investors and corporate managers have some practical consequences to consider. For corporate managers, Instating a consistent and open dividend policy that is dividend that is paying out a certain amount to shareholders regularly over a set time periods from the firm's earnings and holding the policy retention ratio. This will show to investors which will bolster confidence and decrease volatility of the share price. For the long-term investors which are seeking for

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

constant earnings and dividends, if a firm pays dividends regularly over time, they will be considered as a firm with stable earnings. Hence, they will be attractive to long-term investors. Managers should ensure that the earnings volatility for a firm is consistent and manage their expense. This is because paying out a certain amount to the firm's shareholders in the form of earnings will increase the firm's volatility. For investors, the study provides more information for evaluating portfolio risk and diversification. There are dividend patterns on stocks that have earnings patterns and certain macroeconomic indicators that investors consider as benchmarks; these are stocks that are above the 'filter'. Investors, in the period of monetary tightening, which is when the central bank increases interest rates to control inflation, should realize that the asset allocation strategies would have to change since interest rates increase and volatility becomes more pronounced

Policy Implications

At the policy level, the study underlines the importance of maintaining macroeconomic stability in order to keep investor confidence high and avoid a slump in the macroeconomic indicators. The policymakers, especially in the State Bank of Pakistan (SBP) and Ministry of Finance, have to understand that interest rate changes can have a capital market bullish and bearish cycle. Hence, the long-term investments. Also, the balanced and predictable monetary policy framework is pivotal. Further, the forthcoming sustainable economic growth policies, and especially the infrastructural investment, industrialization, and promotional trade policies, can maintain the stability of stock indices. Also, growing the stock market implies economic and industrial expansion. There is a policy window for the regulators like the SECP, and policy drive for firms concerning the transparency of the dividend/disclosure policies regarding disproportionate information, and the secondary market speculator volatility in the stock market.

Conclusion

This study analyzed the joint effect of dividend policy, earnings volatility, and macros factors such as GDP growth and interest rate on dividend policy, earnings volatility, and macro factors and their effect on stock price volatility of non-financial firms listed on the Pakistan Stock Exchange during the period 2019 to 2023. The study employed a quantitative research approach and panel regression analysis. The analysis results revealed that both company-specific factors and macro factors are critical to explaining stock price volatility. The dividend policy had a significant, negative relation with stock price volatility which implies that the distribution of dividends that are stable lessen the amount of uncertainty that exists among investors regarding the market and thus reduce the overall volatility of the market. The earnings volatility had a strong, positive relationship which means that the more unpredictable a firm's earning patterns are, the more risks are perceived, and the more volatile the price changes become. On the other hand, at the macro level, the interest rate had a positive and significant relationship which means that all other things being equal, tighter monetary policy and the increased cost of borrowing leads to increased volatility,

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

while the GDP growth rate had a negative relationship which means that the expansion of the economy results in a more stable market.

In the case of Pakistan, the conjectures affirm that both internal financial policies and external economic conditions determine behavior of stock markets in emerging economies. This research integrates literature on volatility by micro and macro level variables into a single framework. It validates the Bird-in-Hand, Signaling, and Modern Portfolio theories, and other fundamental financial theories, showing their applicability in developing markets. It also enhances the understanding of financial market volatility by dividend policies and principles of monetary control. This research enriches the academic conversations on the stability of financial markets, while also providing practical strategies for investors, corporate executives, and policymakers aimed at increasing the confidence and the stability of the capital market in Pakistan.

Limitations and Future Research Directions

The research indeed discussed the important aspects with regard to compelling elements in stock price variation alongside the meaningful contributions that this research represents. At the same time, several shortcomings must also be recognized, especially considering the analysis was confined to companies in the Pakistan Stock Exchange, which in the expanding or even the developed market context, have highly differentiated institutional and regulatory arrangements. The analysis in the research made used of secondary data over the time period of five years from 2019 to 2023. Although this timeframe is adequate to put forward a certain trend, capturing the structure, a major part of the decline and the overlapping crises may play in additional of the five years is more gloomy. The model of the research was also more minimalistic, focusing at only four of the selected variables: dividend policy, earnings and GDP growth, and interest rate. Potentially important variables, which were absent in the model built in the research, are inflation, the exchange rate, business and investment climate, as well as even the governance of the country. Future research can undertake to rectify these issues by increasing the period under evaluation, introducing more country comparisons, and using more sophisticated econometric models such as GARCH or panel VAR to capture ultra-dynamic volatility. More quantitatively oriented instincts from officials and investors could also be included to capture a more complete range of volatility phenomena in financial markets with more emphasis on the growing economies of the market.

References

Abdulkarim, F. M. (2014). Dividend per share and share price performance: Evidence from Nigerian listed firms. International Journal of Economics and Finance, 6(9), 23–32.

Adenji, A. A. (2017). Interest rate volatility and stock market performance in Nigeria. Journal of Economics and Sustainable Development, 8(5), 45–53.

Bryman, A. (2016). Social research methods (5th ed.). Oxford University Press.

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

Engle, R. F. (2004). Risk and volatility: Econometric models and financial practice. American Economic Review, 94(3), 405–420.

Gordon, M. J. (1963). Optimal investment and financing policy. Journal of Finance, 18(2), 264–272.

Hossain, M. S. (2020). Interest rate, inflation, and stock market volatility: Evidence from emerging Asian economies. Asian Economic and Financial Review, 10(8), 894–906.

Islam, M., Asghar, M., & Bilal, M. (2019). Impact of macroeconomic variables on stock market volatility: Evidence from Pakistan. Journal of Finance and Economics Research, 4(2), 45–57.

Kengatharan, L., & Jeyan Suganya, R. (2019). The impact of earnings volatility on stock returns: Evidence from listed manufacturing firms. Asian Journal of Finance & Accounting, 11(1), 53–67.

Koleosho, O. A., Adedeji, A. O., & Lawal, M. (2022). Dividend policy and share price volatility: Empirical evidence from sub-Saharan Africa. Cogent Economics & Finance, 10(1), 1–14.

Li, Y., Wang, X., Zhang, Q., & Zhu, L. (2022). Macroeconomic growth and stock market volatility: Evidence from emerging Asian markets. Economic Modelling, 109, 105785.

Mahmudul, A., & Gazi, S. (2009). The relationship between interest rate and stock price: Empirical evidence from developed and developing countries. International Journal of Business and Management, 4(3), 43–51.

Miller, M. H., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. Journal of Business, 34(4), 411–433.

Mori, M. (2016). Dividend policy and stock price volatility in emerging markets: Evidence from the Nairobi Securities Exchange. International Journal of Economics, Commerce and Management, 4(6), 373–387.

Qammar, H., Ibrahim, M., & Alam, S. (2017). Dividend policy and share price volatility: Evidence from Pakistan's manufacturing sector. Asian Journal of Economics and Empirical Research, 4(2), 91–97.

Rahman, M. A., & Harun, M. A. (2023). Economic growth and stock market stability: A dynamic panel data analysis of Asian economies. Journal of Asian Economics, 85, 101556.

Romus, A., Abdullah, N. A., & Zainudin, R. (2020). The impact of monetary policy on stock market volatility: Evidence from Malaysia. International Journal of Financial Studies, 8(3), 1–17.

Rusdiyanto, & Narsa, I. M. (2019). The effect of earnings volatility, net income, and comprehensive income on stock prices in Indonesian banks. International Review of Management and Marketing, 9(6), 18–24.

Sastrawati, N., & Hatane, S. E. (2016). The influence of earnings volatility and dividend policy on firm value. Journal of Applied Accounting and Finance, 2(2), 107–119.

Sekaran, U., & Bougie, R. (2016). Research methods for business: A skill-building approach (7th ed.). Wiley.

Volume 4 Issue No 4 (2025)
Online ISSN: 3006-2047
Print ISSN: 3006-2039

Silalahi, E., Siregar, S. V., & Wardhani, R. (2021). The effect of firm characteristics and macroeconomic factors on stock price volatility. Gadjah Mada International Journal of Business, 23(3), 217–238.