

## An Analysis of the Effect of Dividend Policy on Stock Price Volatility of Listed Companies on the Lusaka Securities Exchange

Kapotwe Karen Kapundu <sup>1\*</sup>, Austin Mwangi<sup>1</sup>

<sup>1</sup>Graduate School of Business, University of Zambia

\* Corresponding Author

### Article Info

Volume 7, Issue 3

#### Publication history:

Accepted on 3 May 2026;

Published: 20 June 2026

#### Key Words:

Stock Price Volatility, Dividend Yield, Payout Ratio, Earnings Per Share, Panel Regression

#### Article Doi:

10.59413/ajocs/v7.i3.62

### Abstract

This study analyzed the effect of dividend policy on stock price volatility of firms listed on the Lusaka Securities Exchange, focusing on dividend yield, dividend payout ratio, and earnings per share as key determinants. Stock price volatility is a critical indicator of market stability, investor confidence, and financial decision-making, particularly in emerging markets where information asymmetry and economic uncertainty are prevalent. The study was guided by three objectives: to examine stock price volatility, analyze dividend policies, and evaluate their effect on volatility. A quantitative research approach was employed using secondary data from financial statements of 10 listed companies over a twenty-one-year period. Firms were sampled using a one-stage cluster sampling technique, and data were analyzed using descriptive statistics, correlation analysis, and fixed-effects panel regression models. Diagnostic tests for autocorrelation, heteroskedasticity, and normality ensured robustness and reliability. Findings indicate that stock price volatility is relatively high with frequent short-term fluctuations. Dividend yield was relatively stable, reflecting firms' efforts to maintain consistent returns and signal financial stability, whereas dividend payout ratios and earnings per share exhibited significant variability, highlighting inconsistencies in profitability. Regression results revealed that dividend yield and payout ratio do not have statistically significant effects on stock price volatility. In contrast, earnings per share has a statistically significant negative effect, indicating that higher earnings are associated with more stable stock prices. The study concluded that investors rely more on earnings information than dividend indicators. Firms are encouraged to improve earnings stability and align dividend payouts with sustainable earnings, while policymakers should enhance transparency and timely financial reporting.

## 1. Introduction

This is a study on the effect of dividend policy on stock price volatility of firms listed on the Lusaka Securities Exchange. In line with the above, this chapter presents the background to the study, problem statement, aim, objectives, and research questions, significance of the study, scope, and definition of key terms. Presenting the background, problem statement, aim, objectives, and research questions is crucial as it provides a comprehensive framework for understanding the context and relevance of the study on dividend policy and stock price volatility in an emerging market setting. This chapter establishes the significance of the research by highlighting its potential contributions to enhancing investor decision-making, improving firm valuation, and promoting market stability on the Lusaka Securities Exchange, thereby addressing existing challenges such as information asymmetry and market inefficiencies. Additionally, defining key terms ensures clarity and consistency, facilitating better comprehension of the study's focus and findings among diverse stakeholders, including investors, policymakers, and researchers.

### 1.1 Background of the study

The primary objective of financial management is to maximize shareholders' wealth through investment, financing, and asset management decisions, with dividend policy being a key aspect of financing decisions (James Van Horne, 2008). Dividend policy determines how a firm distributes earnings—either as cash or stock dividends—balancing shareholder returns with retained earnings for reinvestment (Eryomin, 2021). Consistent dividend payments signal financial stability, attracting risk-averse investors and reducing stock price volatility. Theoretical perspectives differ: Miller and Modigliani (1961) argue dividends are irrelevant to stock price, while Lintner and Gordon (1963) assert dividends influence investor behavior. Studies in developed markets, such as Hussainey (2011) in the UK, indicate stable dividend payouts reduce volatility. Emerging markets, including Nigeria, Ghana, Kenya, and Zambia, face lower liquidity, higher information asymmetry, and weaker regulation, making dividend policy more influential in shaping stock price stability (Koleosho, 2022). In this context, the Lusaka Securities Exchange, characterized by low liquidity, concentrated investors, and fluctuating market conditions, provides an ideal setting to examine how dividend yield, payout ratios, and earnings per share affect stock price volatility, offering insights into investor behavior and market stability in Zambia.

## 1.2 Statement Of the Problem

Despite the declaration of dividend policies by firms listed on the Lusaka Securities Exchange (LuSE), stock prices continue to exhibit high volatility, suggesting a weak link between dividends and investor behavior. This instability is largely driven by macroeconomic challenges, including currency fluctuations, low market liquidity, and high information asymmetry, coupled with inconsistent investor sentiment, which diminish the effectiveness of dividend signals (Bank of Zambia, 2023; Ngoma & Sekeleti, 2022). As a result, the disconnect between dividend policies and stock price movements undermines investor confidence, discourages long-term investment, and constrains the growth and stability of Zambia's capital market. While studies in other emerging markets indicate that dividend policies can stabilize stock prices, their effectiveness is often limited by market inefficiencies and behavioral biases (Chen & Lee, 2022; Hirshleifer & Luo, 2023). In Zambia, however, there is limited empirical evidence on the role of dividend policy in influencing stock price volatility, highlighting the need for systematic investigation.

## 1.3 Research Objectives

The study was guided by the following objectives:

- To examine the level and pattern of stock price volatility among selected listed companies.
- To analyse the dividend policies adopted by selected firms, including dividend pay-out ratio, dividend yield, and earnings per share.
- To evaluate the effect of dividend policy on stock price volatility among listed companies.

## 1.4 Theoretical Framework

The results of many researchers' studies regarding corporate dividend policies have been diverse, forming the theoretical foundation of this study based on the Dividend Relevance Theory and Dividend Irrelevance Theory, which is related to dividend policy and stock price volatility. According to the Dividend Relevance Theory, suggested by Graham & Dodd (1934), dividend distribution plays an important role in determining stock prices, implying that high dividends raise company value. This theory was supported by Walter (1956) and Gordon (1959), arguing that dividend decision-making depends on the ratio between the internal rate of return and cost of capital, and investors prefer to receive constant and high dividends. Additionally, Lintner (1956) stressed the importance of maintaining steady dividend policies and targeting dividend payout ratios while changing dividends slowly for increasing company value. The assumptions made in this theory include the use of retained earnings in making investments, the existence of a stable return and cost of capital, and either distribution or reinvestment of all earnings. On the other hand, the Dividend Irrelevance Theory proposed by Miller & Modigliani (1961) maintains that dividend policy does not influence firm value. The theory is underpinned by assumptions that there exist perfect capital markets without any form of taxes and transaction costs, together with the behavior of rational investors who are indifferent to the type of payments made by the companies. Nonetheless, the theory is criticized owing to the lack of realism in its underlying assumptions, particularly in regards to the presence of taxes and transaction costs and market inefficiencies. Nevertheless, the theory remains highly influential. The application of both theories in this paper will allow for an in-depth analysis of the effect of dividends policy on stock price volatility of firms listed on the Lusaka Securities Exchange.

## 1.5 Conceptual Framework

The conceptual framework of this study is derived from the two foundational theories, it illustrates the relationship between dividend policy and stock price volatility, dividend policy is the independent variable (dividend payout ratio, dividend yield, and earnings per share), and stock price volatility is the dependent variable.

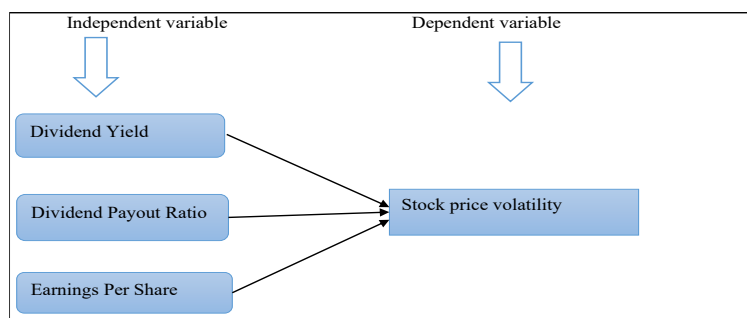


Figure 1: Conceptual Framework

## 2 Literature Review

The literature review section gives a critical overview of the existing related studies on the effect of dividend policy on stock price volatility of firms listed on Lusaka Security Exchange.

### 2.1 General Terms and Definition

**Dividend Policy:** Dividend policy refers to the strategy a company employs to distribute profits to its shareholders, either through dividends or reinvestment into the business. It involves key components such as dividend yield, dividend payout ratio, and earnings per share. This policy significantly impacts shareholder value and the firm's financial stability (Pandey, 2020).

**Dividend Yield:** Dividend yield is defined as the ratio of a company's annual dividend payment to its stock price, expressed as a percentage. It indicates

the return a shareholder earns from dividends relative to the market price of the stock. A higher dividend yield may attract income-focused investors (Gitman & Zutter, 2019).

**Dividend Payout Ratio:** The dividend payout ratio is the proportion of a company's earnings paid out as dividends to shareholders, expressed as a percentage. It reflects the firm's commitment to sharing profits with shareholders versus retaining them for growth (Brealey, Myers, & Allen, 2017).

**Earnings Per Share (EPS)** Earnings per share is a financial metric that calculates the portion of a company's profit allocated to each outstanding share of common stock. It is a widely used indicator of a company's profitability and is calculated by dividing net income by the total number of outstanding shares (Ross, Westerfield, & Jaffe, 2018).

**Stock Price Volatility:** Stock price volatility refers to the degree of variation in a stock's price over a specific period, measured by the standard deviation of returns. High volatility indicates greater risk and uncertainty in stock price movements, which can be influenced by factors such as dividend policy, market conditions, and investor behavior (Hull, 2021).

## 2.2 Overview of Lusaka Securities Exchange

The Lusaka Securities Exchange (LuSE), established in 1993 under the Capital Markets Development Programme, is Zambia's premier platform for trading equities, bonds, and ETFs, contributing to economic development by mobilizing savings for investment (Mwanza, 2014; Zhou & Akamanzi, 2021). As of 2023, LuSE has 22 listed companies across diverse sectors with a total market capitalization of ZMW 88 billion, reflecting growing investor confidence (LuSE, 2024). Its performance is influenced by macroeconomic factors such as inflation, exchange rate fluctuations, government policies, and commodity price volatility, particularly copper, which affect trading volumes and stock price stability (Chilala, 2021; Ngoma & Sekeleti, 2020). Key challenges include low market liquidity, dominance of a few large firms, excessive stock price volatility, limited public awareness, and regulatory and technological constraints (Mufungulwa, 2018). Opportunities for growth involve broadening the investor base through awareness campaigns and incentives, diversifying financial products including derivatives and REITs, strengthening regulatory frameworks, and adopting digital trading technologies to improve efficiency and accessibility (Bank of Zambia, 2023; Mwanza, 2014). Addressing these challenges and leveraging growth avenues can enhance market depth, attract both local and international investors, and position LuSE as a more resilient, inclusive, and competitive capital market in Zambia.

## 2.3 Dividend policy and stock price volatility

Dividend policy is a critical determinant of stock price behavior, particularly in emerging markets like Zambia, where information asymmetry and market volatility are high. Dividend yield serves as a signal of financial stability to investors, influencing their perception of risk. Empirical studies have consistently shown a negative relationship between dividend yield and stock price volatility. For example, Fama and French (2016) found that US firms with higher dividend yields experienced lower volatility. Similar results were observed in Finland (Niskanen & Niskanen, 2017), Pakistan (Khan & Rizvi, 2018), India (Gupta & Sharma, 2019), Nigeria (Adebayo & Oyewole, 2020; Chukwu & Okafor, 2022), Ghana (Osei & Ansah, 2021), and Zambia (Mwamba & Chibamba, 2023). High dividend yields indicate stable earnings and attract long-term investors, which mitigates price fluctuations. Dividend payout ratio (DPR) also plays a stabilizing role. Firms that distribute a higher proportion of their earnings are perceived as more financially secure, resulting in reduced stock price volatility. Studies in various markets, including Zambia (Banda & Chomba, 2023), support this observation, emphasizing that consistent and transparent dividend policies enhance investor confidence and contribute to market stability. Earnings per share (EPS) is another important factor influencing stock price volatility. Higher EPS reflects strong financial performance and reduces market uncertainty, leading to more stable stock prices. Research in Zambia (Chirwa & Nkhoma, 2023) and other emerging markets confirms a significant negative relationship between EPS and stock price fluctuations. Investors interpret higher earnings as a signal of firm resilience, which is particularly relevant in markets with limited liquidity and high sensitivity to economic and political factors.

Although firm size and financial leverage can moderate stock price behavior, their influence in the Zambian context is less pronounced compared to dividend policy and EPS. The limited number of large, stable firms and the relatively low use of long-term debt in Zambia means that dividend decisions and earnings performance remain the primary signals guiding investor decisions. Focusing on dividend policy and EPS is therefore central to understanding stock price volatility on the Lusaka Securities Exchange. By examining these variables, the study provides insight into how Zambian firms can enhance financial stability, guide investor expectations, and promote a more efficient and resilient capital market.

Empirical studies on dividend yield, payout ratio, and earnings per share highlight gaps in methodology, scope, and context. Most rely on traditional regression or time-series models, which may not capture the dynamic and nonlinear nature of financial markets. Most studies largely focus on developed or Asian emerging markets, limiting relevance to sub-Saharan Africa, where currency volatility, liquidity constraints, and regulatory shifts are significant. Results are often inconsistent due to differences in market maturity, sample periods, and investor behavior. Literature also underemphasizes behavioral factors and practical constraints, such as cash limitations, sector-specific dynamics, and policy applicability, particularly in Zambia.

---

## 3 Methodology

This study is grounded in positivism, emphasizing objectivity and empirical measurement, making it suitable for examining the effect of dividend policy on stock price volatility among Lusaka Securities Exchange (LuSE) listed firms. A quantitative, deductive approach was adopted, enabling hypothesis formulation and testing using statistical analysis. Secondary numerical data spanning 21 years (2003–2023) for 10 firms were collected, focusing on dividend yield, payout ratio, earnings per share, and stock price volatility. Stratified sampling ensured representation across industry sectors, enhancing validity. Data were sourced from financial reports, annual statements, LuSE, and the Securities and Exchange Commission of Zambia, and analyzed with E-Views software. Panel data analysis captured cross-sectional and time-series effects, employing pooled OLS, fixed effects, and random effects models, with Hausman tests guiding model selection. Diagnostic tests for multicollinearity, normality, heteroscedasticity, and autocorrelation ensured robustness, providing a systematic framework for assessing the influence of dividend policy on stock price volatility in Zambia.

---

## 4 Data Presentation and Analysis

This chapter presents the study findings, providing a comprehensive overview of the collected data.

## 4.1 Descriptive Statistics

Table 1: Descriptive statistics

| Variable | Obs | Mean     | Std. Dev. | Min    | Max      |
|----------|-----|----------|-----------|--------|----------|
| SP       | 210 | 9.80788  | 16.42127  | .00375 | 64       |
| DY       | 210 | .0525381 | .0889684  | 0      | .966184  |
| PR       | 210 | .7410565 | 1.64452   | -.5    | 19.10112 |
| EPS      | 210 | .0858534 | 6.448708  | -78.19 | 16.106   |

The descriptive statistics provide an overview of the level and distribution of stock price volatility and related financial indicators across the selected listed companies. The stock price (SP) has a mean value of 9.81 with a relatively large standard deviation of 16.42, indicating substantial variability in stock prices among the firms. The wide range, from a minimum of 0.00375 to a maximum of 64, further suggests significant disparities in stock price levels, pointing to the presence of both very low- and high-priced stocks in the sample. Dividend yield (DY) shows a low average of 0.053, with a standard deviation of 0.089, implying that most firms offer relatively modest dividend returns, although there is some variation as evidenced by the maximum value of 0.97. The payout ratio (PR) has a mean of 0.74 but a notably high standard deviation of 1.64, indicating considerable inconsistency in how firms distribute earnings as dividends. The presence of negative values (minimum of -0.5) and a high maximum (19.10) suggests that some firms either experienced losses or paid dividends disproportionately relative to their earnings. Earnings per share (EPS) has a mean of 0.086 and a large standard deviation, highlighting substantial dispersion in firm profitability, with some firms highly profitable while others experience losses.

## 4.2 Unit root test

Table 2: Unit root test

| ADF AT LEVEL                |       |              |             |                |
|-----------------------------|-------|--------------|-------------|----------------|
| Variables                   | order | t-statistics | probability | conclusion     |
| SP                          | I(0)  | -1.387       | 0.5885      | Non-stationary |
| DY                          | I(0)  | -12.652      | 0.0000      | Stationary     |
| PR                          | I(0)  | -10.168      | 0.0000      | Stationary     |
| EPS                         | I(0)  | -11.407      | 0.0000      | Stationary     |
| ADF: With Constant          |       |              |             |                |
| Level of Significance At 5% |       |              |             |                |

The Augmented Dickey-Fuller (ADF) unit root test in table 4.2 results at level indicate mixed stationarity among the variables under consideration at the 5% level of significance. Specifically, stock price (SP) is found to be non-stationary at level, as evidenced by its t-statistic of -1.387 and a probability value of 0.5885, which is greater than 0.05. This implies the presence of a unit root in SP, suggesting that the variable is influenced by time trends and shocks that persist over time. In contrast, dividend yield (DY), payout ratio (PR), and earnings per share (EPS) are all stationary at level, as their respective probability values (0.0000) are less than the 5% significance level. Their highly negative t-statistics further confirm the rejection of the null hypothesis of a unit root, indicating that these variables are stable over time and do not exhibit stochastic trends.

## 4.3 Unit root at first difference

Table 3: Unit root at first difference

| ADF AT FIRST DIFFERENCE     |       |              |             |            |
|-----------------------------|-------|--------------|-------------|------------|
| Variables                   | order | t-statistics | probability | conclusion |
| SP                          | I(1)  | -13.537      | 0.0000      | Stationary |
| DY                          | I(1)  | -25.054      | 0.0000      | Stationary |
| PR                          | I(1)  | -24.284      | 0.0000      | Stationary |
| EPS                         | I(1)  | -24.265      | 0.0000      | Stationary |
| ADF: With Constant          |       |              |             |            |
| Level of Significance At 5% |       |              |             |            |

At first difference, the ADF test results show that all variables, including stock price (SP), become stationary at the 5% level of significance. The t-statistics for SP (-13.537), DY (-25.054), PR (-24.284), and EPS (-24.265) are all highly negative, with corresponding probability values of 0.0000, leading to the rejection of the null hypothesis of a unit root for each variable. This implies that SP, which was non-stationary at level, becomes stationary after first differencing, and is therefore integrated of order one, I(1). Meanwhile, DY, PR, and EPS remain stationary even after differencing, confirming their integration of order zero, I(0). Overall, the results indicate a combination of I(0) and I(1) variables, suggesting that an econometric approach suitable for mixed order integration, such as the ARDL model, would be appropriate for further analysis.

## 4.4 The dividend policies adopted by selected firms

Table 4: The dividend policies adopted by selected firms

| YEAR | SP       | DY        | PR        | EPS       |
|------|----------|-----------|-----------|-----------|
| 2003 | 0.972255 | 0.0821823 | 2.208688  | 0.7247145 |
|      | 1.544915 | 0.0873581 | 5.943633  | 1.967516  |
| 2004 | 1.75256  | 0.0773959 | 0.4895009 | 0.165311  |
|      | 3.201758 | 0.0786206 | 0.3484013 | 0.2239205 |
| 2005 | 2.15982  | 0.0562522 | 0.4762157 | 0.294628  |
|      | 3.004171 | 0.0404434 | 0.3362671 | 0.4685585 |
| 2006 | 3.2356   | 0.0577879 | 0.508412  | 0.659094  |
|      | 4.615474 | 0.0893589 | 0.3788435 | 1.592303  |
| 2007 | 4.2442   | 0.0302671 | 0.5375973 | 0.690634  |
|      | 5.567909 | 0.0260687 | 0.4564784 | 1.63552   |

|       |          |           |           |           |
|-------|----------|-----------|-----------|-----------|
| 2008  | 6.1784   | 0.0324012 | 0.5658038 | 0.6914948 |
|       | 9.12098  | 0.0378365 | 0.5310579 | 1.636282  |
| 2009  | 5.56925  | 0.0433077 | 0.5056039 | -0.328673 |
|       | 8.82644  | 0.0380357 | 0.4442206 | 1.841313  |
| 2010  | 6.0758   | 0.0309827 | 0.4874281 | 0.7020861 |
|       | 9.756984 | 0.0310905 | 0.5131184 | 1.501798  |
| 2011  | 9.0634   | 0.0367209 | 0.6527962 | 1.887247  |
|       | 18.25249 | 0.0407172 | 0.7700771 | 5.009466  |
| 2012  | 9.7345   | 0.0462085 | 0.6335292 | 1.729229  |
|       | 18.83645 | 0.0461906 | 0.8890326 | 4.301417  |
| 2013  | 12.568   | 0.0507384 | 0.6906139 | 1.224078  |
|       | 18.6359  | 0.0690552 | 0.6710793 | 2.622579  |
| 2014  | 16.95    | 0.037307  | 0.8212063 | 1.472212  |
|       | 21.2468  | 0.0199182 | 0.9919269 | 3.03073   |
| 2015  | 16.171   | 0.028579  | 0.8070051 | .8038811  |
|       | 20.49012 | 0.022245  | 1.138626  | 1.263314  |
| 2016  | 13.589   | 0.0374307 | 0.8801409 | -1.134507 |
|       | 20.61666 | 0.0343158 | 1.320632  | 4.637689  |
| 2017  | 13.601   | 0.0272305 | 0.9699195 | 0.4934335 |
|       | 20.60848 | 0.0318377 | 1.667456  | 1.462118  |
| 2018  | 13.624   | 0.0736475 | 0.8177944 | 1.073514  |
|       | 20.58169 | 0.1480023 | 1.485609  | 1.665298  |
| 2019  | 12.033   | 0.0193908 | .3388781  | 0.4922038 |
|       | 19.73847 | 0.0304316 | 1.023193  | 0.9360062 |
| 2020  | 12.946   | 0.1194633 | 0.4926467 | 1.408403  |
|       | 20.97336 | 0.299438  | 0.7519435 | 4.386012  |
| 2021  | 14.323   | 0.0701234 | 0.7938636 | -7.265837 |
|       | 20.67133 | 0.0713889 | 1.678155  | 24.95777  |
| 2022  | 15.184   | 0.0415788 | 0.7351391 | -1.778504 |
|       | 20.59188 | 0.0385411 | 1.862414  | 7.751765  |
| 2023  | 15.9907  | 0.1043047 | 1.149403  | -2.20172  |
|       | 21.03093 | 0.0973688 | 2.007633  | 8.33295   |
| Total | 9.80788  | 0.0525381 | 0.7410565 | 0.0858534 |
|       | 16.42127 | 0.0889684 | 1.64452   | 6.448708  |

Table 4 shows that stock price (SP) has the highest variability, as indicated by its large standard deviation (16.42) relative to its mean (9.81), confirming that stock prices fluctuate widely over time. Dividend yield (DY) has both a low mean (0.053) and low standard deviation (0.089), suggesting that dividend returns are generally small and relatively stable. The pay-out ratio (PR) has a moderate mean of 0.74 but a high standard deviation (1.64), indicating inconsistent dividend distribution practices among firms, with some paying significantly more or less than their earnings. Lastly, earnings per share (EPS) has a very low mean (0.086) but a large standard deviation (6.45), highlighting substantial volatility in firm profitability, including periods of both profits and losses. Overall, the table confirms that while dividend yield remains relatively stable, stock prices, pay-out ratios, and especially earnings per share exhibit considerable fluctuations, reflecting variability in firm performance and dividend policy over time.

#### 4.5 Effect of dividend policy on stock price volatility among listed companies.

##### Correlation analysis

Table 5: Correlation analysis results

|     | SP      | DY     | PR     | EPS    |
|-----|---------|--------|--------|--------|
| SP  | 1.0000  |        |        |        |
| DY  | -0.0453 | 1.0000 |        |        |
|     | 0.5136  |        |        |        |
| PR  | 0.3929  | 0.2663 | 1.0000 |        |
|     | 0.0000  | 0.0001 |        |        |
| EPS | -0.1047 | 0.0095 | 0.0365 | 1.0000 |
|     | 0.1305  | 0.8916 | 0.5992 |        |

The correlation matrix in table 4.5 provides initial insight into the relationships between stock price (SP) and the key dividend policy variables—dividend yield (DY), payout ratio (PR), and earnings per share (EPS). The results show that DY has a very weak negative correlation with SP (-0.0453) and is statistically insignificant ( $p = 0.5136$ ), suggesting that dividend yield does not have a meaningful linear relationship with stock price volatility. In contrast, PR exhibits a moderate positive correlation with SP (0.3929), which is statistically significant ( $p = 0.0000$ ), indicating that higher payout ratios are associated with higher stock prices or volatility levels. EPS, however, shows a weak negative correlation with SP (-0.1047) and is statistically insignificant ( $p = 0.1305$ ), implying no strong linear association. Additionally, the correlations among the independent variables are generally low, suggesting no serious multicollinearity concerns.

##### Regression analysis

##### Model summary

Table 6: Model summary results

|                                                       |                |
|-------------------------------------------------------|----------------|
| Fixed-effects (within) regression Number of obs = 210 |                |
| Group variable: firmid Number of groups = 10          |                |
| R-sq:                                                 | Obs per group: |
| within = 0.1061                                       | Min = 21       |
| between = 0.5428                                      | Avg = 21.0     |
| overall = 0.1758                                      | Max = 21       |
|                                                       | F(3,9) = 18.54 |
| corr(u_i, Xb) = 0.2815                                |                |
| Prob > F = 0.0003                                     |                |

The fixed-effects regression model in table 4.6 further evaluates the impact of dividend policy variables on stock price volatility while controlling for firm-specific effects. The model includes 210 observations across 10 firms, with each firm contributing 21 observations. The within R-squared value of 0.1061 indicates that approximately 10.6% of the variation in stock price within firms over time is explained by the independent variables. The between R-squared (0.5428) suggests that differences across firms explain a larger portion of the variation, while the overall R-squared of 0.1758 indicates modest explanatory power of the model. The F-statistic (18.54) with a probability value of 0.0003 shows that the model is statistically significant overall, meaning the independent variables jointly explain variations in stock price.

#### Coefficient estimates

Table 7: Coefficient estimates results

| SP                                          | Coef.     | Robust Std. Err. | T    | P> t  |
|---------------------------------------------|-----------|------------------|------|-------|
| DY                                          | -5.299557 | 6.16585          | 0.86 | 0.412 |
| PR                                          | 1.907285  | 2.299725         | 0.83 | 0.428 |
| EPS                                         | -.2491409 | .0363885         | 6.85 | 0.000 |
| _cons                                       | 8.694293  | 1.440346         | 6.04 | 0.000 |
| sigma_u 13.052077                           |           |                  |      |       |
| sigma_e 9.2358386                           |           |                  |      |       |
| rho 66634761 (fraction of variance due u_i) |           |                  |      |       |

Examining the coefficient estimates in table 4.7, dividend yield (DY) has a negative coefficient (-5.2996) but is statistically insignificant ( $p = 0.412$ ), indicating that changes in dividend yield do not significantly affect stock price volatility. Similarly, the payout ratio (PR) has a positive coefficient (1.9073) but is also statistically insignificant ( $p = 0.428$ ), suggesting that although higher payout ratios may be associated with increased stock price levels, the effect is not strong enough to be statistically meaningful. In contrast, earnings per share (EPS) has a negative and statistically significant coefficient (-0.2491,  $p = 0.000$ ), indicating that higher earnings are associated with a reduction in stock price volatility. This suggests that profitability plays a more critical role in stabilizing stock prices compared to dividend policy variables.

The constant term (\_cons) is positive and statistically significant, indicating the baseline level of stock price when all explanatory variables are zero. The variance components show that  $\sigma_u$  (13.05) is larger than  $\sigma_e$  (9.24), suggesting that firm-specific effects contribute more to total variability than idiosyncratic errors. The rho value indicates that a substantial proportion of the total variance is due to differences across firms, justifying the use of a fixed-effects model. Overall, the results imply that while dividend policy variables (DY and PR) do not have a significant effect on stock price volatility, earnings per share is a key determinant, highlighting the importance of firm profitability in influencing stock price behaviour.

## 4.6 Diagnostic test

The diagnostic tests were conducted to validate the reliability and robustness of the panel regression model by examining the presence of serial correlation, heteroskedasticity, and normality of residuals.

#### Serial correlation

Table 8: Serial correlation

|                                                   |        |
|---------------------------------------------------|--------|
| Wooldridge test for autocorrelation in panel data |        |
| H0: no first order autocorrelation                |        |
| F( 1, 9)                                          | 23.418 |
| Prob > F                                          | 0.9876 |

The Wooldridge test for autocorrelation in panel data was employed to assess the presence of first-order serial correlation. The null hypothesis states that there is no first-order autocorrelation. The results in table 4.8 show an F-statistic of 23.418 with a probability value of 0.9876, which is greater than the 5% level of significance. Therefore, the null hypothesis cannot be rejected, indicating that there is no evidence of serial correlation in the model. This suggests that the error terms are not correlated over time, and hence, the estimates from the regression model are not biased due to autocorrelation.

#### Heteroskedasticity

Table 9: Heteroskedasticity test results

| Modified Wald test for groupwise heteroskedasticity in fixed effect regression model |           |
|--------------------------------------------------------------------------------------|-----------|
| H0: $\sigma(i)^2 = \sigma^2$ for all $i$                                             |           |
| chi2 (10)                                                                            | 526941.03 |
| Prob > chi2                                                                          | 0.7860    |

The Modified Wald test for groupwise heteroskedasticity was used to determine whether the variance of the error terms is constant across the cross-sectional units. The null hypothesis assumes homoskedasticity (constant variance). The test results in table 4.9 reveal a chi-square value of 526,941.03 with a probability value of 0.7860, which exceeds the 5% significance level. As a result, the null hypothesis cannot be rejected, implying that there is no evidence of heteroskedasticity in the model. This indicates that the variance of the residuals is consistent across firms, thereby supporting the reliability and efficiency of the estimated coefficients.

#### Normality test

Table 10: Normality test results

| Shapiro-Wilk W test for normal data |     |         |        |       |        |
|-------------------------------------|-----|---------|--------|-------|--------|
| Variable                            | W   | Obs     | V      | Z     | Prob>z |
| Residuals                           | 210 | 0.66006 | 52.918 | 9.154 | 0.6890 |

Finally, the Shapiro-Wilk test was conducted to assess the normality of the residuals. The null hypothesis for this test is that the data are normally distributed. The results in table 4.10 show a W statistic of 0.66006 and a probability value of 0.6890, which is greater than 0.05. Consequently, the null hypothesis of normality cannot be rejected, suggesting that the residuals are approximately normally distributed. This is important as it validates the assumption of normality required for statistical inference in regression analysis.

Overall, the diagnostic test results confirm that the regression model satisfies key classical assumptions, including the absence of serial correlation, homoskedasticity, and normal distribution of residuals. These findings enhance the credibility of the model and indicate that the estimated results are reliable for drawing valid conclusions regarding the effect of dividend policy on stock price volatility.

## 4.7 Discussion of Findings

This chapter discusses the key findings of the study in relation to the stated research objectives and existing empirical literature. The discussion focuses on the extent to which the results align with or differ from prior studies and provides possible explanations for the observed outcomes.

### Objective 1: Level and Pattern of Stock Price Volatility

The findings show that stock price volatility among the selected companies is quite high during the study period, as evidenced by the wide range of stock prices and the large differences between minimum and maximum values. The trend analysis reveals that stock prices generally rise over time; however, this growth is accompanied by noticeable fluctuations, indicating instability in market behavior. Such volatility suggests that stock prices respond strongly to both company-specific developments and broader economic conditions. These results align with studies on emerging markets. Al-Malkawi, Bhatti, and Magableh (2018) note that stock markets in developing countries exhibit higher volatility due to structural issues, limited liquidity, and weaker regulations. Similarly, Mensah et al. (2017) highlight the role of macroeconomic factors such as inflation, exchange rates, and interest rates in influencing stock price changes in African markets. Apergis and Sorros (2020) further confirm that volatility is driven by both internal firm fundamentals and external economic shocks. Additionally, fluctuations may result from information gaps and investor behavior, where delayed information adjustment and heightened sensitivity during uncertainty amplify price movements, reflecting earnings instability, market inefficiencies, and external pressures.

### Objective 2: Analysis of Dividend Policies of Selected Firms

The analysis of dividend policy variables shows clear patterns in dividend yield, payout ratio, and earnings per share throughout the study period. Dividend yield remains relatively low and stable, which means that firms often provide modest but steady returns to shareholders in the form of dividends. This stability indicates that firms prioritize maintaining consistent dividend payments, perhaps to signal financial stability and maintain investor trust. This finding supports the dividend smoothing hypothesis found in recent literature. Baker and Kapoor (2019) observe that firms typically avoid frequent changes in dividend payouts and prefer stable dividend policies, even when earnings fluctuate. Similarly, Dang, Li, and Nguyen (2020) suggest that maintaining stable dividends is an important strategy for companies to reduce uncertainty and send positive signals to investors about their future performance. In contrast, payout ratios show significant variability over time, with some instances exceeding one, meaning that some firms pay dividends that exceed their current earnings, possibly by using retained earnings or external financing. Such behavior aligns with Gill, Biger, and Tibrewala (2010), who found that companies may prioritize dividend continuity to avoid negative market reactions. Earnings per share also shows significant volatility, reflecting fluctuations in company profitability due to operational challenges and economic conditions. Ahmed and Javid (2019) note that earnings in emerging markets often fluctuate, directly influencing dividend policy decisions and firms' ability to maintain financial stability.

### Objective 3: Effect of Dividend Policy on Stock Price Volatility

The regression results indicate that dividend yield and payout ratio do not significantly affect stock price volatility, while earnings per share (EPS) has a significant negative effect, providing insights into stock price behavior among the selected firms. The insignificance of dividend yield aligns with Iqbal, Ahmed, and Zaheer (2019), who found that dividend yield does not notably influence stock returns or volatility in emerging markets, suggesting investors may not prioritize it in decision-making. Similarly, Saeed and Zain (2021) report that dividend-related variables often lack significance when firm fundamentals, such as earnings, are considered, highlighting the limited explanatory power of dividends in certain contexts. The payout ratio also shows no meaningful impact, implying that changes in the proportion of earnings distributed do not substantially affect price movements, particularly in markets with information gaps. In contrast, EPS exhibits a significant negative relationship with stock price volatility, indicating that higher earnings are associated with more stable stock prices. This supports Al-Najjar (2017) and Tran (2024), as strong earnings improve transparency, reduce uncertainty, and enhance investor confidence. Signaling theory suggests that higher earnings signal better performance, lowering perceived risk, while weak or unstable earnings increase volatility.

## 5 Conclusion and Recommendations

### 5.1 Conclusion

The findings indicate that stock price volatility is primarily influenced by firm profitability rather than dividend policy, with earnings per share identified as a key determinant of stock price behavior. The study examined the effect of dividend policy on stock price volatility among selected listed companies, focusing on dividend yield, payout ratio, and earnings per share, using descriptive statistics, correlation analysis, and panel regression techniques. Results show that stock price volatility is relatively high and marked by noticeable fluctuations, reflecting responsiveness to firm-specific developments and external economic conditions, typical of emerging markets with information asymmetry and economic uncertainty. Dividend policies exhibit mixed characteristics: dividend yield remains relatively stable, suggesting firms maintain consistent payments to signal financial stability, while payout ratios and earnings per share show significant variability, indicating dividend decisions are influenced by underlying financial performance. Regression results reveal that dividend yield and payout ratio do not significantly affect stock price volatility, whereas earnings per share has a significant negative effect, implying that higher earnings lead to more stable stock prices. Overall, volatility is driven more by firm fundamentals, supporting the dividend irrelevance perspective.

### 5.2 Recommendations

- Based on the study findings, the following recommendations are proposed:
- **Strengthen Profitability and Earnings Stability:** Firms should prioritize improving and stabilizing earnings performance, as earnings per share significantly influences stock price volatility. Enhancing operational efficiency, cost control, and revenue generation can ensure consistent earnings growth, reduce price fluctuations, and boost investor confidence.
- **Maintain Consistent Dividend Policies:** While dividend yield and payout ratio are not statistically significant in affecting volatility, firms should maintain stable and predictable dividend payments to signal financial strength and commitment to shareholders, avoiding abrupt changes that may create uncertainty.
- **Align Dividend Payments with Sustainable Earnings:** Dividend payouts should reflect firms' earnings capacity to avoid compromising liquidity and financial stability. A prudent policy linking dividends to sustainable earnings, such as a residual dividend approach, ensures operational and investment needs are met before distribution.
- **Enhance Transparency and Information Disclosure:** Regulatory authorities should promote timely and accurate disclosure of financial information to reduce information asymmetry, improve market efficiency, and stabilize stock prices through informed investor decisions.

### 5.3 Recommendations for Future Research

Future studies should consider the following areas to build on the findings of this research:

- **Inclusion of Additional Variables:** Future research should incorporate macroeconomic and firm-specific variables such as inflation, interest rates, exchange rates, firm size, leverage, and liquidity to provide a more comprehensive analysis of the determinants of stock price volatility.
- **Expansion of Sample and Sector Coverage:** Subsequent studies should consider a larger sample size and include firms from multiple sectors or different markets. Cross-country comparative studies may also provide deeper insights into how dividend policy affects stock price volatility in different economic environments.
- **Application of Advanced Econometric Techniques:** Future research could employ advanced methods such as dynamic panel models, generalized method of moments (GMM), or vector autoregression (VAR) to address potential endogeneity and capture dynamic relationships among variables.

### 5.4 Limitation of the study

The study faced several limitations. It focused primarily on dividend yield, payout ratio, and earnings per share, excluding other influential factors such as macroeconomic indicators, firm size, leverage, and market liquidity, which may limit the model's explanatory power. The sample was relatively small, restricting generalizability across markets. Reliance on secondary data from financial statements and market records meant the accuracy of findings depended on the reliability and consistency of reported information, with potential errors influencing results. Additionally, the study covered a specific period, which may not reflect long-term structural changes, regulatory shifts, or external economic shocks beyond this timeframe.

### Declaration of Competing Interests

The authors declare that they not aware of any competing financial interests or personal relationships that may have influenced the work described in this document.

### Funding

This research did not receive specific grants from any public, commercial, non-profit sector funding bodies.

### Acknowledgements

The authors would like to offer my heartfelt gratitude to everyone who made a contribution to this research

### Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

## References

- Abu Khalaf, B. et al. (2023) 'The Impact of Dividend Policy on Share Price Volatility: Evidence from Listed Companies in Gulf Cooperation Council Countries', 4, pp. 289–295. Available at: <https://doi.org/10.22495/cbsrv4i2siart8>.
- Adebayo, T. S., & Oyewole, O. S. (2020). Dividend payout and stock price volatility: Empirical evidence from Nigeria. *African Journal of Economic and Management Studies*, 11(4), 627–642.
- Apergis, E., & Apergis, N. (2020). Inflation expectations, volatility and COVID 19: Evidence from the US inflation swap rates. *Applied Economics Letters*, 28(15), 1327–1331. <https://doi.org/10.1080/13504851.2020.1813245>
- Banda, M., & Chomba, K. (2023). Relationship between dividend payout ratio and stock price volatility of firms listed on LuSE. *Zambian Journal of Economics*, 11(1), 89–105.
- Bank of Zambia. (2023). Annual report 2023. Bank of Zambia.
- Brealey, R. A., Myers, S. C., & Allen, F. (2017). *Principles of corporate finance* (12th ed.). McGraw-Hill Education.
- Chen, J., & Lee, C. (2022). Dividend policy and stock price volatility: Evidence from emerging markets. *International Review of Financial Analysis*, 82, 102165
- Chen, L., Petkova, R., & Zhang, L. (2018). Size, value, and momentum in international stock returns: A unified approach. *Journal of Financial Economics*, 129(2), 305–328.
- Chirwa, P., & Nkhoma, M. (2023). Earnings per share and its effect on stock price volatility of firms listed on LuSE. *Zambian Journal of Financial Studies*, 10(2), 123–139.
- Chukwu, O., & Okafor, E. (2022). Dividend yield and stock price volatility in Nigerian listed firms. *Journal of Business and Economics*, 16(3), 59–74.
- Eryomin, D. (2021). Dividend policy and firm value: The role of payout decisions in corporate finance. *Journal of Corporate Finance Research*, 15(2), 45–58.
- Fama, E. F., & French, K. R. (2016). Dividend yield and stock price volatility: Evidence from the US stock market. *Journal of Portfolio Management*, 42(1), 1–15.
- Farooq, O., Satt, H., Bendriouch, F. Z., & Lamiri, D. (2021). Dividend policy and the downside risk in stock prices: Evidence from the MENA region. *Journal of Risk Finance*, 22(3/4), 261–278. <https://doi.org/10.1108/JRF-10-2020-0226>
- Gill, A., Biger, N., & Tibrewala, R. (2010). Determinants of dividend payout ratios: Evidence from United States. *The Open Business Journal*, 3(1), 8–14
- Gordon, M.J. (1962). *The investment, financing, and valuation of the corporation*. Homewood, Ill: R.D. Irwin.
- Gordon, M. J. (1959). Dividends, earnings, and stock prices. *Review of Economics and Statistics*, 41(2), 99–105.
- Graham, B., & Dodd, D. L. (1934). *Security analysis*. McGraw-Hill.
- Gupta, R., & Sharma, V. (2019). The impact of dividend policy on share price volatility in Indian firms. *International Journal of Economics and Finance*, 11(2), 45–58.
- Hirshleifer, D., & Luo, G. Y. (2023). Investor psychology and asset pricing: Behavioral finance perspectives on market reactions. *Journal of Financial Economics*, 147(1), 1–24.
- Hussainey, K., et al. (2011). Dividend policy and share price volatility: UK evidence. *Journal of Risk Finance*, 12(1), 57–68.
- Khan, A., & Rizvi, S. A. R. (2018). Dividend policy and stock price volatility: Evidence from emerging markets. *Journal of Financial Research*, 41(3), 455–472.
- Koleosho, A., Akintoye, I., & Ajibade, A. (2022). The Effect of Dividend Policy on Share Price Volatility of Some Selected Companies on the Nigerian Exchange. *Journal of Accounting, Business and Finance Research*, 15, 10–20. Available at: <https://doi.org/10.55217/102.v15i1.525>.
- Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *American Economic Review*, 46(2), 97–113.
- Lusaka Securities Exchange. (2023). Annual market performance report 2023. Lusaka Securities Exchange. <https://www.luse.co.zm/>
- Miller, M. H., & Modigliani, F. (1961). Dividend policy and firm value. *Journal of Business*, 34(4), 411–433.
- Mwamba, L., & Chibamba, R. (2023). Dividend yield and stock price volatility on LuSE: Evidence from Zambian firms. *Zambian Journal of Finance and Development*, 9(3), 145–160.
- Ngoma, J., & Sekeleti, N. (2022). Exchange rate volatility and its impact on economic performance in Zambia. *African Journal of Economic Review*, 10(2), 45–60.
- Niskanen, M., & Niskanen, J. (2017). *Corporate finance in practice* (2nd ed.). Springer
- Tran, Q.T. (2024). Dividend Policy and Stock Price. In *Dividend Policy* (pp. 99–112). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83797-987-520241010>
- Osei, K. A., & Ansah, R. H. (2021). Dividend policy and stock price volatility in Sub-Saharan African stock markets. *Journal of African Business*, 22(5), 689–706.
- Van Horne, J. C., & Wachowicz, J. M. (2008). *Fundamentals of financial management* (13th ed.). Financial Times/Prentice Hall.
- Walter, J. E. (1956). Dividend policies and common stock prices. *Journal of Finance*, 11(1), 29–41.