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The Moderating Role of Earnings Volatility in the Relationship Between RBBR, Interest Rates, and Stock Volatility

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ABSTRACT

This study examines the effects of Risk-Based Bank Rating (RBBR), Loan-to-Deposit Ratio (LDR), Good Corporate Governance (GCG), Net Interest Margin (NIM), Capital Adequacy Ratio (CAR), and bank interest rates on stock price volatility in the Indonesian banking sector, with earnings volatility serving as a moderating variable. The study employs a quantitative approach using panel data from 20 banking companies listed on the Indonesia Stock Exchange during the 2020–2024 period, resulting in 100 firm-year observations. Data were obtained from the companies' annual financial reports, the Indonesia Stock Exchange, and Bank Indonesia. The analysis utilizes panel data regression with the Fixed Effects Model (FEM) and is preceded by classical assumption tests to ensure the robustness of the model. The findings indicate that the independent variables jointly have a significant effect on stock price volatility. Partially, Risk-Based Bank Rating, Good Corporate Governance, Net Interest Margin (NIM), and bank interest rates significantly influence stock price volatility. In contrast, the Loan-to-Deposit Ratio (LDR) and Capital Adequacy Ratio (CAR) do not exhibit significant effects. Regarding the moderating variable, earnings volatility has a direct and significant effect on stock price volatility but does not moderate the relationships between the RBBR components, bank interest rates, and stock price volatility. These findings contribute to the literature on banking performance and capital market behavior by providing empirical evidence regarding the determinants of stock price volatility in the Indonesian banking industry. Practically, the study offers useful insights for investors in conducting fundamental analysis and evaluating the financial health and investment attractiveness of banking institutions when making investment decisions.

Keywords: Earnings Volatility, Good Corporate Governance (GCG), Indonesian Banking Sector, Risk-Based Bank Rating (RBBR), Stock Price Volatility

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1. INTRODUCTION

Volatility in stock prices is a critical indicator of market uncertainty and investor risk. According to Harimbawa and Sulindawati (2022), stock price volatility is influenced by several key factors, including trading volume, order imbalance, trading frequency, and earnings volatility. The Indonesia Stock Exchange (IDX) has experienced rapid growth, positioning itself as one of the preferred capital markets for companies to obtain external financing and support their business expansion (Sunarto, 2020). Each of these elements contributes significantly to fluctuations in market prices, reflecting the uncertainty inherent in investor decision-making. Their findings highlight that dynamic market activities and fluctuations in company earnings create instability, thereby increasing the level of risk investors must manage in both short-term and long-term investment decisions. In line with the development of the Indonesian capital market, investors require relevant information to make investment decisions. Several factors influence stock price movements, including a company's fundamentals by (Arumdani et al., 2025). Indonesia's economy exhibits a substantial dependence on the stability of the financial sector as a key driver of economic activity. The role of financial institutions in mobilizing public funds and reallocating them to productive sectors positions the financial industry as a key pillar of sustaining national economic growth to Noviyanti (2026). According to Sunarto et al. (2025), the capital market serves as a vital financial intermediary, connecting investors with excess funds to companies and other entities seeking capital to support business expansion and economic growth.

Furthermore, research by Bangun et al. (2018) emphasizes the importance of transparency and accountability in financial reporting as a means of maintaining public trust in the banking system. This phenomenon illustrates that the Risk-Based Bank Rating (RBBR) framework functions not merely as an administrative tool but also as a crucial determinant of investor confidence, stock value preservation, and capital market stability amid global economic fluctuations. The reliability of RBBR components such as governance quality, risk profile, profitability, and capital adequacy play a substantial role in shaping investor perceptions of a bank's soundness.

In addition, Zenever and Sisilia (2024) explain that changes in interest rates influence consumption, investment, and the attractiveness of financial instruments, wherein rising interest rates tend to exert downward pressure on stock performance. This demonstrates that macroeconomic indicators, particularly bank interest rates, serve as essential variables that affect investor behavior and market conditions.

Collectively, these phenomena underscore the importance of examining RBBR components, earnings volatility, and interest rate movements in understanding the determinants of stock price volatility within the banking sector. Such an analysis is vital for providing insights into how internal bank performance indicators and external macroeconomic factors interact to shape market stability and investor decision-making.

Earnings volatility is recognized as an important factor influencing stock price movements in both Islamic and conventional financial markets. Previous studies, including those by Hasanah, Adrianto, and Hamidi (2024), Saribu (2024), and Purwohedi and Noviarini (2021), confirm that earnings volatility affects stock fluctuations. However, these studies mainly examine earnings volatility as an independent variable, leaving limited understanding of its role as a moderating factor. Rangga and Ekadjaja (2023) explained that earnings volatility represents fluctuations in a company's earnings over a given period. High earnings volatility indicates unstable financial performance, while low earnings volatility reflects more consistent and predictable profitability. In the banking sector, earnings stability is crucial because it reflects a bank's ability to withstand changes in capital regulation, liquidity conditions, and interest rate movements. This creates a research gap, as no study has yet analyzed whether earnings volatility moderates the relationship between Risk-Based Bank Rating (RBBR) and bank interest rates in influencing stock price volatility.

The relevance of this study has increased during the 2020–2024 period, when the banking industry experienced post-pandemic recovery, monetary policy tightening, and global market uncertainty, all of which contributed to heightened stock price volatility. Furthermore, the Risk-Based Bank Rating (RBBR) components, including Risk Profile (LDR) The performance of conventional banks reflects their effectiveness in allocating funds and maintaining public confidence, which can be assessed through the Loan to Deposit Ratio (LDR) (Septiani et al., 2024), Good Corporate Governance (GCG) Abror and Nuzulia (2022) explained that Good Corporate Governance (GCG) is implemented based on five core principles, namely transparency, accountability, responsibility, independency, and fairness. These principles are expected to enhance corporate governance practices and improve the effectiveness of organizational oversight, Earnings (NIM) According to Purwanti (2021), the Net Interest Margin (NIM) ratio measures the net interest income earned by a bank from its earning assets. A higher NIM ratio indicates greater net interest income generated from productive assets, reflecting the bank's efficiency in managing its interest-earning assets, and Capital (CAR) Harahap and Hairunnisah (2017) explained that the Capital Adequacy Ratio (CAR) measures a bank's capital adequacy relative to its risk-weighted assets. A higher CAR reflects a stronger capital base, enabling banks to absorb potential losses and maintain operational stability while supporting business growth, along with bank interest rates, serve as important indicators for assessing bank performance and investors' perceptions of risk. However, the influence of these indicators on stock price volatility may depend on the stability of a bank's earnings.

From the perspective of Signaling Theory, stable earnings provide credible information regarding a bank's future prospects and reduce information asymmetry between managers and investors. Conversely, high earnings volatility increases information uncertainty and diminishes the credibility of financial signals, causing investors to react more strongly to both firm-specific and macroeconomic information. Under conditions of volatile earnings, investors tend to perceive greater risk and adjust their expectations more rapidly, thereby amplifying the impact of RBBR components and interest rates on stock price volatility. In contrast,

stable earnings may mitigate investors' reactions because the firm's financial condition is perceived as more predictable and less risky.

Therefore, earnings volatility is theoretically expected to moderate the relationship between RBBR components, bank interest rates, and stock price volatility by influencing the extent to which investors interpret and respond to financial and economic information. Examining this moderating role is essential for understanding stock price behavior in the banking sector and for providing valuable insights to investors, regulators, and industry practitioners.

2. LITERATURE REVIEW AND HYPOTHESIS

Grand Theory (Signal Theory)

Signal Theory, introduced by Spence (1973), explains how individuals or firms transmit information to reduce information asymmetry between internal and external parties. In the labor market context, educational attainment is viewed as a signal of individual quality, enabling external parties to make more accurate decisions. This theory is relevant for capital market studies, as financial indicators disclosed by firms such as profitability, risk levels, or governance quality serve as signals that influence investor perceptions and stock price movements.

Stock price volatility represents the degree of fluctuation in stock value over a given period and is influenced by market conditions, financial information, and investor expectations (Tandelilin, 2010). High volatility indicates rapid movements in stock prices, reflecting greater uncertainty and investment risk. Understanding volatility is essential in financial decision-making, particularly in dynamic markets that respond quickly to economic and political developments.

Bank interest rates, as defined by Kasmir (2014), represent compensation for depositors or costs incurred by borrowers. Interest rates play a central role in monetary control, capital allocation, and financial intermediation. Their movements are affected by macroeconomic conditions, monetary policy, and market mechanisms, making them an important determinant of investment decisions and stock performance.

According to Rivai and Veithzal (2013), the Risk-Based Bank Rating (RBBR) framework is a supervisory approach used by banking authorities to assess the soundness of banks by evaluating several key dimensions, namely Risk Profile, Good Corporate Governance (GCG), Earnings, and Capital. Rather than employing the composite RBBR score, this study uses specific indicators representing each RBBR component as separate explanatory variables, namely the Loan-to-Deposit Ratio (LDR) for Risk Profile, Corporate Governance Perception Index (CGPI) for GCG, Net Interest Margin (NIM) for Earnings, and Capital Adequacy Ratio (CAR) for Capital.

The use of these proxies enables a more detailed examination of how each dimension of bank soundness individually influences stock price volatility. Therefore, the term RBBR in this study refers to the conceptual framework of bank soundness assessment, while LDR, GCG, NIM, and CAR are operationalized as measurable proxies of its underlying components and are not simultaneously

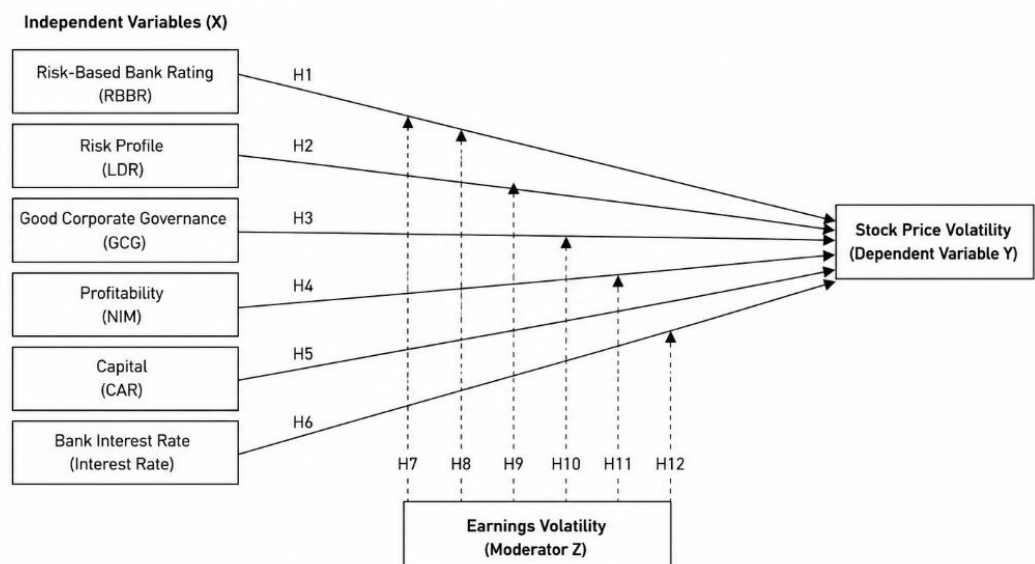
modeled with a composite RBBR score. This approach avoids conceptual overlap and allows the specific contribution of each RBBR component to stock price volatility to be identified.

The RBBR framework is further elaborated in SEOJK 14/2017, which outlines four primary assessment components. The Risk Profile evaluates inherent risks including credit, market, liquidity, operational, legal, reputational, strategic, and compliance risks and the quality of risk management applied by banks. Good Corporate Governance (GCG) assesses adherence to governance principles in managing bank operations. Earnings evaluation focuses on profitability levels, sustainability, trends, and peer comparisons. Capital assessment examines capital adequacy relative to risk exposures, following minimum capital regulations mandated by the OJK.

Earnings volatility, as described by Harahap (2015), refers to fluctuations in net income over time and reflects the degree of certainty in a firm's financial performance. High volatility complicates financial forecasting due to unstable earnings patterns, often driven by changes in input prices, exchange rates, market demand, or cost inefficiencies. Earnings volatility is therefore a critical indicator for investors, as it captures the underlying risks associated with a firm's operations and future performance.

Conceptual Framework

According to Sugiyono (2017:60), a conceptual framework is a conceptual model that illustrates how theories relate to the various factors identified as important research variables. It explains the logical structure of relationships among concepts and serves as a basis for developing hypotheses and guiding the research process.



Source : Data processed by researchers (2025)

3. RESEARCH METHOD

The research design adopted in this study is quantitative research with a causal relationship approach. The data employed consist of published financial statements, historical data on bank interest rates, and historical stock price data of banking companies. The data are analyzed as reported, without any manipulation of the observed variables.

This study is classified as quantitative research. According to Sugiyono (2017), quantitative research is a method that utilizes numerical data or qualitative information that is transformed into measurable numerical form. In addition, this study also applies a descriptive approach, which aims to identify and describe the characteristics or values of independent variables, either individually or collectively, without conducting comparisons or establishing relationships with other variables. Within this framework, quantitative data processing is carried out to explain the relationship between independent variables and dependent variables.

The research utilizes secondary data derived from the annual reports of banking companies listed on the Indonesia Stock Exchange. The observation period covers five consecutive years, from 2020 to 2024, to ensure data consistency and to capture recent trends in the banking sector.

Data Collection Techniques

This study employs library research and online research approaches. The data used are secondary data obtained from the annual financial statements of banking companies. Additional secondary data include the historical bank interest rate, as well as stock-related information sourced from the Indonesia Stock Exchange (www.idx.co.id). These datasets represent financial and market indicators relevant to banking companies listed in Indonesia.

Operational Definitions of Variables

Stock price volatility represents the degree of fluctuation in stock value over a given period and is influenced by market conditions, financial information, and investor expectations (Tandelilin, 2010). Bank interest rates, as defined by Kasmir (2014), represent compensation for depositors or costs incurred by borrowers. Interest rates play a central role in monetary control, capital allocation, and financial intermediation. Risk-Based Bank Rating (RBBR), according to Rivai and Veithzal (2013), is a supervisory framework used by monetary authorities to assess bank soundness by evaluating key risks that may affect operational stability. The RBBR framework is further elaborated in SE OJK 14/2017, which outlines four primary assessment components. The Risk Profile evaluates inherent risks including credit, market, liquidity, operational, legal, reputational, strategic, and compliance risks and the quality of risk management applied by banks. Good Corporate Governance (GCG) assesses adherence to governance principles in managing bank operations. Earnings evaluation focuses on profitability levels, sustainability, trends, and peer comparisons. Capital assessment examines capital adequacy relative to risk exposures, following minimum capital regulations mandated by the OJK. Earnings

volatility, as described by Harahap (2015), refers to fluctuations in net income over time and reflects the degree of certainty in a firm's financial performance.

Sample Collection Techniques

The population in this study consists of finance and banking companies listed on the Indonesia Stock Exchange (IDX). The sampling technique used is purposive sampling, with criteria including:

1. firms listed on the IDX,
2. firms with a market capitalization above IDR 10 trillion, and
3. firms that have published complete annual financial statements during the research period.

Data Analysis Techniques

Panel Data Model Selection

To determine the most appropriate panel data model, this study conducts the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test. The evaluated panel data estimation models include the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).

Classical Assumption Tests

Prior to estimating the panel regression model, several diagnostic tests were conducted to ensure the validity of the estimation results. The diagnostic procedures included normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Table X presents the complete results of these diagnostic tests.

Table 1. Classical Assumption Tests

Diagnostic Test	Method	Probability Value	Decision
Normality	Jarque-Bera	0.221871	Residuals are normally distributed
Multicollinearity	Correlation Matrix / VIF	Below critical value	No multicollinearity detected
Heteroscedasticity	Breusch-Pagan-Godfrey	0.0632	No heteroscedasticity detected
Autocorrelation	Breusch-Godfrey LM Test	0.3070	No autocorrelation detected

Source: Data processed by researchers (2025)

The results indicate that the panel data model satisfies the classical assumptions required for regression analysis. Therefore, the Fixed Effects Model (FEM) can be estimated using conventional standard errors. Robust standard errors were not employed because there was no evidence of significant heteroscedasticity or autocorrelation in the residuals. Nevertheless, if future analyses reveal violations of panel data assumptions, heteroskedasticity- and autocorrelation-consistent (HAC)

or cluster-robust standard errors should be applied to obtain unbiased statistical inference.

Test (Correlation and Determination Coefficient)

The R test consists of the correlation coefficient (R) and the coefficient of determination (R^2). The R coefficient measures the strength and direction of the relationship between independent and dependent variables, ranging from -1 to $+1$. Meanwhile, R^2 explains the proportion of variance in the dependent variable that can be accounted for by the model, where a higher R^2 indicates a better explanatory ability.

F Test (Simultaneous Test)

The F-test is used to determine whether all independent variables collectively influence the dependent variable (Ghozali, 2018). The test is conducted using a significance level of 0.05, where the decision is based on the probability (p-value).

T Test (Partial Test)

The t-test, according to Ghozali (2018), examines the individual effect of each independent variable on the dependent variable. It measures the extent to which each explanatory variable independently contributes to variations in the dependent variable.

Moderated Regression Analysis (MRA)

Moderated Regression Analysis is applied to evaluate whether the moderating variable earnings volatility strengthens or weakens the relationship between the Risk-Based Bank Rating (RBBR) components and bank interest rates (independent variables) and stock price volatility (dependent variable). This analysis clarifies the extent to which earnings volatility influences the interaction between financial performance indicators and stock market responses.

4. DATA ANALYSIS AND DISCUSSION

Table 2. Chow Test Result

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.515364	(19,74)	0.0025
Cross-section Chi-square	49.824894	19	0.0001

Source: Data processed by researchers (2025)

Based on the results presented above, the probability value of the Cross-section Chi-square from the EViews 13 estimation is 0.0001, which is below the

0.05 significance level. Therefore, the appropriate panel data model for this study is the Fixed Effects Model (FEM).

Table 3. Hausman Test Result

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.595648	6	0.0499

Source: Data processed by researchers (2025)

Based on the results of the Correlated Random Effects – Hausman Test, the probability value of the Cross-section Chi-square obtained from E-Views 13 is 0.0499, which is below the 0.05 significance level. Therefore, the appropriate panel data model for this study is the Fixed Effect Model (FEM).

Classical Assumption Tests

Based on the results of the normality test, the Jarque–Bera probability value obtained from E-Views 13 is 0.221871, which is greater than the 0.05 significance level. Therefore, the data are normally distributed, and the analysis can proceed to the subsequent stages.

Based on the results of the multicollinearity test, the E-Views 13 output indicates that none of the correlation values exceed 0.8. Therefore, this study is free from multicollinearity issues and can be continued to the subsequent stages of analysis. Based on the results of the heteroscedasticity test using the Breusch–Pagan–Godfrey method, the E-Views 13 output shows an Obs*R-squared probability value of 0.0632. Since this value is greater than the significance level of 0.05, it indicates that the model does not exhibit heteroscedasticity. Therefore, the analysis can be continued to the next stage of the research.

The autocorrelation test was conducted using the Breusch Godfrey method, resulting in a probability value of 0.3070, which is above the 0.05 significance level. The Chi-Square value from the Obs*R-square statistic indicates the absence of autocorrelation. Therefore, the model is concluded to be free from autocorrelation issues.

Table 4. R Test

R-squared	0.540072	Mean dependent var	0.116595
Adjusted R-squared	0.384691	S.D. dependent var	0.115383
S.E. of regression	0.090508	Akaike info criterion	-1.747852
Sum squared resid	0.606192	Schwarz criterion	-1.070508
Log likelihood	113.3926	Hannan-Quinn criter.	-1.473718
F-statistic	3.475786	Durbin-Watson stat	2.045199
Prob(F-statistic)	0.000017		

Source: Data processed by researchers (2025)

The moderated regression model produced an Adjusted R-squared value of 0.384691, indicating that approximately 38.47% of the variation in stock price volatility can be explained by the independent variables included in the model. Compared with the baseline model, the inclusion of earnings volatility and the interaction terms resulted in only a marginal increase in explanatory power.

Although the adjusted R-squared increased slightly, the improvement is not economically meaningful and does not provide sufficient justification for adopting the more complex moderated model. Furthermore, none of the interaction terms between earnings volatility and the explanatory variables were statistically significant. This finding suggests that earnings volatility does not strengthen or weaken the relationships between the RBBR components, bank interest rates, and stock price volatility. Therefore, the additional complexity introduced by the moderated regression model does not substantially improve the model's explanatory capability. The evidence supports the conclusion that earnings volatility acts primarily as an independent predictor of stock price volatility rather than as a moderating variable.

The output results indicate that the Adjusted R-squared value is 0.384691, which means that approximately 38.47% of the variation in Stock Price Volatility can be explained by the variables examined in this study, namely the Risk-Based Bank Rating, Risk Profile, Good Corporate Governance (GCG), Profitability, Capitalization, and Bank Interest Rates. The remaining percentage is attributed to other variables outside the scope of this research.

Table 5. F Test (Simultaneous)

R-squared	0.540072	Mean dependent var	0.116595
Adjusted R-squared	0.384691	S.D. dependent var	0.115383
S.E. of regression	0.090508	Akaike info criterion	-1.747852
Sum squared resid	0.606192	Schwarz criterion	-1.070508
Log likelihood	113.3926	Hannan-Quinn criter.	-1.473718
F-statistic	3.475786	Durbin-Watson stat	2.045199
Prob(F-statistic)	0.000017		

Source: Data processed by researchers (2025)

Based on the output above, the probability value (Prob. F-Statistic) for all models is 0.000017, indicating that the probability value is lower than the significance level of 0.05. Referring to the F-table with a sample size (n) of 100, seven variables, a significance level of 0.05, degrees of freedom $df1 = 7 - 1 = 6$ and $df2 = n - k = 100 - 7 = 93$, the critical F-value obtained is 2.198. Since the calculated F-value (F-statistic) of 3.475786 exceeds the F-table value of 2.198, it can be concluded that Risk Based Bank Rating, Risk Profile, Good Corporate Governance (GCG), Profitability, Capitalization, and Bank Interest Rates jointly have a significant effect on Stock Price Volatility in this study.

Table 6. T Test (Partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.154706	0.185789	-0.832693	0.4077
RBBR	-0.475857	0.194940	-2.441042	0.0170
LDR	-0.035117	0.031819	-1.103648	0.2733
GCG	0.546421	0.188665	2.896252	0.0050
NIM	-2.274037	0.755257	-3.010945	0.0036
CAR	0.024299	0.058180	0.417653	0.6774
Interest Rate	0.034053	0.010089	3.375357	0.0012

Source: Data processed by researchers (2025)

A probability value of 0.0170 with a t-statistic of -2.441042 indicates that RBBR has a significant negative effect on stock price volatility. A probability value of 0.2733 with a t-statistic of -1.103648 shows that LDR has no significant effect on stock price volatility. A probability value of 0.0050 with a t-statistic of 2.896252 demonstrates that GCG has a significant positive effect on stock price volatility. A probability value of 0.0036 with a t-statistic of -3.010945 indicates that NIM has a significant negative effect on stock price volatility. A probability value of 0.6774 with a t-statistic of 0.417653 shows that CAR does not have a significant effect on stock price volatility. A probability value of 0.0012 with a t-statistic of 3.375357 indicates that the benchmark interest rate has a significant positive effect on stock price volatility.

Data Analysis**Table 7. MRA Test**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.401141	0.191313	-2.096785	0.0398
RBBR	-0.040790	0.204014	-0.199937	0.8421
LDR	-0.045312	0.030991	-1.462089	0.1484
GCG	0.147021	0.195247	0.752998	0.4541
NIM	-2.519080	0.870844	-2.892688	0.0051
CAR	0.068913	0.071391	0.965298	0.3379
Interest Rate	0.049338	0.011988	4.115595	0.0001
Earnings Volatility	0.385780	0.157376	2.451319	0.0168
RBBR x Earnings Volatility	-0.112007	0.139951	-0.800328	0.4263
LDR x Earnings Volatility	-0.068874	0.063348	-1.087237	0.2808
GCG x Earnings Volatility	0.064114	0.142607	0.449587	0.6545
NIM x Earnings Volatility	0.404914	0.502873	0.805201	0.4236
CAR x Earnings Volatility	0.001744	0.082528	0.021130	0.9832
Interest Rate x Earnings Volatility	-0.024799	0.015602	-1.589444	0.1167
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.654871	Mean dependent var		0.116595
Adjusted R-squared	0.490034	S.D. dependent var		0.115383
S.E. of regression	0.082397	Akaike info criterion		-1.895005
Sum squared resid	0.454884	Schwarz criterion		-1.035299

Log likelihood	127.7502	Hannan-Quinn criter.	-1.547066
F-statistic	3.972827	Durbin-Watson stat	1.545772
Prob(F-statistic)	0.000001		

Source: Data processed by researchers (2025)

The results of the model indicate that variable Earnings Volatility is significant, whereas all RBBR, LDR, GCG, NIM, CAR, Interest Rate with Earnings Volatility interaction terms are not significant. This implies that Earnings Volatility only has a direct effect on Stock Price Volatility and does not moderate the relationship between RBBR, LDR, GCG, NIM, CAR, Interest Rate and Stock Price Volatility. Therefore, the type of moderation is classified as “No Moderation” or “Predictor only.” In conclusion, Earnings Volatility cannot be considered a moderating variable, as none of the interaction effects between RBBR, LDR, GCG, NIM, CAR, Interest Rate and Earnings Volatility are statistically significant. Instead, Earnings Volatility functions solely as an independent variable that directly influences Stock Price Volatility.

Discussion

The Effect of Risk-Based Bank Rating, Risk Profile, Good Corporate Governance, Profitability, Capital, and Bank Interest Rate on Stock Price Volatility

The Effect of Risk-Based Bank Rating on Stock Price Volatility The hypothesis testing for X_1 (Risk-Based Bank Rating) shows that the calculated t-statistic is -2.441042, while the critical t-value is 1.98552. Since the absolute value of the calculated t-statistic is greater than the critical t-value ($|-2.441042| > 1.98552$), the hypothesis is supported. This result is further confirmed by the probability value of 0.0170, which is lower than the significance level of 0.05 ($0.0170 < 0.05$). Therefore, it can be concluded that Risk-Based Bank Rating has a statistically significant effect on Stock Price Volatility.

This finding is consistent with the study conducted by Bangun (2018), which reported that the Risk-Based Bank Rating indicators have a significant simultaneous effect on stock prices. The study evaluated bank soundness using the indicators of Loan to Deposit Ratio (LDR), Good Corporate Governance (GCG), Return on Assets (ROA), and Capital Adequacy Ratio (CAR).

The Effect of Risk-Based Bank Rating on Stock Price Volatility

The hypothesis testing for X_1 (Risk-Based Bank Rating) indicates that the calculated t-statistic is -2.441042, while the critical t-value is 1.98552. Since the absolute value of the calculated t-statistic is greater than the critical t-value ($|-2.441042| > 1.98552$), the proposed hypothesis is accepted. Furthermore, the probability value of the Risk-Based Bank Rating variable is 0.0170, which is lower than the significance level of 0.05 ($0.0170 < 0.05$). Therefore, it can be concluded that Risk-Based Bank Rating has a statistically significant effect on Stock Price Volatility.

These findings are consistent with the study conducted by Bangun (2018), which concluded that the indicators of the Risk-Based Bank Rating framework have

a significant simultaneous effect on stock prices. In Bangun's study, bank soundness was measured using Loan to Deposit Ratio (LDR), Good Corporate Governance (GCG), Return on Assets (ROA), and Capital Adequacy Ratio (CAR). The present study adopts a similar approach in evaluating the components of the Risk-Based Bank Rating framework. However, unlike Bangun (2018), this study uses Net Interest Margin (NIM) as the proxy for the Profitability (Earnings) component instead of Return on Assets (ROA). This proxy was selected because NIM more accurately reflects a bank's ability to generate net interest income from its earning assets, making it a more representative measure of profitability in the banking industry.

The Effect of Risk Profile on Stock Price Volatility

The hypothesis testing for X_2 (Risk Profile) indicates that the calculated t-statistic is -1.103648, while the critical t-value is 1.98552. Since the absolute value of the calculated t-statistic is lower than the critical t-value ($|-1.103648| < 1.98552$), the proposed hypothesis is rejected. This finding is further supported by the probability value of the Risk Profile variable, which is 0.2733, exceeding the significance level of 0.05 ($0.2733 > 0.05$). Therefore, it can be concluded that Risk Profile does not have a statistically significant effect on Stock Price Volatility.

This finding is consistent with the study conducted by Marom and Ali (2021), which concluded that the Loan to Deposit Ratio (LDR) has no significant relationship with stock price volatility. In other words, changes in the LDR do not significantly influence the volatility of stock prices. The Loan to Deposit Ratio (LDR) is a financial ratio used to measure a bank's ability to meet customers' withdrawal demands by relying on loans extended to borrowers as its primary source of liquidity. Therefore, fluctuations in the LDR may not be directly interpreted by investors as a determinant of stock price volatility, particularly when the bank maintains adequate liquidity and prudent risk management practices.

The Effect of Good Corporate Governance on Stock Price Volatility

The hypothesis testing for X_3 (Good Corporate Governance) indicates that the calculated t-statistic is 2.896252, while the critical t-value is 1.98552. Since the calculated t-statistic is greater than the critical t-value ($2.896252 > 1.98552$), the proposed hypothesis is accepted. Furthermore, the probability value of the Good Corporate Governance (GCG) variable is 0.0050, which is lower than the significance level of 0.05 ($0.0050 < 0.05$). Therefore, it can be concluded that Good Corporate Governance has a statistically significant effect on Stock Price Volatility.

This finding is consistent with the study conducted by Marom and Ali (2021), which concluded that Good Corporate Governance (GCG) has a significant relationship with stock price volatility. The study indicates that stronger corporate governance practices can influence investors' perceptions of a company's transparency, accountability, and overall governance quality, thereby affecting stock price movements and their volatility. Effective implementation of GCG enhances investor confidence, reduces information asymmetry, and supports more stable market valuations, which ultimately contributes to changes in stock price volatility.

The Effect of Profitability on Stock Price Volatility

The hypothesis testing for X_4 (Profitability) indicates that the calculated t-statistic is -3.010945, while the critical t-value is 1.98552. Since the absolute value of the calculated t-statistic is greater than the critical t-value ($|-3.010945| > 1.98552$), the proposed hypothesis is accepted. Furthermore, the probability value of the Profitability variable is 0.0036, which is lower than the significance level of 0.05 ($0.0036 < 0.05$). Therefore, it can be concluded that Profitability has a statistically significant effect on Stock Price Volatility.

The findings of this study are consistent with those of Bangun (2018), who reported that profitability has a significant effect on stock price volatility, although a different proxy was employed. While Bangun (2018) measured profitability using Return on Assets (ROA), the present study uses Net Interest Margin (NIM) as the proxy for profitability. The use of NIM is considered more appropriate for the banking industry because it reflects a bank's ability to generate net interest income from its earning assets. Despite the difference in measurement, both studies demonstrate that profitability is a significant determinant of stock price volatility.

The Effect of Capital on Stock Price Volatility

The hypothesis testing for X_5 (Capital) indicates that the calculated t-statistic is 0.417653, while the critical t-value is 1.98552. Since the calculated t-statistic is lower than the critical t-value ($0.417653 < 1.98552$), the proposed hypothesis is rejected. This finding is further supported by the probability value of the Capital variable, which is 0.6774, exceeding the significance level of 0.05 ($0.6774 > 0.05$). Therefore, it can be concluded that Capital does not have a statistically significant effect on Stock Price Volatility.

The results of this study indicate that the Capital Adequacy Ratio (CAR) does not significantly affect stock price volatility. This finding is consistent with the study conducted by Rachmawati (2018), which concluded that CAR has no partial effect on stock price volatility. The findings suggest that investors may not consider the level of capital adequacy as the primary determinant of stock price fluctuations, particularly when banks have already maintained capital levels above the minimum regulatory requirements. Consequently, variations in CAR are less likely to trigger significant changes in investor behavior or stock price volatility.

The Effect of Bank Interest Rate on Stock Price Volatility

The hypothesis testing for X_6 (Bank Interest Rate) indicates that the calculated t-statistic is 3.375357, while the critical t-value is 1.98552. Since the calculated t-statistic is greater than the critical t-value ($3.375357 > 1.98552$), the proposed hypothesis is accepted. Furthermore, the probability value of the Bank Interest Rate variable is 0.0012, which is lower than the significance level of 0.05 ($0.0012 < 0.05$). Therefore, it can be concluded that Bank Interest Rate has a statistically significant effect on Stock Price Volatility.

The findings of this study are consistent with those reported by Rachmawati (2018), who found that interest rates have a significant effect on the stock prices of banking companies listed in the LQ45 Index of the Indonesia Stock Exchange.

Changes in interest rates influence investors' investment decisions by affecting the cost of capital, borrowing activities, and banks' profitability. Consequently, fluctuations in interest rates may alter market expectations and investor sentiment, leading to changes in stock price movements and their volatility.

The Moderating Effect of Earnings Volatility on the Relationship between Risk-Based Bank Rating, Risk Profile, Good Corporate Governance, Profitability, Capital, Bank Interest Rate, and Stock Price Volatility

The results of this study indicate that earnings volatility does not strengthen the relationship between any of the independent variables and stock price volatility. None of the interaction terms between earnings volatility and the independent variables were found to be statistically significant. Therefore, earnings volatility does not function as a moderating variable in the relationship between Risk-Based Bank Rating, Risk Profile, Good Corporate Governance, Profitability, Capital, Bank Interest Rate, and Stock Price Volatility.

These findings are consistent with the study conducted by Nur Hasanah (2024), which concluded that earnings volatility has no significant effect on stock price volatility. Based on the results of the present study, earnings volatility weakens the relationship between Risk-Based Bank Rating and Stock Price Volatility and does not serve as a moderating variable. This finding suggests that, although earnings volatility is theoretically associated with market uncertainty, empirical evidence in the banking sector indicates that fluctuations in earnings do not necessarily strengthen the effect of bank risk on stock price volatility. Consequently, the results of this study support the findings of previous research.

Furthermore, the findings are also supported by Jasselyn (2021), who reported that earnings volatility and leverage do not have a significant effect on stock price volatility. This evidence suggests that earnings volatility is not a dominant factor considered by investors when responding to changes in stock prices. As a result, when incorporated as a moderating variable, earnings volatility tends to weaken rather than strengthen the relationship between variables that were previously found to be significant.

Overall, the findings imply that earnings volatility is more appropriately classified as a predictor variable rather than a moderating variable in explaining stock price volatility within the banking sector. Investors appear to place greater emphasis on banks' fundamental financial performance, corporate governance quality, capital adequacy, liquidity conditions, and macroeconomic factors, such as interest rates, than on fluctuations in reported earnings. Consequently, earnings volatility does not provide sufficient moderating influence to alter the relationship between the independent variables and stock price volatility.

CONCLUSION & SUGGESTION

Conclusion

The objective of this study was to examine whether earnings volatility moderates the relationship between the Risk-Based Bank Rating (RBBR)

components, namely Risk Profile, Good Corporate Governance (GCG), Earnings (measured by Net Interest Margin/NIM), Capital (measured by Capital Adequacy Ratio/CAR), and bank interest rates, on stock price volatility in banking companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The empirical findings indicate that, simultaneously, the independent variables significantly influence stock price volatility, suggesting that investors consider multiple aspects of bank performance and macroeconomic conditions when making investment decisions. These findings support Signaling Theory, which argues that financial and non-financial information disclosed by firms serves as an important signal that shapes investor perceptions and market reactions.

The partial regression results reveal that Risk-Based Bank Rating (RBBR), Good Corporate Governance (GCG), Net Interest Margin (NIM), and bank interest rates have significant effects on stock price volatility. In contrast, Risk Profile, as measured by the Loan-to-Deposit Ratio (LDR), and Capital, as measured by the Capital Adequacy Ratio (CAR), do not significantly affect stock price volatility. These findings imply that investors place greater emphasis on governance quality, profitability, overall bank soundness, and changes in interest rates than on liquidity and capital adequacy indicators when evaluating the volatility of banking stocks.

Furthermore, the moderation analysis demonstrates that earnings volatility does not moderate the relationships between the RBBR components, bank interest rates, and stock price volatility, as none of the interaction terms are statistically significant. Although earnings volatility has a significant direct effect on stock price volatility, it functions solely as an independent explanatory variable rather than as a moderating variable. Accordingly, the moderating role of earnings volatility in this study is classified as Predictor Only (No Moderation), indicating that earnings volatility independently influences stock price volatility without strengthening or weakening the effects of the explanatory variables on stock price movements.

Suggestion

This study provides several important practical and theoretical implications for investors, bank management, regulators, and future researchers. For investors, the findings suggest that greater attention should be given to the components of the Risk-Based Bank Rating (RBBR), particularly Good Corporate Governance (GCG), Earnings as measured by Net Interest Margin (NIM), and prevailing bank interest rates when evaluating banking stocks. These variables have been empirically shown to significantly influence stock price volatility and can therefore serve as valuable indicators in investment decision-making and portfolio risk management.

For bank management, the findings emphasize the importance of continuously strengthening corporate governance practices, maintaining sustainable profitability, and effectively managing interest rate risk to minimize stock price volatility and enhance investor confidence. Given that earnings volatility has a direct effect on stock price volatility, managers should also prioritize maintaining stable earnings performance and improving the quality and transparency of financial disclosures to reduce information asymmetry and uncertainty in the capital market.

From a regulatory perspective, the results provide empirical evidence that bank soundness indicators and monetary factors play an important role in influencing

stock price behavior in the Indonesian banking sector. Accordingly, the Financial Services Authority (OJK) and other regulatory institutions are encouraged to strengthen supervisory mechanisms and disclosure requirements related to corporate governance, profitability, and risk management. Improved transparency and continuous monitoring of banking performance are expected to contribute to greater market stability, enhance investor protection, and reinforce public confidence in the financial system.

Finally, future studies are encouraged to expand the sample by including banks with different market capitalization categories or extending the observation period to capture various economic conditions and business cycles. Future researchers may also consider employing alternative proxies for the RBBR components and incorporating additional macroeconomic variables, such as inflation, exchange rates, and economic growth, to improve the explanatory power of the model. Furthermore, investigating other moderating or mediating variables may provide deeper insights into the mechanisms through which bank soundness indicators influence stock price volatility.

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