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The Effect of Profitability, Solvency, and Liquidity on Stock Price with Dividend Policy as a Moderating Variable in the Conventional Commercial Banking Subsector for the 2020–2024 Period

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Abstract: This study aims to analyze the effect of profitability, solvency, and liquidity on stock prices and to examine dividend policy as a moderating variable in conventional banking subsector companies listed on the Indonesia Stock Exchange during 2020–2024. The study uses a quantitative approach and secondary data from financial reports and market data. The sample consists of 14 conventional commercial banks with 70 panel observations selected through purposive sampling. The data were analyzed using panel data regression and Moderated Regression Analysis with EViews 13. The Random Effect Model was selected as the best estimation model. The results show that profitability, measured by Return on Asset, significantly affects stock prices, while Capital Adequacy Ratio and Loan to Deposit Ratio do not significantly affect stock prices. Simultaneously, the three variables significantly affect stock prices, with the model explaining 13.1% of the variation based on R-squared. Dividend policy, measured by Dividend Payout Ratio, does not moderate the relationship between profitability, solvency, or liquidity and stock prices.

Keyword: Profitability, Solvency, Liquidity, Dividend Policy, Stock Price

Indonesian Abstract: Penelitian ini bertujuan untuk menganalisis pengaruh profitabilitas, solvabilitas, dan likuiditas terhadap harga saham serta menguji kebijakan dividen sebagai variabel moderasi pada perusahaan subsektor perbankan konvensional yang terdaftar di Bursa Efek Indonesia selama periode 2020–2024. Penelitian ini menggunakan pendekatan kuantitatif dan data sekunder yang diperoleh dari laporan keuangan serta data pasar. Sampel penelitian terdiri dari 14 bank umum konvensional dengan 70 observasi data panel yang dipilih melalui metode purposive sampling. Data dianalisis menggunakan regresi data panel dan Moderated Regression Analysis (MRA) dengan perangkat lunak EViews 13. Random Effect Model terpilih sebagai model estimasi terbaik. Hasil penelitian menunjukkan bahwa profitabilitas yang diukur dengan Return on Assets berpengaruh signifikan terhadap harga saham, sedangkan Capital Adequacy Ratio dan Loan to Deposit Ratio tidak berpengaruh signifikan terhadap harga saham. Secara simultan, ketiga variabel tersebut berpengaruh signifikan terhadap harga saham, dengan model yang mampu menjelaskan 13,1% variasi

berdasarkan nilai R-squared. Kebijakan dividen yang diukur dengan Dividend Payout Ratio tidak memoderasi hubungan antara profitabilitas, solvabilitas, maupun likuiditas terhadap harga saham.

Kata Kunci: *Profitabilitas, Solvabilitas, Likuiditas, Kebijakan Dividen, Harga Saham.*

INTRODUCTION

The Indonesian capital market plays an important role in the economy as a means of investment and corporate market value formation. Stock prices reflect investors' perceptions of a company's performance and prospects, so changes in stock prices can serve as an important indicator for assessing market confidence. In the banking subsector, stock price dynamics become increasingly relevant because banks play a crucial role in maintaining financial stability and intermediation (Faluthy, 2021). During the 2020–2024 period, the stock prices of conventional commercial banks showed varied movements. In this thesis, this condition serves as the basis for examining internal factors that potentially influence stock prices, namely profitability as proxied by Return on Asset (ROA), solvency as proxied by Capital Adequacy Ratio (CAR), and liquidity as proxied by Loan to Deposit Ratio (LDR). ROA describes a bank's ability to generate profit from its managed assets, CAR reflects capital adequacy in bearing risk, while LDR indicates a bank's ability to channel third-party funds into credit.

Findings from previous research show inconsistency. ROA has been reported to have a positive effect on stock prices (Aminar Sutra Dewi & Saputra, 2025), but other research found a negative and insignificant effect (Ratna Cahyaning Utami & Sudiyatno, 2024). CAR also shows differing results, namely positive and significant (Elvira Rosa Tunjung Fatma, 2020) as well as negative and insignificant (Bella Salsabilla & Yunita, 2020). LDR has been reported to have a positive and significant effect (Nugroho & Rachmaniyah, 2020), while other research found no significant effect (Fatihah & Mala, 2022).

Dividend policy is used as a moderating variable because profit distribution to shareholders can serve as a signal regarding a company's condition and prospects. Dividend Payout Ratio (DPR) indicates the proportion of profit distributed as dividends. Previous research has also produced differing findings regarding DPR's ability to moderate the relationship between financial ratios and stock prices (Wirdayeni et al., 2024; Yudha & Diantini, 2026; Zidan & Utami, 2023; Handayani, 2021). This inconsistency forms the basis for this research to re-examine the relationship between ROA, CAR, and LDR on stock prices, with DPR as a moderating variable, in the conventional commercial banking subsector during the 2020–2024 period.

This research aims to analyze the effect of ROA, CAR, and LDR on stock prices and to test whether DPR is able to moderate each of these relationships. Theoretically, this research uses Signaling Theory, which explains that information on financial performance and dividend policy can serve as signals for investors in making investment decisions.

METHOD

This research is a quantitative study using a causal associative approach. The data used are secondary data sourced from companies' annual financial reports, the Indonesia Stock Exchange, and official company sources during the 2020–2024 period. The analysis was conducted using EViews 13 (Sugiyono, 2023a). The research population consists of 47 banks listed on the Indonesia Stock Exchange. The sample was selected using purposive sampling based on the availability of financial reports throughout the research period, status as a conventional commercial bank, and consistency in dividend distribution. Based on these criteria, 14 companies and 70 panel observations were obtained. The sample consists of BBKA,

BBRI, BMRI, BBNI, BNLI, MEGA, BNGA, NISP, BDMN, BTPN, BBTN, BNII, BJBR, and SDRA.

The dependent variable is stock price, measured using closing price and transformed into natural logarithm. The independent variables consist of ROA, CAR, and LDR, while DPR is used as the moderating variable. ROA is calculated from net profit after tax divided by total assets; CAR from total capital divided by risk-weighted assets; LDR from total credit divided by third-party funds; and DPR from the proportion of net profit distributed as dividends.

Data analysis was conducted through descriptive statistics and panel data regression. Model selection was carried out using the Chow, Hausman, and Lagrange Multiplier tests. The test results selected the Random Effect Model (REM). Assumption testing included normality, multicollinearity, and heteroskedasticity; autocorrelation was not tested separately because the REM model is estimated using Generalized Least Square. Hypothesis testing was conducted using the t-test, F-test, coefficient of determination, and Moderated Regression Analysis (MRA). The moderation model includes the interaction terms $ROA \times DPR$, $CAR \times DPR$, and $LDR \times DPR$.

RESULTS AND DISCUSSION

This research uses 70 observations from 14 conventional commercial banks during 2020–2024. Descriptive statistics show that the average stock price after natural logarithm transformation is 7.599968; ROA is 0.020329; CAR is 0.234259; LDR is 0.896024; and DPR is 0.411457. The maximum and minimum values of each variable indicate variation in financial conditions among banks during the research period.

Table 1. Descriptive statistics of research variables

Variabel	Mean	Median	Maximum	Minimum	Std. Dev.
Harga Saham (LN)	7,599968	7,739718	9,177301	5,337538	0,983955
ROA	0,020329	0,018000	0,042200	0,005000	0,010035
CAR	0,234259	0,241650	0,357000	0,007400	0,067183
LDR	0,896024	0,842250	1,626900	0,523000	0,233519
DPR	0,411457	0,350000	1,179000	-0,187000	0,300438

Source: EVIEWS 13, processed data (2026).

Model selection resulted in REM as the best model. The Chow test showed a probability of 0.0000, indicating that FEM is better than CEM; the Hausman test produced a probability of 0.1074, indicating that REM is better than FEM; and the LM test produced a Breusch–Pagan probability of 0.0000, indicating that REM was selected over CEM. Thus, the final estimation uses REM.

The results of the assumption tests show that the residuals are normally distributed, with a Jarque–Bera probability of 0.171367. After mean centering, the correlations among variables did not show symptoms of high multicollinearity; the largest correlation was between ROA and DPR at 0.613485. The Glejser test also showed that all variable and interaction probabilities were above 0.05, indicating no evidence of heteroskedasticity.

Table 2. Panel regression results (REM)

Variabel	Koefisien	t-Statistic	Prob.	Keputusan
ROA	15,40515	2,538750	0,0135	Berpengaruh signifikan

CAR	1,370002	1,398408	0,1667	Tidak signifikan
LDR	-0,276990	-0,672712	0,5035	Tidak signifikan

Source: EViews 13, processed data (2026).

The basic regression model produced the equation $SP = 7.214059 + 15.40515 ROA + 1.370002 CAR - 0.276990 LDR + \epsilon$. ROA has a positive and significant effect on stock price with a probability of 0.0135. This finding indicates that increased profitability is information that investors pay attention to and can improve perceptions of a bank's performance. This result is consistent with research that found a positive effect of profitability on stock prices. CAR has a positive coefficient of 1.370002 but a probability of 0.1667, indicating that it has no significant effect on stock price. This finding suggests that capital adequacy has not yet become a factor that directly influences stock price changes within the research sample. LDR has a negative coefficient of -0.276990 with a probability of 0.5035, indicating that it also has no significant effect. Investors are presumed to consider other factors such as profitability, interest rate conditions, market sentiment, and economic conditions when assessing banking stocks. Simultaneously, ROA, CAR, and LDR have a significant effect on stock price. The F-statistic value of 3.309253 with a Prob(F-statistic) of 0.025360 indicates the significance of the model at the 5% level. The R-squared value of 0.130749 indicates that approximately 13.1% of the variation in stock price can be explained by ROA, CAR, and LDR, while the remainder is explained by other factors outside the model.

Table 3. Moderated Regression Analysis (MRA)

Interaksi	Koefisien	Prob.	Kesimpulan
ROA $\times$ DPR	19,40452	0,1460	Tidak memoderasi
CAR $\times$ DPR	0,092805	0,9702	Tidak memoderasi
LDR $\times$ DPR	-0,602065	0,5056	Tidak memoderasi

Source: EViews 13, processed data (2026).

The MRA results show that DPR does not moderate the relationship between ROA and stock price. The ROA $\times$ DPR interaction has a coefficient of 19.40452 with a probability of 0.1460. DPR also does not moderate the relationship between CAR and stock price, as the interaction coefficient of 0.092805 has a probability of 0.9702. Furthermore, the LDR $\times$ DPR interaction has a coefficient of -0.602065 with a probability of 0.5056, indicating that DPR does not moderate the relationship between LDR and stock price. These findings indicate that dividend policy has not yet become a factor that strengthens or weakens the effect of financial ratios on stock price during the research period. In the ROA relationship, investors likely focus more on the profitability information itself. In the CAR relationship, capital adequacy signals and dividend signals operate separately. Meanwhile, in the LDR relationship, liquidity levels and dividend policy have not yet formed a signal strong enough to change market response. This result is not entirely consistent with several previous studies that found a moderating function of DPR, thereby indicating that the role of dividend policy can be contextual.

The dynamics of banking stock prices in this study were found to be unresponsive to fluctuations in solvency levels as proxied by CAR. The internal capital adequacy parameter appears to be disregarded by investors as a primary basis for investment decision-making. The focus of capital market participants tends to lean toward operational financial performance that promises short-term gains, such as profitability or liquidity. An excessively large capital buffer, reflected in a high CAR value, may even be viewed negatively as a form of fund management

inefficiency, which in turn restrains the movement of stock market value. This empirical reality is not in line with the basic premise of signaling theory, whereby the maintenance of a strong capital ratio should serve as a positive sentiment regarding a bank's resilience in mitigating loss risk. This misalignment demonstrates an asymmetry in the market's absorption of capital signals, resulting from investors' orientation being more focused on short-term profitability. Furthermore, the conclusion of this research supports the empirical finding (Bella Salsabilla, 2020) that CAR has no significant effect on stock price.

From the perspective of Signaling Theory, the research results show that not all financial ratio information is translated by the market into direct stock price changes. The significant ROA indicates that information regarding a bank's ability to generate profit from its assets is more easily perceived by investors as a performance signal. Conversely, the insignificant CAR and LDR indicate that capital adequacy and credit distribution capability have not been sufficient to statistically form stock price changes in the research sample.

This condition is also reflected in the characteristics of the data. The average ROA of 2.03% indicates a relatively good profit-generating capability, while the average CAR of 23.43% indicates a strong capital position. The average LDR of 89.60% shows that third-party funds are fairly actively channeled into credit. However, the high or low levels of these ratios are not automatically followed by stock price changes, as investors may also consider macroeconomic conditions, interest rate levels, market sentiment, and the growth prospects of each bank. The insignificance of all DPR interaction variables implies that dividend distribution has not yet become a mechanism that changes the relationship between financial ratios and stock price during the research period. DPR may be viewed as supplementary information, while investors place greater emphasis on a bank's profit-generating ability and capital gain prospects. Thus, the presence of DPR as a corporate policy has not been sufficient to strengthen the signals originating from ROA, CAR, or LDR.

This finding reinforces the presence of differing results compared to previous research. Such inconsistency may occur due to differences in observation periods, sample characteristics, economic conditions, variable proxies, and investor responses across different sectors and periods. Therefore, the research results do not imply that CAR, LDR, or dividend policy are unimportant for banks, but rather indicate that, within the 2020–2024 sample and period, their effect on stock price was not statistically proven to be significant.

CONCLUSION

Based on the research results, profitability as proxied by ROA has a significant effect on the stock price of conventional commercial banks during the 2020–2024 period. Solvency as proxied by CAR and liquidity as proxied by LDR do not have a significant effect on stock price. Simultaneously, ROA, CAR, and LDR have a significant effect on stock price, with the model's explanatory power of 13.1%. Furthermore, dividend policy as proxied by DPR is unable to moderate the relationship between ROA, CAR, or LDR and stock price.

For investors, the research results indicate the importance of considering profitability, particularly ROA, alongside other financial ratios and market conditions before making investment decisions. For banking companies, improving profitability performance remains important, as ROA has proven to be a variable that influences stock price. Future research may consider external variables and other company characteristics not yet covered in this model.

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