

## Effectiveness of Capital Adequacy Ratio and Problem Loans In Affecting Stock Return: A Roa Moderation Perspective In National Private Commercial Banks

Atika Purnamasari<sup>1</sup>, Deta Oktavia<sup>2\*</sup>, Sumaryo<sup>3</sup>, Petty Aprilia Sari<sup>4</sup>

<sup>1,2,3,4</sup> Institut Putra Perdana Indonesia

\* E-mail: detaoktavia75@gmail.com

### Information Article

*History Article*

*Submission: 23-04-2026*

*Revision: 30-04-2026*

*Published: 30-04-2026*

### DOI Article:

10.62421/jibema.v3i4.220

### ABSTRACT

This study aims to analyze the effect of the Capital Adequacy Ratio (CAR) and Non Performing Loans (NPL) on stock returns, with Return on Assets (ROA) as a moderating variable in banking companies listed on the Indonesia Stock Exchange. This study uses a quantitative approach with regression analysis and Moderated Regression Analysis (MRA). The data used are secondary data in the form of annual financial reports for the 2022–2024 period, processed using statistical software. Tests were conducted using partial tests (t-tests), simultaneous tests (F-tests), and the coefficient of determination ( $R^2$ ) to determine the model's ability to explain the dependent variable. The results show that CAR has no effect on stock returns, while NPL has a negative effect on stock returns. In the moderation test, ROA was able to strengthen the effect of CAR on stock returns, but failed to moderate the effect of NPL on stock returns. These findings indicate that investors are more concerned with a bank's ability to generate profits and manage capital efficiently than solely considering capital adequacy or credit risk separately. Thus, the combination of capital strength and profitability is an important factor in increasing investor confidence in the capital market.

### Acknowledgment

**Key word:** Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Return on Assets (ROA), Stock Returns

©2026 Published by JIBEMA. Selection and/or peer-review under responsibility of JIBEMA

### INTRODUCTION

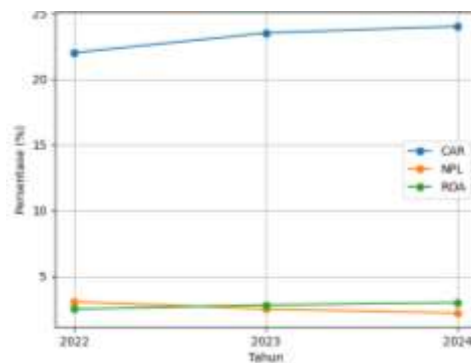
The banking sector plays a strategic role in a country's economy, primarily as an intermediary institution that channels funds from those with surplus funds to those in need. In Indonesia, the development of the banking sector listed on the Indonesia Stock Exchange (IDX) showed significant dynamics, particularly in the 2022-2024 period, marked by economic recovery and increased investment activity in the capital market. This is reflected in the stable and increasing growth of the Jakarta Composite Index (JCI), with the JCI hovering around 6.800 in 2022 and approaching 7.300 in 2024 (Bursa Efek Indonesia, 2024).

These conditions encourage investors to be more selective in selecting stocks, particularly in the banking sector, known for its relative stability. Stock returns are a key indicator in assessing investment success. However, banking stock returns in Indonesia during the 2022-2024 period showed fluctuations. For example, several large banks, such as Bank Central Asia Tbk and Bank Rakyat Indonesia Tbk, experienced significant share price increases post pandemic, while several other banks experienced more volatile movements due to internal and external pressures (Bank Central Asia Tbk, 2024; Bank Rakyat Indonesia Tbk, 2024).

From a fundamental perspective, banking financial ratios also show interesting dynamics. According to data from the Financial Services Authority (OJK), the average Capital Adequacy Ratio (CAR) of Indonesian banks remained at a relatively high level, above 20% throughout the 2022-2024 period, well above the minimum requirement of 8% (Otoritas Jasa Keuangan, 2024). This indicates that banks generally have strong capitalization. However, high CARs do not always translate into consistent increases in stock returns.

Meanwhile, the Non Performing Loan (NPL) ratio Banking Performing Loan (NPL) have improved post pandemic. Data shows that the gross NPL rate in banks was around 3.06% in 2022, decreased to around 2.5% in 2023, and continued to improve to approach 2.2% in 2024 (Otoritas Jasa Keuangan, 2024). This decline in NPL reflects improvements in bank credit quality. However, the market does not always respond directly to NPL declines through increased stock returns.

On the other hand, Return on Assets (ROA), as a profitability indicator, also shows an upward trend. The average ROA for Indonesian banks was around 2.5% in 2022, increasing to around 2.8% in 2023, and approaching 3% in 2024 (Otoritas Jasa Keuangan, 2024). This increase indicates that banks are increasingly efficient at generating profits from their assets. Large banks like Bank Mandiri Tbk even recorded ROA above the industry average (Bank Mandiri Tbk, 2024). To clarify this phenomenon, the following graph presents trends in CAR, NPL, and ROA in Indonesian banking for the 2022-2024 period:



**Figure 1. Trends in CAR, NPL, and ROA of Indonesian Banking**

Source: Data processed from Financial Services Authority publications (2022-2024)

The graph shows a consistent increase in CAR, a decrease in NPL, and an upward trend in ROA. This indicates that the overall health and profitability of Indonesian banking is improving. However, improvements in these fundamental indicators are not always accompanied by a linear increase in stock returns.

This phenomenon indicates a research gap, where there is a mismatch between a company's financial performance and market response. This suggests that other factors influence the relationship between financial ratios and stock returns. Investors consider not only a bank's soundness but also its ability to generate profit.

The novelty of this study lies in the placement of Return on Assets (ROA) as a moderating variable in the relationship between Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) on stock returns in banking companies listed on the Indonesia Stock Exchange for the period 2022-2024. Unlike previous studies that generally place ROA as an independent or mediating variable (Sari & Putra (2021) dan Hidayat (2022)), this study examines the role of ROA in strengthening or weakening the influence of bank health ratios on market response.

Furthermore, several previous studies have shown inconsistent results, such as that conducted by Widyastuti (2020), which found that CAR had a positive and significant effect on stock returns, while NPL had a significant negative effect. However, a different finding was found by Sari and Putra (2021), who found that CAR had no significant effect on stock returns, while NPL had no strong influence on investor decisions. Furthermore, a study by Hidayat (2022) found that ROA had a significant effect on stock returns, necessitating further testing using a different approach.

To explain the relationship between these variables, this study uses Signaling theory, which explains that companies will provide signals to external parties through published financial information (Michael Spence, 1973). According to Eugene F. Brigham dan Joel F. Houston Spence (2011), investors use this information to assess a company's prospects and determine investment decisions. Aswath Damodaran (2020) states that the better the information provided by a company, the more positive the investor response will be towards the company.

In this study, CAR, NPL, and ROA are seen as signals that can influence investor perception. CAR is a ratio that describes a bank's ability to provide capital to cover risks arising from its operational activities. A high CAR indicates that the bank has a good ability to maintain financial stability and face potential losses. NPL indicates the amount of non performing loans held by the bank. The higher the NPL, the greater the risk faced by the bank due to the high possibility of uncollectible loans. Banks with high CAR and high ROA levels tend to receive a more positive response from investors than banks with high CAR but low ROA. Conversely, the negative impact of NPLs on stock returns is expected to be

weaker if the company is still able to generate high profits (Anggraini, 2022; Kasmir, 2018; Aswath Damodaran, 2020; Frederic S. Mishkin, 2018).

## RESEARCH METHODS

Using all National Private Commercial Banks listed on the Indonesia Stock Exchange for the 2022-2024 period as the population, this study employed a purposive sampling strategy. Sample selection was based on specific parameters to ensure that the information presented was highly representative of the reality of the relevant operational entities (Sugiyono, 2020).

Financial statements and annual reports published by each company and the stock exchange authority serve as the primary secondary data sources in this study. The dependent variable tested is stock returns, proxied by the annual stock price difference. This instrument is used because its movements directly reflect the profitability performance received by investors from their banking assets.

This study uses two main independent variables, the Capital Adequacy Ratio (CAR) and Non Performing Loans (NPL). CAR serves as an indicator of the effectiveness of bank capital in mitigating risks from productive assets, a higher ratio reflects a bank's stronger financial resilience to potential losses. Conversely, NPL plays a role in monitoring credit quality. A high NPL indicates the magnitude of the credit risk borne, which in turn can negatively impact a company's profitability (Widyastuti, 2020).

In addition, this study uses Return on Assets (ROA) as a moderating variable (Hidayat, 2022). The use of the return on assets (ROA) indicator is based on its ability to reflect a company's efficiency in optimizing all assets to generate profit. A substantial level of profitability is predicted to amplify the positive impact of the capital adequacy ratio (CAR) on stock returns, while simultaneously mitigating the negative correlation from non-performing loans (NPL).

The influence of independent variables on stock returns in this study was tested using a Moderated Regression Analysis (MRA) approach, with return on assets (ROA) positioned as a moderating factor. The analysis begins with the presentation of descriptive statistics to provide an overview of the research data profile. To ensure the validity and feasibility of the model, a series of classical assumption tests, including evaluation of normality, multicollinearity, heteroscedasticity, and autocorrelation, were also implemented.

After ensuring the model was free from classical assumption bias, the hypothesis analysis was executed using multiple linear regression. This study also integrated a moderation test by calculating the interaction between ROA, CAR, and NPL. The entire data computation process was performed

using SPSS software to investigate the role of profitability in modulating the influence of bank health indicators on stock performance.

### Hypothesis

H1 : Capital adequacy ratio (CAR) has a positive effect on stock returns

H2 : Non performing loans (NPL) have a negative effect on stock returns

H3 : Return on assets (ROA) strengthens the influence of the capital adequacy ratio (CAR) on stock returns

H4 : Return on Assets (ROA) weakens the negative influence of Non Performing Loans (NPL) on stock returns

## RESULTS AND DISCUSSION

### RESULTS

This segment presents a synthesis of regression test findings to evaluate the impact of the capital adequacy ratio (CAR) and non-performing loans (NPL) on stock returns. This study positions return on assets (ROA) as a moderating factor, focusing on National Private Commercial Banks listed on the Indonesia Stock Exchange (IDX) for the 2022-2024 period. The analytical procedure begins with a series of classical assumption tests including tests for normality, multicollinearity, and heteroscedasticity to ensure the statistical validity of the model and minimize the risk of estimation bias. After verifying the assumptions, the analysis continues with an examination of the coefficient of determination to measure the variables explanatory power on stock return fluctuations. Finally, Moderated Regression Analysis (MRA) is applied to examine the interaction of ROA in influencing the relationship between the independent and dependent variables. A summary of the statistical data and the significance of the relationships between the variables are systematically summarized in test result tables.

**Table 1. Classical Assumption Test Table**

Testing	Indicator	Mark	Criteria	Conclusion
Normality	Sig. Kolmogorov-Smirnov	0.200	Sig. > 0.05	Normally distributed data
Multicollinearity	VIF CAR	1.555	VIF < 10	is no multicollinearity
	VIF NPL	2.255	VIF < 10	is no multicollinearity
	VIF ROA	1.976	VIF < 10	is no multicollinearity
Heteroscedasticity	Sig. Glejser	> 0.05	Sig. > 0.05	is no heteroscedasticity
Determination	Adjusted R Square	0.630	0–1	The model explains 6.3 % of the variation in stock <i>returns</i> .
F test	Sig. F	0,000	Sig. < 0.05	Model fit for use
H1	CAR → Stock Return	-1.385 / 0.17	Sig. < 0.05	<b>Rejected</b>

Testing	Indicator	Mark	Criteria	Conclusion
H2	NPL → Stock Return	-2.024 / 0.04	Sig. < 0.05	<b>Accepted</b>
H3	CAR*ROA → Stock Return	1.728 / 0.03	Sig. < 0.05	<b>Accepted</b>
H4	NPL*ROA → Stock Return	-0.891 / 0.37	Sig. < 0.05	<b>Rejected</b>

Source: Data processed by researchers, 2026

Based on the results of the classical assumption test, this research data meets the criteria for statistical validity. The Kolmogorov-Smirnov test yielded a significance value of 0.200 ( $>0.05$ ), confirming that the residual distribution is normal. Regarding intervariable dependencies, the VIF values for all predictors (CAR = 1.555; NPL = 2.255; ROA = 1.976) are below the threshold of 10, confirming the absence of multicollinearity.

Furthermore, the Glejser test demonstrated the absence of heteroscedasticity, as all significance values exceeded 0.05, indicating that the residual variance is homoscedastic, or constant. In terms of model strength, the Adjusted R Square value of 0.630 indicates that CAR, NPL, ROA, and their interactions contribute 63% to stock return fluctuations. The remaining 37% is driven by external variables such as macroeconomic dynamics, inflation, and market sentiment. Finally, the significance of the F test ( $0.000 < 0.05$ ) confirms that this model is credible and all independent variables collectively have a real influence on the dependent variable.

The t-test results show that the capital adequacy ratio (CAR) variable has a significance value of 0.17 ( $> 0.05$ ), thus disproving the first hypothesis. This finding implies that capital adequacy is not the primary determinant significantly influencing stock returns. This phenomenon indicates that market participants do not solely use the capital adequacy ratio as a reference in investment decisions, considering that a high CAR without adequate profitability is not necessarily perceived as a positive sentiment. Conversely, the non-performing loan (NPL) variable was proven to have a negative effect on stock returns with a significance value of 0.04 ( $< 0.05$ ). This confirms that the escalation of credit risk is inversely proportional to stock performance in the capital market, as the increase in non performing loans reduces asset quality and investor interest.

Based on the moderation analysis, the interaction between CAR and ROA yielded a t-statistic of 1.728 with a significance level of 0.03. This finding proves that ROA acts as a moderating variable that strengthens the positive correlation between CAR and stock returns, thus verifying the third hypothesis. Theoretically, the market tends to place a higher value on the capital adequacy ratio when accompanied by profit-generating efficiency. The synergy between a robust capital structure and superior profitability builds positive market sentiment towards the issuer's prospects. Conversely, the test of the interaction

between NPL and ROA showed a t-value of -0.891 with a significance level of 0.37. Because the significance value exceeded the 0.05 threshold, the fourth hypothesis was not supported by the data. This indicates that profitability failed to mitigate the influence of NPL on stock returns. Investors continue to prioritize credit risk as a primary determinant, where high levels of non-performing loans are still seen as a performance threat regardless of the size of the company's profits.

## **DISCUSSION**

### **The capital adequacy ratio (CAR) has no effect on stock returns**

The Capital Adequacy Ratio (CAR) indicator was found to have no significant correlation with stock returns because a high capital adequacy ratio does not automatically reflect increased dividends or price appreciation for shareholders. In the national private banking sector on the Indonesia Stock Exchange (IDX) during the 2022-2024 period, the majority of institutions maintained capital levels well above the Financial Services Authority (OJK) regulatory threshold. Consequently, this variable tended to stagnate and lose its relevance as a primary determinant in investment decision-making. Investors are more responsive to fundamental indicators that directly impact company value, such as profitability, operational efficiency, productive asset quality, and sustainable profit growth.

This phenomenon is reflected in the performance of large issuers such as PT Bank Central Asia Tbk, PT Bank CIMB Niaga Tbk, and PT Bank OCBC NISP Tbk, which consistently maintain solid capital structures but exhibit divergent stock return fluctuations. This confirms that the market places greater value on banks' ability to optimize low-cost funds (Current Account Saving Account-CASA), mitigate non performing loan (NPL) risk, and generate stable net interest income than simply accumulating core capital. Furthermore, capital market dynamics during this period were also heavily influenced by macroeconomic variables such as interest rate volatility, inflation, and external sentiment, leading investors to prioritize the prospect of future profit growth over the stability of the CAR ratio, which was already in a safe zone.

The findings of this study confirm previous literature (Triyana et al., 2024; Astohar, et al., 2021; Sahroni, 2022; Wahyu Pamungkas, 2023), which states that the capital adequacy ratio (CAR) does not have a significant impact and tends to be negatively correlated with stock returns in the conventional banking sector. This phenomenon indicates a tendency for investors to prioritize profitability and future business projections over mere capital adequacy figures. However, discussions regarding the influence of CAR remain variable, Andy Kurniawan (2017) found a significant positive effect on stock returns. This perspective is based on the assumption that a strong capital ratio reflects a bank's resilience in mitigating the risk of loss, which ultimately triggers positive sentiment and increases market expectations regarding the stock's value (Widyastuti, 2020).

### **The impact of non performing loans (NPL) has a negative effect on stock returns**

An increase in the non performing loan (NPL) ratio theoretically exerts negative pressure on stock returns, given that the accumulation of non-performing loans represents an escalation of operational risk and a degradation of banks' profitability. Based on signaling theory, published financial reports serve as a means of transmitting information for market participants to evaluate an entity's internal fundamentals. Investors interpret a surge in NPLs as a negative signal, indicating a decline in asset quality and the risk of future losses (Tapokabkab dan Rosyati, 2023). Technically, the increase in NPL requires banks to allocate larger amounts of allowance for impairment losses (CKPN), which ultimately distorts net profit. This profit reduction automatically erodes the issuer's attractiveness in the capital market, triggering stock price corrections and declining returns.

Empirical observations in the National Private Commercial Bank sector listed on the Indonesia Stock Exchange (IDX) during the 2022-2024 period confirm that NPL fluctuations are a crucial indicator for investor decision-making. Amid global economic uncertainty and adjustments to interest rate policies during this period, several banking institutions faced increased credit risk, which directly impacted stock price volatility. As an illustration, PT Bank CIMB Niaga Tbk recorded a dynamic NPL ratio in line with credit expansion amid macroeconomic uncertainty, where the increase in provisioning expenses due to bad loans impacted stock performance instability. In contrast, PT Bank Central Asia Tbk consistently managed to mitigate credit risk below the industry average, thereby securing sustainable profit growth and maintaining stock value stability. This reality confirms that effective credit quality management is a key determinant in maintaining positive sentiment and investor confidence in the equity market.

This trend confirms the theoretical premise that investor behavior is driven by the balance between expected returns and asset risk profiles. An increase in non performing loans (NPL) directly reflects an escalation in default risk, which triggers negative market perceptions of banking stability. This situation suppresses market demand, resulting in a contraction in overall stock prices and returns. The relevance of this finding is reinforced by observations by Sondakh et al. (2024), Sahapudi et al. (2025), Silalahi dan Khairunnisa (2019) and Tahmat (2020), who collectively identified a negative correlation between non-performing loans and stock performance, although the level of significance varied across research models. Conversely, there are anomalies in the literature indicating that NPLs are not always the primary determinant of stock prices, as noted by (Yuniarti dan Ica, 2024; Wijaya, 2020). This phenomenon indicates that in certain market situations, investor sensitivity to credit risk can be reduced if there are other, stronger fundamental factors such as stable profitability levels or positive macroeconomic sentiment that can compensate for concerns about rising non performing loans.

Through a synthesis of the theoretical framework and factual evidence at the research site, it can

be confirmed that non-performing loans (NPL) have a significant negative correlation with stock returns. This phenomenon is rooted in the fact that escalating bad loans directly erode profitability and increase corporate risk exposure, which is then interpreted by the market as a signal of poor fundamentals. Consequently, this negative sentiment triggers stock price depreciation and confirms declining returns for shareholders.

### **Return on assets (ROA) moderates the effect of capital adequacy ratio (CAR) on stock returns**

Return on Assets (ROA) has been identified as having a significant moderating role in strengthening the correlation between the capital adequacy ratio (CAR) and stock returns. Profitability is a key determinant of whether a bank's capital adequacy can be converted into profits for shareholders. Conceptually, CAR represents a bank's resilience to capital risk, while ROA measures management's effectiveness in utilizing assets to generate profits. This synergy between capital stability and operational efficiency amplifies positive signals for market participants.

Independently, a high CAR ratio does not guarantee appreciation in stock returns, given that large capital reserves represent security rather than productivity. However, the integration of a solid CAR with an optimal ROA indicates that the banking institution not only possesses strong fundamentals but also agile asset management. This condition triggers positive investor sentiment, increases market demand, and ultimately stimulates share price increases.

According to Signaling Theory, the combination of capital and profitability indicators provides more credible information to the public. Abundant capital without adequate profits is often perceived as idle capital. Conversely, achieving a high ROA demonstrates management's ability to manage resources productively. Therefore, ROA serves to reinforce the informative value of CAR, which then increases investor confidence in the company's prospects.

Empirical data on banking companies listed on the Indonesia Stock Exchange (IDX) for the 2022-2024 period supports this argument, where issuers with a superior combination of CAR and ROA recorded more competitive stock performance. For example, PT Bank Central Asia Tbk consistently maintained a strong CAR ratio coupled with a stable ROA, thereby securing investor loyalty and delivering promising stock returns. The opposite phenomenon is seen in banks with strong capital but low profitability, where the market tends to respond skeptically. This confirms ROA's position as a moderating variable, clarifying the mechanism by which CAR influences stock return volatility.

This finding aligns with previous literature confirming the role of return on assets (ROA) as a moderating variable that strengthens the correlation between the capital adequacy ratio (CAR) and stock returns. Increased profitability is considered a catalyst that amplifies the impact of the capital ratio on investor valuation (Meliza et al., 2024; Sinurat et al., 2025; Lisdawati & Tri Sulistyani, 2023).

Furthermore, the synergy between capital resilience and profit generating ability has been shown to have a stronger impact on market performance than a partial analysis of the variables. However, there are discrepancies in previous research Sri Sudarsi et al (2024) showed that stock prices are more directly influenced by ROA, while CAR has no significant effect. This phenomenon indicates a shift in investor focus from profitability to capital stability in certain situations, leading to inconsistent moderating effects. Overall, ROA functions as a positive moderator because it optimizes capital utilization and signals credibility and bright prospects for the banking sector in the eyes of the market.

### **Return on assets (ROA) failed to moderate the influence of non performing loans (NPL) on stock returns**

Observations show that return on assets (ROA) fails to act as a significant moderating variable in the relationship between non performing loans (NPL) and stock returns. This is due to banks' profitability capacity being unable to neutralize the negative sentiment resulting from high non performing loan ratios. Based on Signaling Theory, NPLs represent the asset quality of financial institutions; a spike in NPLs is viewed by the market as a signal of increasing credit risk. This risk directly indicates the potential for future losses, which in turn undermines investor expectations and confidence. Conversely, ROA only provides a snapshot of profitability over a specific timeframe, so investors tend to be more responsive to structural risks reflected in NPLs than to immediate profit figures.

Operationally, escalating NPL force banks to increase their allocation of Allowances for Impairment Losses (CKPN), which systematically erodes net profit. This situation confirms that the negative pressure from non-performing loans is fundamental and difficult to offset solely through short term efficiency or profitability improvements. Therefore, ROA lacks sufficient statistical power to strengthen or weaken the correlation between NPLs and stock price fluctuations in the capital market.

Data on the banking sector listed on the Indonesia Stock Exchange (IDX) for the 2022-2024 period supports this argument. A phenomenon was found where banking issuers continued to experience share price corrections when NPL increased, even though their ROA positions were relatively stable. This fact confirms that in making investment decisions, market players prioritize risk management aspects over profitability figures.

In the capital market context, stock returns are not solely driven by historical financial performance but are also heavily influenced by projections of business sustainability and future risks. High NPL rates trigger uncertainty about the stability of banks' cash flows. Consequently, even though ROA shows impressive performance in the short term, investors remain conservative and cautious. This phenomenon is why the relationship between credit risk and stock returns remains independent of the

moderating influence of profitability.

These findings align with studies by Sondakh et al., (2024) and Yuniarti dan Ica (2024), which confirmed that non performing loans (NPL) do not significantly impact stock price fluctuations. This phenomenon indicates that profitability and credit risk indicators are not yet the main determinants of stock return movements, thus the role of ROA as a moderating variable has not been empirically tested. On the other hand, inconsistencies in the results are seen in studies by Hariyanto dan Maryono (2024) and Nguyen (2023), which instead emphasize a negative correlation between credit risk and financial performance (ROA). This difference suggests that in certain contexts, ROA has the potential to influence the relationship between NPL and stock returns. Therefore, the failure of ROA to consistently moderate this relationship is due to the strong negative signal of credit risk in the eyes of investors compared to the stability of the entity's profitability.

## CONCLUSION

The findings of this study confirm that the capital adequacy ratio (CAR) does not contribute significantly to stock return fluctuations, unlike non performing loans (NPL), which have been shown to negatively impact stock price performance in the market. Interestingly, a moderation analysis shows that profitability, as proxied by return on assets (ROA), acts as an accelerator, strengthening the relevance of the capital adequacy ratio in influencing stock returns. This indicates that banks' efficiency in generating profits can increase investor optimism regarding the company's capital fundamentals. On the other hand, ROA has not been able to mitigate the negative impact of credit risk (NPL) on market confidence, reflecting that investor sensitivity to asset quality remains high despite good profitability. Applicably, this dynamic signals to market participants to prioritize the integration of earnings performance and equity management rather than simply evaluating risk profiles in isolation. While providing new insights, the generalizability of this study's results is limited by the narrow sample size, the relatively short observation period, and the limited scope of independent variables in capturing a comprehensive picture of the determinants of stock returns. In response to these limitations, future research needs to expand the data coverage by adding samples and extending the observation period. Furthermore, developing research models to include other banking indicators such as Net Interest Margin (NIM) and Loan to Deposit Ratio (LDR), or integrating macroeconomic variables, is highly recommended for more precise and holistic estimates.

## BIBLIOGRAPHY

- Ahmad Fauzi. (2022). Pengaruh kinerja keuangan terhadap return saham perusahaan perbankan di Bursa Efek Indonesia. *Jurnal Akuntansi Multiparadigma*, 13(1), 130–145.
- Alfaini, N., & Amin, M. A. N. (2023). Pengaruh Dana Pihak Ketiga, Efisiensi, Loan To Deposit Ratio (LDR), dan Capital Adequacy Ratio (CAR) Terhadap Penyaluran Kredit. *Konsentrasi: Jurnal*

Manajemen Dan Bisnis, 3(2), 80-95.

- Amin, M. A. N., Utami, Y., & Aji, W. Y. (2021). Pengaruh struktur modal, ukuran perusahaan, dan likuiditas terhadap profitabilitas pada perusahaan perbankan. *Jurnal Audit Dan Perpajakan (JAP)*, 1(2), 114-129.
- Amin, M. A. N., & Dasuki, N. I. (2023). Pengaruh perputaran modal kerja, rasio aktivitas, likuiditas dan solvabilitas terhadap profitabilitas perusahaan sub sektor makanan dan minuman yang terdaftar di Bursa Efek Indonesia periode 2017-2021. *Jurnal Ekonomi Bisnis, Manajemen Dan Akuntansi (JEBMA)*, 3(1), 1-13.
- Amin, M. A. N., & Khilmi, T. A. (2023). Pengaruh Likuiditas, Leverage, dan Growth Terhadap Kinerja. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, dan Akuntansi*, 1(1), 1-17.
- Amin, M. A. N., Amirah, A., & Azis, L. A. (2023). Pengaruh growth opportunity, pertumbuhan aset, profitabilitas, dan risiko bisnis terhadap struktur modal pada perusahaan properti dan real estate. *Jurnal Valuasi: Jurnal Ilmiah Ilmu Manajemen Dan Kewirausahaan*, 3(1), 132-151.
- Astohar, A., Ristianawati, Y., & Oktafiani, D. (2021). Pengaruh kinerja keuangan terhadap return saham dengan Price to Book Value sebagai variabel intervening pada perbankan go public. *Jurnal Akuntansi dan Manajemen*, 18(2), 45–58. <https://doi.org/10.36406/jam.v18i2.205>
- Aswath Damodaran. (2020). *Applied Corporate Finance* (5th ed.). Wiley.
- Bank Central Asia Tbk. (2024). *Laporan Tahunan*. <https://www.bca.co.id>
- Bank Mandiri Tbk. (2024). *Laporan Tahunan*. <https://www.bankmandiri.co.id>
- Bank Rakyat Indonesia Tbk. (2024). *Laporan Tahunan*. <https://www.bri.co.id>
- Basel Committee on Banking Supervision. (2011). *Basel III: A global regulatory framework for more resilient banks and banking systems*. <https://www.bis.org>
- Budi Santoso. (2024). Peran profitabilitas dalam memoderasi pengaruh risiko kredit terhadap return saham. *Jurnal Keuangan Indonesia*, 19(1), 100–115.
- Bursa Efek Indonesia. (2024). *Data IHSIG dan Laporan Pasar Modal*. <https://www.idx.co.id>
- Bursa Efek Indonesia. (2024). *Data dan informasi pasar modal*. <https://www.idx.co.id>
- Dewi Anggraini. (2022). Pengaruh rasio keuangan terhadap return saham pada perusahaan perbankan. *Jurnal Ilmu Ekonomi*, 15(1), 60–75.
- Eugene F. Brigham, & Joel F. Houston. (2011). *Fundamentals of Financial Management* (13th ed.). Cengage Learning.
- Eugene F. Fama. (2014). Two pillars of asset pricing. *American Economic Review*, 104(6), 1467–1485. <https://doi.org/10.1257/aer.104.6.1467>.
- Frederic S. Mishkin. (2018). *The economics of money, banking, and financial markets* (12th ed.). Pearson.
- Ghozali, I. (2021). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 26* (10th ed.). Semarang : Fakultas Ekonomi dan Bisnis Universitas Diponegoro.

- Hariyanto, & Maryono. (2024). Pengaruh Non Performing Loan terhadap profitabilitas perbankan. *Costing: Journal of Economic, Business and Accounting*. <https://doi.org/10.31539/costing.v8i1.16548>
- Hery. (2017). *Analisis laporan keuangan*. Grasindo.
- Hidayat. (2022). Pengaruh Return on Assets (ROA) terhadap Return Saham pada Bank yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ekonomi dan Bisnis*, 10(3), 78–90.
- International Monetary Fund. (2022). *Financial Soundness Indicators Guide*. <https://www.imf.org>
- Ismail. (2018). *Manajemen perbankan*. Prenadamedia Group.
- Jogiyanto Hartono. (2017). *Teori portofolio dan analisis investasi* (Edisi terbaru). BPFPE.
- Kasmir. (2018). *Dasar-dasar perbankan* (Cetakan terbaru). Rajagrafindo Persada.
- Kurniawan, A. (2017). Pengaruh kinerja keuangan terhadap return saham pada perusahaan perbankan di Bursa Efek Indonesia. *Jurnal Ilmiah Manajemen dan Bisnis*, 3(1), 67–78. <https://doi.org/10.22441/jimb.v3i1.3191>
- Lisdawati, & Tri Sulistyani. (2023). Pengaruh kinerja keuangan terhadap harga saham perusahaan perbankan. *JEMSI: Jurnal Ekonomi Manajemen Sistem Informasi*, 9(4). <https://doi.org/10.35870/jemsi.v9i4.1346>
- Meliza, Herlinah, & Dewi Yuniar Magetana. (2024). Pengaruh kinerja keuangan terhadap return saham dengan variabel moderasi pada perusahaan perbankan. *J-MIND: Jurnal Manajemen Indonesia*, 10(3). <https://doi.org/10.29103/j-mind.v10i3.25040>
- Michael Spence. (1973). *Job market signaling*. *The Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- Najhah, D., & Amin, M. A. N. (2024). Pengaruh Non Performing Loan, BOPO dan Firm Size Terhadap Profitabilitas. *Konsentrasi: Jurnal Manajemen dan Bisnis*, 4(2), 80-95.
- Nguyen. (2023). Credit risk and bank performance: Evidence from emerging markets. <https://doi.org/10.48550/arXiv.2304.08217>
- Otoritas Jasa Keuangan. (2023). *Peraturan dan Statistik Perbankan Indonesia*. <https://www.ojk.go.id>
- Otoritas Jasa Keuangan. (2023). *Statistik Perbankan Indonesia*. <https://www.ojk.go.id>
- Otoritas Jasa Keuangan. (2024). *Statistik Perbankan Indonesia*. <https://www.ojk.go.id>
- Rizky Pratama. (2023). Analisis pengaruh risiko kredit dan profitabilitas terhadap return saham. *Jurnal Manajemen Bisnis*, 18(2), 210–225.
- Sahapudi, et al. (2025). Pengaruh risiko kredit terhadap profitabilitas perbankan di Indonesia. *Jurnal Bisnis dan Ekonomi (JBE)*. <https://doi.org/10.35794/jbe.v13i1.64631>
- Sahroni, S. (2022). Pengaruh CAR, LDR, dan BOPO terhadap return saham pada sektor perbankan. *Jurnal Perbankan dan Keuangan*, 6(1), 1–12
- Sari, & Putra. (2021). Analisis Pengaruh Kinerja Keuangan terhadap Return Saham pada Sektor Perbankan di Indonesia. *Jurnal Akuntansi dan Investasi*, 15(1), 45–60.

- Silalahi, Y. C. F., & Khairunnisa, K. (2019). Analisis Pengaruh Non Performing Loan, Good Corporate Governance, Return On Asset Dan Capital Adequacy Ratio Terhadap Return Saham (studi Kasus Pada Bank Umum Swasta Nasional Yang Terdaftar Di Bursa Efek Indonesia Tahun 2013-2017). *eProceedings of Management*, 6(3).
- Sinurat, et al. (2025). Pengaruh profitabilitas terhadap harga saham pada sektor perbankan periode 2023–2024. *International Journal of Economics and Management Research*, 4(2). <https://doi.org/10.55606/ijemr.v4i2.396>
- Siti Nuraini. (2021). Pengaruh capital adequacy ratio dan non-performing loan terhadap profitabilitas perbankan. *Jurnal Riset Akuntansi*, 11(2), 90–105.
- Sondakh, Palandeng, & Untu. (2024). Pengaruh kinerja keuangan terhadap harga saham perusahaan perbankan di Bursa Efek Indonesia. *Jurnal EMBA*, 12(3). <https://doi.org/10.35794/emba.v12i3.57146>
- Sri Sudarsi, et al. (2024). Pengaruh CAR, ROA, dan EPS terhadap harga saham dengan variabel moderasi. *Dinamika Akuntansi, Keuangan dan Perbankan*, 14(2). <https://doi.org/10.35315/dakp.v14i2.10324>
- Sugiyono. (2020). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.
- Tahmat, T. (2020). Pengaruh Tingkat Kesehatan Bank Terhadap Return Saham Bank BUMN Periode 2009-2018. *EKUITAS (Jurnal Ekonomi dan Keuangan)*, 4(3), 373-395
- Tapokabkab, & Rosyati. (2023). Pengaruh CAR, NPL, dan LDR terhadap return saham pada perusahaan perbankan. *Jurnal Akuntansi Bareleng*, 7(2), 45–55. <https://doi.org/10.33884/jab.v7i2.7148>
- Triyana, D., Mahmudi, B., & Mulyani, A. S. (2024). Pengaruh CAR, ROA, dan NPL terhadap return saham pada bank umum konvensional di Indonesia. *Costing: Journal of Economic, Business and Accounting*, 7(2), 1234–1245.
- Pamungkas, W. (2023). Pengaruh CAR, ROA, dan NPF terhadap return saham bank syariah di Indonesia. *Jurnal Ekonomi Syariah*, 5(2), 89–102
- Widyastuti. (2020). *Pengaruh Capital Adequacy Ratio (CAR) dan Non-Performing Loan (NPL) terhadap Return Saham pada Perusahaan Perbankan*. *Jurnal Keuangan dan Perbankan*, 12(2), 123–135.
- Wijaya, R. S. (2020). Pengaruh non Performing Loan (NPL), Good Corporate Governance (GCG), Return On Assets (ROA), Capital Adequacy Ratio (CAR), terhadap return saham sebelum dan sesudah Pandemi covid-19. *Jurnal Ekonomika Dan Bisnis (JEBS)* Vol, 2(02), 38
- World Bank. (2022). *Banking sector indicators*. <https://www.worldbank.org>
- Yuniarti, & Ica. (2024). Pengaruh kinerja keuangan terhadap harga saham pada perusahaan perbankan. *Jurnal Ekonomi STIEP*, 9(1), 12–25
- Zvi Bodie, Alex Kane, & Alan J. Marcus. (2018). *Investments* (11th ed.). McGraw-Hill.