# Analysis of the Impact of CR and DAR on NPM at PT Bank BNI Tbk for the Period 2013-2023

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**Abstract:** This study aims to examine how the Current Ratio (CR) and Debt to Asset Ratio (DAR) influence the Net Profit Margin (NPM) of Bank Negara Indonesia (BNI) over the period from 2013 to 2023. The data used in this research consists of the bank's annual financial reports spanning 11 years, sourced internally from the bank. The research method applied is multiple linear regression analysis, with data processing carried out using SPSS software. The findings show that neither the Current Ratio nor the Debt to Asset Ratio significantly impacts the Net Profit Margin. The coefficient of determination is low ($R^2 = 0.077$), indicating that these two variables explain only 7.7% of the variation in Net Profit Margin. The F-test results also confirm that these variables do not have a significant collective effect on Net Profit Margin. Based on these results, it is recommended that BNI focus on other factors, such as cost control and operational efficiency, to enhance its profitability in the future.

**Keyword:** Current Ratio, Net Profit Margin, Debt to Asset Ratio.

## INTRODUCTION

The banking sector plays a crucial role in driving a country's economic development. As one of the key financial institutions, banks are tasked with managing and distributing funds from the public to individuals and businesses in need. The financial performance of a bank is an essential indicator of its success and stability (Kasmir, 2017). One of the prominent national banks in Indonesia is PT Bank BNI (Bank Indonesia, 2023).

A bank's financial performance can be evaluated using several financial ratios, such as the CR, DAR, and NPM. The CR measures the bank's capacity to meet its short-term obligations using current assets. From 2013 to 2023, Bank BNI's CR ranged from 118% to 131%, showing a stable liquidity position well above the 100% minimum threshold (Otoritas Jasa Keuangan, 2023). This indicates that Bank BNI has consistently maintained the ability to fulfill short-term obligations.

The DAR, on the other hand, reflects the portion of the bank's funding that is sourced from debt. During the same period, Bank BNI's DAR fluctuated between 77% and 87%. A high DAR is typical for banking institutions as their operations heavily rely on managing third-

party funds, which are recorded as short-term liabilities (Kasmir, 2017). Nonetheless, the stable liquidity suggests that Bank BNI has efficiently managed this funding structure.

NPM, meanwhile, demonstrates the bank's efficiency and profitability in generating net income from its revenues. The fluctuation of Bank BNI's NPM between 6% and 34% from 2013 to 2023 reflects the dynamic nature of its financial performance, influenced by both external and internal factors such as interest income, operational costs, and macroeconomic conditions (Sugiyono, 2019). With an NPM consistently above 15%, Bank BNI is classified as having a strong financial performance, generating steady profits.

In light of this data, the purpose of this study is to examine the effect of CR and DAR on NPM at PT Bank BNI Tbk from 2013 to 2023. This research aims to provide an academic contribution to the understanding of the relationship between liquidity ratios, funding structures, and profitability within the Indonesian banking sector.

## METHOD

This research adopts a quantitative approach, aiming to analyze the relationship between financial ratios, specifically the CR, DAR, and NPM. A quantitative method was chosen because the study emphasizes measuring variables that can be statistically processed to test relationships between them (Markonah & Prasetyo, 2022). The population for this research includes the annual financial statements of PT Bank BNI for the period from 2013 to 2023. The sample was selected using purposive sampling based on the criterion that the financial statements were audited and available in full for the entire period under study (Sekaran & Bougie, 2016).

The study was conducted in December 2024, using data from PT Bank BNI's official financial reports, accessed via the company's website and other reliable sources. Data analysis was carried out in the researcher's office using statistical software. The research instrument is secondary data derived from the audited annual financial statements of PT Bank BNI, which includes CR, DAR, and NPM ratios from those reports.

The research process started with the collection of relevant financial data covering the period from 2013 to 2023. The collected data was then processed and analyzed using the latest version of SPSS software (Wiharso, Akbar Basudani, et al., 2022). The analysis aimed to assess the impact of the independent variables (CR and DAR) on the dependent variable (NPM). The statistical method used is multiple linear regression analysis, designed to evaluate the extent to which CR and DAR affect NPM both simultaneously and individually. SPSS software was used to ensure accurate and reliable results.

## RESULTS AND DISCUSSION
### Results

Descriptive statistical analysis reveals the values of the the CR, DAR, and NPM based on 11 data points from the financial reports of PT Bank Negara Indonesia (Persero) Tbk for the period 2013–2023. The average CR is 125.36, with a minimum of 118.00, a maximum of 131.00, and a standard deviation of 4.50. The average DAR is 82.82, ranging from a minimum of 77.00 to a maximum of 87.00, with a standard deviation of 2.86. The average NPM is 27.45, with a minimum of 6.00, a maximum of 34.00, and a standard deviation of 8.14.

**Table 1. Descriptive Statistics of the Study**

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| Current Ratio | 11 | 118.00 | 131.00 | 125.3636 | 4.50051 |
| Debt to Asset Ratio | 11 | 77.00 | 87.00 | 82.8182 | 2.85721 |
| Net Profit Margin | 11 | 6.00 | 34.00 | 27.4545 | 8.14081 |
| Valid N (listwise) | 11 | | | | |

Normality testing using the Kolmogorov-Smirnov test indicates that the residuals follow a normal distribution, with a statistical value of 0.212 and an asymptotic significance (2-tailed) of 0.182. This suggests that the residuals do not significantly differ from a normal distribution, allowing for the use of multiple linear regression analysis (Wiharso, Prasetyo, et al., 2022).

**Table 2. Results of Data Normality Test**

| One-Sample Kolmogorov-Smirnov Test | | |
|---|---|---|
| | | Unstandardized Residual |
| N | | 11 |
| Normal Parameters[a,b] | Mean | .0000000 |
| | Std. Deviation | 7.82299091 |
| Most Extreme Differences | Absolute | .212 |
| | Positive | .138 |
| | Negative | -.212 |
| Test Statistic | | .212 |
| Asymp. Sig. (2-tailed) | | .182[c] |

The multicollinearity test shows a Tolerance value of 0.742 and a Variance Inflation Factor (VIF) of 1.347 for CR and DAR, indicating that there is no multicollinearity between these independent variables. This confirms that these variables can be included in the regression model (Markonah, 2021).

**Table 3. Results of Multicollinearity Test**

| Collinearity Statistics | |
|---|---|
| Tolerance | VIF |
| | |
| .742 | 1.347 |
| .742 | 1.347 |

The Durbin-Watson value of 1.569 is close to the ideal value of 2, suggesting no autocorrelation in the residuals (Sugiyono, 2019). However, the model results show that the effects of CR and DAR on NPM are not significant, indicating that these variables are not key predictors of NPM during the study period.

**Table 4. Results of Autocorrelation Test**

| Model Summary[b] | | | | | |
|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .277[a] | .077 | -.154 | 8.74637 | 1.569 |

Heteroscedasticity testing involved analyzing the scatter of residuals against predicted values of NPM. The test results show a random dispersion of points without any distinct pattern, confirming the absence of heteroscedasticity. This ensures the linearity and constant

variance assumptions are met, enabling accurate interpretation of regression results (Prasetyo & Riyanto, 2019).
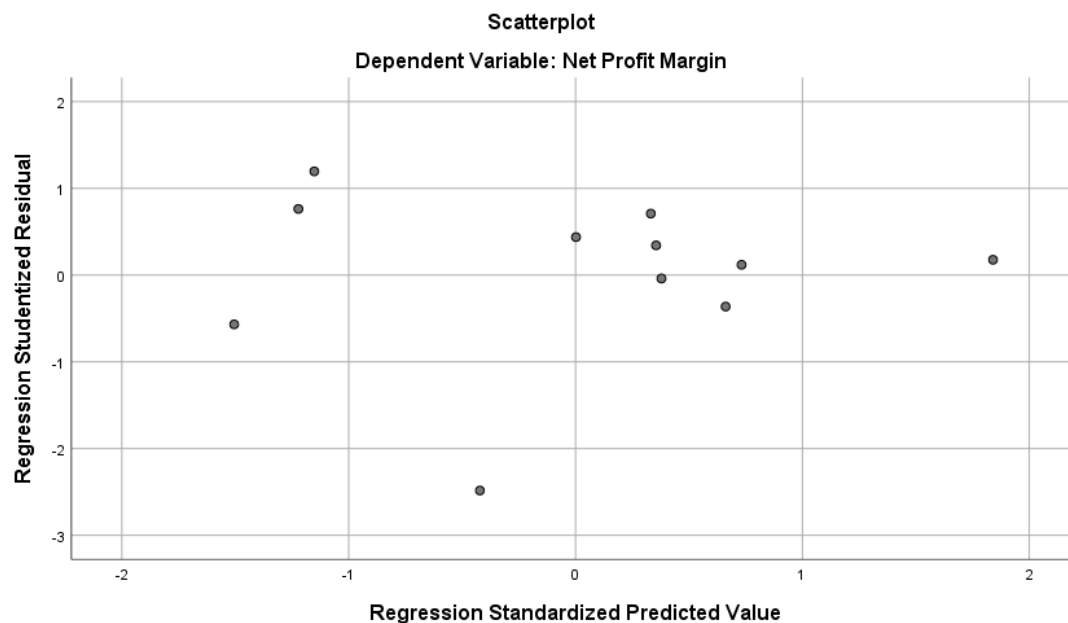
**Scatterplot**

**Dependent Variable: Net Profit Margin**



**Figure 1. Results of Heteroscedasticity Test**

In the multiple linear regression analysis, the constant coefficient is 82.359, indicating that if both CR and DAR are zero, the predicted NPM would be 82.359. The regression coefficient for CR is 0.053, with a significance value of 0.943, which means CR does not significantly affect NPM ($p > 0.05$). Similarly, the regression coefficient for DAR is -0.743, with a significance value of 0.527, showing no significant effect. This suggests that, individually, CR and DAR do not have a significant impact on NPM.

**Table 5. Multiple Linear Regression Analysis**

**Coefficients$^a$**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 82.359 | 158.456 | | .520 | .617 |
| | Current Ratio | .053 | .713 | .029 | .074 | .943 |
| | Debt to Asset Ratio | -.743 | 1.124 | -.261 | -.661 | .527 |

The coefficient of determination test in Table 4 shows an R Square value of 0.077, meaning only 7.7% of the variation in NPM is explained by CR and DAR, while the remaining 92.3% is influenced by other variables outside the model. The Adjusted R Square value of -0.154 suggests that including CR and DAR in the regression model does not significantly improve prediction accuracy. The Standard Error of the Estimate is 8.74637, indicating the level of error in predictions compared to actual NPM values.

The simultaneous (F-test) yields an F value of 0.332 with a significance of 0.727. Since this value is greater than 0.05, it can be concluded that CR and DAR do not jointly influence NPM. Therefore, the null hypothesis (H$_0$), stating that CR and DAR do not simultaneously affect NPM, cannot be rejected.

**Table 6. Results of Simultaneous Test (F-test)**

ANOVA<sup>a</sup>

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 50.735 | 2 | 25.368 | .332 | .727[b] |
| | Residual | 611.992 | 8 | 76.499 | | |
| | Total | 662.727 | 10 | | | |

In conclusion, the test results indicate that the multiple linear regression model is not significant in explaining the relationship between CR, DAR, and NPM, either partially or jointly. This suggests that CR and DAR are not the main factors influencing NPM during the study period. Future research could explore other relevant factors to explain the variation in NPM.

**Discussion**

The findings from the multiple linear regression analysis in this study suggest that both the CR and DAR do not significantly influence the NPM, either individually or collectively. The very low coefficient of determination, 0.077, indicates that these two variables account for only 7.7% of the variation in NPM. This suggests that there are other factors impacting the company's profitability that have not been included in this model. For example, factors such as operational efficiency, cost management, and product innovation may have a stronger impact on the company's financial performance compared to the liquidity and capital structure factors examined in this study (Brealey et al., 2017; Moyer et al., 2014).

Based on the results of the partial hypothesis tests, it is clear that the CR has a significance value of 0.943, which is well above the 0.05 threshold, leading to the conclusion that CR does not have a significant effect on NPM. Similarly, the DAR shows a significance value of 0.527, also greater than 0.05, indicating that DAR does not significantly affect NPM. Coefficients greater than 0.05 suggest that changes in CR and DAR do not substantially influence changes in NPM, implying that other factors may play a more significant role in determining the company's profitability.

Additionally, the results of the simultaneous test (F-test) show a significance value of 0.727, which exceeds the 0.05 threshold, indicating that when considered together, CR and DAR do not significantly impact the NPM. This means that, although these two variables are important in financial analysis, they do not adequately explain the variations in company profitability within the scope of this model.

Thus, although the variables used in this study are important indicators of corporate financial management, the results suggest that companies need to consider other factors beyond CR and DAR to enhance profitability. Factors such as marketing strategy, operational efficiency, and cost management should receive more attention in strategic planning to optimize the company's financial performance. Future research could expand this model by considering other relevant variables, such as external factors, government policies, or industry characteristics, which could provide deeper insights into the factors influencing company profitability (Ghozali, 2015; Riley, 2016).

**CONCLUSION**

Based on the results from the multiple linear regression analysis in this study, it can be concluded that the CR and DAR do not significantly affect the NPM, either individually or collectively. The low coefficient of determination suggests that these two variables account for only a small part of the variation in NPM. This implies that other factors, not considered in this study's model, likely have a greater influence on the company's profitability.

Given these findings, it is recommended that businesses should not rely solely on liquidity (CR) and capital structure (DAR) as key drivers of profitability. Other elements, such as operational efficiency, cost management, product innovation, and marketing strategies, should be considered as well. Future research should incorporate additional relevant variables, such as external factors, government policies, or industry-specific characteristics, to offer a more complete understanding of what impacts company profitability. This approach will enable businesses to formulate a more holistic strategy to enhance their financial performance.

## REFERENCE

Bank Indonesia. (2023). *Laporan Tahunan Bank Indonesia 2023*.

Brealey, R. A., Myers, S. C., & Allen, F. (2017). *Principles of Corporate Finance* (12th ed.). McGraw-Hill Education.

Ghozali, I. (2015). *Analisis Laporan Keuangan* (6th ed.). Gramedia.

Kasmir, K. (2017). *Analisis laporan keuangan* (10th ed.). Raja Grafindo Persada.

Markonah, M. (2021). Analysis Relates to The Role of Premium Income, Claim Expenses, Investment Result and Risk Based Capital (RBC) Against the General Insurance Companies' Profits Income (Case Study on General Insurance Which Registered in The Indonesia Stock Exchange. *Dinasti International Journal of Economics, Finance & Accounting*, *2*(2), 135–149. https://doi.org/10.38035/DIJEFA.V2I2.856

Markonah, M., & Prasetyo, J. H. (2022). The Effect of Corporate Governance on Financial Performance: Evidence from Islamic Banks in Indonesia. *Journal of Asian Finance, Economics and Business*, *9*(6), 45–52. https://doi.org/10.2991/aer.k.201221.098

Moyer, R. C., McGuigan, J. R., & Kretlow, W. J. (2014). *Contemporary Financial Management* (14th ed.). Cengage Learning.

Otoritas Jasa Keuangan. (2023). *Statistik Perbankan Indonesia*.

Prasetyo, J. H., & Riyanto, S. (2019). The Effect of Emotional Intelligence, Learning Interest, and Discipline on Students' Learning Outcomes in SMP Negeri 141 Jakarta. *International Journal of Innovative Science and Research Technology*, *4*(5), 973–980. www.ijisrt.com973

Riley, G. (2016). Corporate governance and profitability in emerging markets. *International Journal of Business Studies*, *20*(4), 101–118.

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

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.

Wiharso, G., Akbar Basudani, W., Theresia Simamora, V., & Mulyadi, H. (2022). Digital Banking: Assessing Customer Satisfaction through Product Quality. *Dinasti International Journal of Economics, Finance & Accounting*, *3*(4), 412–418. https://doi.org/10.38035/dijefa.v3i4.1436

Wiharso, G., Prasetyo, J. H., Prakoso, B. S., & Fabrianto, L. (2022). The Effect Of Mobile Banking Product Quality On Customer Satisfaction Of Indonesian Sharia Bank Jakarta Wolter Monginsidi Branch. *Matriks: Jurnal Sosial Dan Sains*, *3*(2), 80–88. https://matriks.greenvest.co.id/index.php/jmt/article/view/90/134