THE EFFECT OF CREDIT RISK, LIQUIDITY, AND CAPITAL STRUCTURE ON THE FINANCIAL PERFORMANCE OF CONVENTIONAL BANKS WITH PROFITABILITY AS A CONTROL VARIABLE

Maulana Fajar Satriawan[1]
Universitas Muhammadiyah Surakarta, Surakarta, Indonesia
b100220193@student.ums.ac.id

Wuryaningsih Dwi Lestari[2*]
Universitas Muhammadiyah Surakarta, Surakarta, Indonesia
wdl126@ums.ac.id*

Abstract

This study analyzes the effect of credit risk, liquidity, and capital structure on the financial performance of conventional banks, with profitability as a control variable. The research employs a quantitative method using panel data from conventional banks listed on the Indonesia Stock Exchange during the 2021–2024 period. The variables examined include NPL, LDR, CAR, ROE, and ROA, with testing conducted through panel data regression. The results show that credit risk has a significant positive effect, liquidity has a positive but insignificant effect, while capital structure demonstrates a negative and insignificant effect. Profitability is found to have a significant positive effect. Simultaneously, the research variables explain 74.64% of the variation in financial performance, with the remaining portion influenced by other factors. These findings emphasize that credit risk management and profitability play a crucial role in strengthening banks' financial performance. Therefore, management should focus on risk control and profitability maintenance to enhance competitiveness and investor confidence.

Keywords: Credit Risk, Liquidity, Capital Structure, Financial Performance, Profitability

INTRODUCTION

Banking serves as a cornerstone of a nation's economy by channeling surplus funds to areas of deficit, thereby maintaining financial balance. In Indonesia, conventional banks are central to economic growth and stability, yet the sector faces mounting risks amid rapid market changes and increasing business complexity. Pressures such as the weakening of the rupiah, rising interest rates, and the influence of Bank Indonesia Certificates (SBI) have contributed to a higher incidence of non-performing loans. Internal issues ranging from weak management and insider lending to inadequate capital reserves further strain bank performance (Ponttie, 2007; Isbahi, 2023). Even so, the industry continues to be pivotal within Indonesia's economic framework, supported by improved credit quality and a gross and net non-performing financing (NPF) ratio maintained near 3.08% (Putri & Wahyudi, 2023). Often described as the economy's lifeblood, banks perform four essential roles: facilitating monetary policy transmission, acting as financial intermediaries, transforming and distributing risk, and stabilizing the economy (Mahrani, 2023). To carry out these functions, banks must manage a spectrum of risks, including credit, market, operational, and liquidity within an integrated risk-management system as stipulated in Bank Indonesia Regulation No. 11/25/PBI/2009 (Sante et al., 2021). Because banks mobilize and allocate public funds, their financial performance is a vital measure of both operational efficiency and public confidence. Consequently, their annual financial statements become key references for evaluating financial achievements and ensuring accountability to stakeholders (Basuki & Abrohim, 2024).

Financial performance reflects a company's overall fiscal health within a defined period and indicates how effectively management generates profits while safeguarding business continuity. It is commonly assessed through annual reports that not only fulfill accountability requirements but also attract investors by demonstrating the firm's capacity to manage invested capital profitably and support future expansion (Setyowati & Lestari, 2024; Darmawan, 2020; Rorong, 2022). Evaluating such performance showing how well obligations to capital providers are met and strategic goals are achieved typically involves financial ratio analysis encompassing liquidity, activity, solvency, and profitability indicators (Anindyastri et al., 2022). Among these, profitability often represented by Return on Assets (ROA) highlights a company's ability to produce pre-tax earnings from its total assets, revealing how effectively resources generate returns for shareholders. In essence, financial performance captures the outcome of corporate policy execution and reflects the efficiency and effectiveness of operations, thereby serving as a benchmark of managerial quality and a firm's competitive capacity to maximize value (Kusdiyanto & Kusumaningrum, 2015; Abidin, 2015; Sudaryo & Widiarni, 2015; Apt & SWI, 2020; Yanti et al., 2021).

Experts define financial performance as an evaluation of how well an organization implements sound financial management practices, including the preparation of financial statements that conform to applicable standards such as the Indonesian Financial Accounting Standards (SAK) or GAAP (Makkulau, 2020). This study investigates the principal drivers of financial performance in conventional banks by examining three operational determinants: credit risk, liquidity, and capital structure. Credit risk denotes potential losses when borrowers default on their obligations; empirical studies indicate that the Non-Performing Loan (NPL) ratio materially influences Return on Assets (ROA), a primary profitability

indicator, with research on Indonesian-listed conventional banks for 2014–2021 showing a significant negative linkage between NPL and ROA (Assa & Loindong, 2023). Liquidity conceptualized as the danger that a bank cannot meet maturing commitments using high-quality liquid assets without impairing operations is typically proxied by the Loan-to-Deposit Ratio (LDR), which gauges the bank's capacity to cover short-term liabilities; prior findings suggest LDR has a positive but statistically insignificant association with ROA in conventional banks over 2015–2020 (Silitonga & Manda, 2022). Capital structure pertains to an enterprise's financing mix, making funding choices central in corporate finance (Lestari et al., 2020); within banking, the Capital Adequacy Ratio (CAR) is used to assess loss-absorbing capacity, yet empirical evidence from Indonesian conventional banks (2014–2021) reports no significant effect of CAR on ROA (Assa & Loindong, 2023). Although numerous investigations have addressed how credit risk, liquidity, and capital structure affect bank performance, their conclusions are mixed some confirm a meaningful impact of credit risk on profitability while others do not, and the roles of liquidity and capital structure remain contested among researchers and practitioners. Profitability itself is a central indicator of financial health: increases signal improved performance while declines indicate weakening results (Irawan & Kusuma, 2019). To isolate the influence of the independent variables, researchers commonly include control variables (Annisa & Rafki Nazar, 2015). Profitability can be assessed using several ratios Gross Profit Margin, Operating Profit on Sales, Net Profit Margin, ROA, and Return on Equity (ROE) and this study adopts ROE as the control measure because it reflects net income attributable to shareholders relative to their invested capital (Annisa & Rafki Nazar, 2015; Erida, 2011).

This study addresses the research gap by examining how credit risk, liquidity, and capital structure collectively influence the financial performance of conventional banks in Indonesia. By analyzing these key determinants, it contributes theoretically to the advancement of financial management knowledge, particularly in banking risk management and capital structure strategies. Practically, the findings are expected to guide conventional bank management in making strategic decisions that enhance financial performance and maintain operational stability**.**

REVIEW OF LITERATURE

Agency Theory

Agency theory provides a key conceptual framework in corporate governance by examining the relationship between principals (owners) and agents (managers). According to Read (2014), it explains the separation of ownership and control that can create agency problems arising from information asymmetry, where agents possess more complete and detailed knowledge of a firm's internal conditions than principals (Al-Amin et al., 2022). This imbalance may lead managers to make decisions misaligned with owners' interests. To mitigate risks of moral hazard and adverse selection, agency theory highlights the role of contracts and monitoring mechanisms such as independent audits that ensure financial statements are presented fairly and uphold transparency and accountability. Consequently, agency theory is not only vital for understanding internal corporate relationships but also for reinforcing public and investor confidence in sound governance practices.

Signalling Theory

Signaling Theory, first proposed by Spence (1973) in Job Market Signaling, was initially used to explain information gaps in labor markets but has since been widely applied in finance and management contexts. The concept focuses on the presence of information asymmetry between those who send signals such as corporate executives and those who receive them namely investors. Managers communicate their firm's condition and future prospects through various signals, including financial statements, dividend policies, profit trends, and strategic investment decisions, which investors then interpret to evaluate company performance. As highlighted by Amin and Taufiq (2023), every managerial action conveys implicit information that can shape investor perceptions; therefore, management is expected to deliver precise and meaningful signals to reduce uncertainty and bridge the information gap. Indicators such as consistent profit growth, operational effectiveness, and expansion of assets act as positive signals that reinforce investor trust in management's competence, while strong and sustainable profitability remains a critical benchmark for investment choices. In turn, the accuracy and credibility of the information disclosed play a vital role in enhancing the firm's reputation in the capital market and attracting long-term investors (Purwaningsih, 2019).

Factors Affecting Banking Financial Performance

The financial performance of banks typically assessed using indicators such as Return on Assets (ROA) and Return on Equity (ROE) is shaped by a combination of internal dynamics and external pressures. Among the most significant internal challenges is credit risk, as borrower defaults can deteriorate asset quality, increase provisions for loan losses, and ultimately weaken profitability and overall stability (Sante et al., 2021). Liquidity risk emerges when a bank struggles to meet short-term obligations due to constrained funding, which can adversely affect financial outcomes (Caporale et al., 2017). Capital structure is equally pivotal; excessive dependence on debt raises fixed interest obligations, limits financial flexibility, and can diminish profit levels (Lazar, 2016). In their intermediary role, banks channel and allocate funds to support economic activity and uphold the health of the national financial system (Swot et al., 2018). Additionally, external factors such as exchange-rate volatility influence balance sheets, cash flows, and profitability, making it crucial for banks to manage foreign-exchange exposure often through derivative instruments. Consequently, a bank's capacity to control credit, liquidity, capital, and external risks is vital not only for sustaining its own performance but also for protecting the stability of the wider financial system.

Hypothesis Development

Credit risk (NPL) affects banking financial performance (ROA)

An active credit risk framework is essential for banks to enhance profitability and mitigate the threat of aggressive mergers and acquisitions (Gadzo, Kportorgbi, Gatsi, & Murray, 2019). Prior studies, however, present mixed evidence regarding the impact of non-performing loans (NPL) on return on assets (ROA): some report a negative but insignificant effect (Yudha et al., 2017; Suciaty et al., 2019; Korompis et al., 2020), while others find an insignificant yet positive relationship (Muttaqin, 2017; Anindiansyah et al., 2020). These contradictory findings motivate the formulation of the present research problem:

H1: Credit risk (NPL) has an impact on banking financial performance (ROA).
Liquidity risk (LDR) affects the bank's financial performance (ROA).

A bank is considered liquid when its current assets exceed its current liabilities (Natalia, 2015). Prior studies present mixed evidence regarding the effect of the Loan to Deposit Ratio (LDR) on a bank's Return on Assets (ROA). Lubis et al. (2019) found that LDR has a significant positive impact on ROA, a result supported by Sanggel (2019) and Gadzo et al. (2019). Conversely, Pinasti and Mustikawati (2018) reported that LDR exerts a negative and insignificant influence on ROA. Based on these contrasting findings, the present study formulates the following hypothesis:

H2: Liquidity risk (LDR) affects bank financial performance (ROA).

Capital structure affects financial performance

Capital structure refers to the composition of a company's long-term debt and equity, which serves as the primary source of financing. Its main objective is to combine permanent funding sources in a way that maximizes the firm's value (Fahmi, 2017:185). Companies must carefully balance the use of external and internal capital to attract investors and potential investors. Failure to properly analyze and determine the appropriate capital structure policy can negatively affect the firm's financial performance. Empirical evidence by Anggraini (2017) shows that capital structure indicators such as DAR, DER, and LDR have a significant impact on financial performance (Nur Amalia, 2021). Based on this rationale, the following hypothesis is proposed:

H3: Capital structure affects financial performance.

Profitability affects Financial Performance

Research indicates that profitability has a positive and significant impact on financial performance, meaning that higher profitability tends to enhance a company's overall financial condition. This is because profitability reflects the firm's ability to generate earnings from its operations, thereby strengthening its financial position. Empirical evidence from studies on Indonesian manufacturing firms shows that profitability, measured by return on equity (ROE), significantly influences financial performance, measured by return on assets (ROA), demonstrating that greater profitability directly improves a company's financial performance.

H4: Profitability has an effect on Financial Performance.

RESEARCH METHOD

This study employs a quantitative methodology grounded in a positivist paradigm, utilizing numerical data and statistical techniques to examine the effects of credit risk, liquidity, and capital structure on the financial performance of conventional banks listed on the Indonesia Stock Exchange (IDX) during 2021–2024. Secondary data were collected from annual financial statements and key macroeconomic indicators, including exchange rates and inflation, sourced from Bank Indonesia and official statistical agencies, complemented by literature on credit risk, liquidity risk, capital structure, and bank performance. The sample comprises conventional banks that consistently published complete annual reports throughout 2021–2024, provided comprehensive data on Non-Performing Loans (NPL), Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Capital Adequacy Ratio (CAR), and Return on Equity (ROE), and did not undergo major mergers, acquisitions, or changes in legal status. Purposive sampling was employed, and panel regression analysis was conducted

using EViews 12, integrating four years of time-series data with 16 cross-sectional observations.

The independent variables include credit risk, defined as a bank's inability to fulfill obligations when due (Irianto & Yudhinanto, 2020) and measured by NPL; liquidity, reflecting challenges in settling short-term liabilities due to insufficient cash or delays in asset liquidation (Akbar, 2021) and measured by LDR; and capital structure, representing the proportion of equity and long-term debt in permanent financing (Dewi et al., 2014) and measured by CAR. The dependent variable is financial performance, capturing the overall financial condition of a bank (SaThierbach et al., 2015) and measured by ROE, while profitability, measured by ROA (Akbar, 2021), functions as a control variable to mitigate estimation bias (Efendi, 2013).

Descriptive statistics, including mean, standard deviation, variance, maximum, minimum, range, skewness, and kurtosis, were employed to summarize the data. Three panel regression models were compared: the Common Effect Model (CEM), which applies ordinary least squares without considering cross-sectional or temporal differences; the Fixed Effect Model (FEM), which incorporates entity-specific intercepts; and the Random Effect Model (REM), which treats unobserved effects as part of the residual term. Model selection was guided by the Chow test (CEM vs. FEM), Hausman test (FEM vs. REM), and Lagrange Multiplier test (CEM vs. REM), all at a 5% significance threshold. Classical assumptions were checked using the Kolmogorov–Smirnov normality test (with $p > 0.05$ indicating normally distributed residuals) and multicollinearity diagnostics (correlation coefficients exceeding 0.8 indicating multicollinearity). Hypotheses were tested using the coefficient of determination (R^2) to measure explanatory power, the F-test to assess the joint significance of independent variables, and the t-test to evaluate the significance of individual coefficients, with p-values below 0.05 considered statistically significant.

RESULTS AND DISCUSSION

Object Description

The Indonesian banking sector, primarily led by conventional banks, plays a vital role in ensuring the stability of the financial system while supporting national economic development. Acting as financial intermediaries, these institutions allocate funds from surplus entities to those requiring financing and contribute to government initiatives, including infrastructure projects, development of priority sectors, and promotion of financial inclusion. This research examines conventional banks that maintained consistent operations and were publicly listed on the Indonesia Stock Exchange from 2021 to 2024, focusing on major banks with substantial influence on the national financial system, such as BRI, Mandiri, BNI, BTN, BCA, CIMB Niaga, Danamon, Permata, OCBC NISP, Panin, Mega, Jago, Neo Commerce, Maybank Indonesia, BTPN, and KB Bukopin. The sample was selected using purposive sampling based on the following criteria: (1) conventional banks listed on the IDX and actively traded throughout 2021–2024, (2) consistent publication of annual financial statements during the period, (3) availability of complete financial ratio data including NPL, LDR, ROA, CAR, and ROE, and (4) no major mergers, acquisitions, or legal status changes that might compromise data consistency.

Research Object Profile

Indonesia's banking sector is led by a mix of state-owned giants, private leaders, and innovative digital players. Bank Rakyat Indonesia (BRI), founded in 1895, is the country's oldest bank and a market leader in microfinance and SME lending, backed by an extensive nationwide network and strong digital inclusion drive. Bank Mandiri, established in 1998 through the merger of four state banks after the Asian financial crisis, is one of Indonesia's largest banks by assets, excelling in corporate, retail, and digital banking. Bank Negara Indonesia (BNI), the first government-established commercial bank (1946), stands out for its international network, strong corporate and SME financing, and digital services. Bank Tabungan Negara (BTN), dating back to 1897 and focused on housing finance since 1963, dominates the mortgage market and supports government housing programs while pushing digital mortgage solutions. Among private banks, Bank Central Asia (BCA), founded in 1957, is the largest and most stable, renowned for cutting-edge digital banking and wealth management services.

CIMB Niaga (1955) pioneered digital banking through platforms like OCTO Mobile, while Bank Danamon (1956), supported by Japan's MUFG, focuses on SMEs and automotive financing. Bank Permata, formed through a 2002 merger and now part of Bangkok Bank, strengthens digital retail and corporate services. OCBC NISP (1941) emphasizes sustainable financing and wealth management under OCBC Group, and Bank Panin (1971) grows through strong capitalization and digital transformation. Bank Mega (1969), part of CT Corp, expands aggressively in retail banking and e-channels. Digital-first players include Bank Jago, transformed in 2020 and integrated with Gojek's ecosystem for flexible personal and business finance, and Bank Neo Commerce, a 2020 digital banking pioneer targeting young, tech-savvy users with instant app-based services. Foreign-backed Maybank Indonesia (1959) blends retail, corporate, and syariah banking with a "humanising financial services" approach, while BTPN (1958) combines pension and SME banking with its flagship digital platform Jenius. Lastly, KB Bukopin (1970), now part of South Korea's KB Kookmin Bank, accelerates digital transformation to strengthen its SME and retail segments. Together, these institutions illustrate Indonesia's dynamic banking landscape, where traditional strength meets rapid digital innovation.

Data Analysis Results

Descriptive Statistics

Descriptive statistics provide an overview of the data by presenting the minimum, maximum, mean, and standard deviation values. The standard deviation measures the extent of variation or dispersion within a dataset, either a sample or a population, indicating how far individual observations deviate from the mean. A smaller standard deviation signifies that the data are more concentrated or homogeneous, whereas a larger standard deviation reflects greater dispersion or heterogeneity. The descriptive statistical results obtained from EViews 12 in this study are as follows:

Table 1.
Descriptive Statistics Results

Statistics	Y	X1	X2	X3	XZ
Mean	0.180017	0.027961	0.880816	0.290792	0.025877

Median	0.129800	0.026850	0.844450	0.253100	0.022950
Maximum	1.540000	0.106600	1.480000	1.690000	0.137100
Minimum	0.002100	0.016600	0.526300	0.018700	0.007600
Std. Dev.	0.234360	0.018858	0.188271	0.211271	0.021759
Skewness	3.866168	2.437715	0.188031	4.194482	2.514550
Kurtosis	20.51180	9.983173	4.758473	31.92907	12.34810
Jarque-Bera	977.2055	193.4254	23.30106	2489.369	300.4771
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	11.52110	1.789500	56.37220	18.61070	1.656100
Sum Sq. Dev.	3.460264	0.022403	2.233012	2.812037	0.029286

Data source: Processed data from 2025

The descriptive analysis shows that the mean value of Credit Risk (X1) is 0.027961 with a standard deviation of 0.018858, indicating a homogeneous distribution since the standard deviation is smaller than the mean; the highest and lowest values are 0.106600 and 0.001600, respectively. Liquidity (X2) has a mean of 0.880816 and a standard deviation of 0.188271, also reflecting homogeneity, with values ranging from 1.480000 to 0.526300. Capital Structure (X3) records a mean of 0.290792 and a standard deviation of 0.211271, likewise homogeneous, with a maximum of 1.690000 and a minimum of 0.018700. In contrast, Financial Performance (Y) has a mean of 0.180017 and a higher standard deviation of 0.234360, indicating a heterogeneous distribution, with the highest value of 1.540000 and the lowest of 0.002100. Profitability (XZ) shows a mean of 0.025877 and a standard deviation of 0.021759, suggesting homogeneity, with values ranging from 0.137100 to 0.001000.

Panel Data Regression Approach

Table 2.
Panel Data Analysis

Variable	CEM (coef & p-value)	FEM (coef & p-value)	REM (coef & p-value)
C	–0.273525 (0.0012)	0.275631 (0.2970)	–0.273525 (0.0012)
X1	3.717751 (0.0001)	–3.545968 (0.2025)	3.717751 (0.0001)
X2	0.170643 (0.0615)	–0.186732 (0.4851)	0.170643 (0.0613)
X3	–0.029529 (0.7087)	0.038523 (0.7790)	–0.029529 (0.7087)
XZ	8.033236 (0.0000)	6.059896 (0.0000)	8.033236 (0.0000)
R-squared	0.762509	0.823212	0.762509
Adjusted R-squared	0.746408	0.746871	0.746408
F-statistic	47.35768	10.78343	47.35768

Prob(F-statistic)	0.000000	0.000000	0.000000
Durbin-Watson stat	2.356831	1.970466	2.356831

Data Source: Processed data from 2025

The combined results reveal that under the Common Effect Model (CEM) and Random Effect Model (REM), Credit Risk (X1) shows a significant positive impact on financial performance ($p < 0.01$), while Liquidity (X2) and Capital Structure (X3) are not statistically significant. Profitability (XZ) consistently exerts a strong and highly significant positive effect ($p < 0.001$) across all models. The Fixed Effect Model (FEM) yields similar significance for Profitability (XZ) but shows no significant effects for the other predictors. The explanatory power is high, with R-squared values ranging from about 0.76 in CEM/REM to 0.82 in FEM, indicating that the independent variables collectively explain a substantial proportion of the variance in financial performance. The Durbin–Watson statistics, around 2.0, suggest no serious autocorrelation problem. Overall, Profitability (XZ) emerges as the most robust determinant of financial performance across the three estimation approaches.

Panel Data Regression Estimation Model Selection

Chow Test

Table 3.
Results of Chow Test Analysis

Effect Test	Statistic	d.f	Prob
Cross-section F	1.007195	(15,44)	0.4655
Cross-section Chi-Square	18.891230	15	0.2187

Data source: Processed data from 2025

Table 3 shows that the Chow test produces a cross-section chi-square probability of 0.4655, which is greater than the 0.05 significance level, indicating that the appropriate model to use is the Common Effect Model.

Lagrange Multiplier Test

Table 4.
Results of the Lagrange Multiplier Test Analysis

Test Hypothesis	Cross-section	Time	Both
Breusch-Pagan	2.722657 (0.0989)	0.057780 (0.8100)	2.780437 (0.0954)
Honda	-1.650048 (0.9505)	0.240374 (0.4050)	-0.996790 (0.8406)
King-Wu	-1.650048 (0.9505)	0.240374 (0.4050)	-0.454199 (0.6752)
Standardized Honda	-1.168104 (0.8786)	0.647299 (0.2587)	-1.311166 (1.0000)
Standardized King-Wu	-1.168104 (0.8786)	0.647299 (0.2587)	-3.016894 (0.9987)
Gourieroux, et al.	–	–	0.057780 (0.6479)

Data source: Processed data from 2025

Based on table 4, it shows that the LM test results state that the value of the random cross section has a value of 0.0989. It can be concluded that the probability value of 0.0989 > 0.05 means that the selected model is the Common Effect Model.

Classical Assumption Test

The normality test aims to determine whether the independent and dependent variables follow a normal distribution. In this study, the Histogram–Normality Test in EViews was applied, and the results show a Jarque–Bera statistic of 1.482563 with a probability value of 0.476503, which is greater than the 0.05 significance level. This indicates that the data used in the analysis are normally distributed.

The multicollinearity test evaluates whether there is a high correlation among the independent variables in the regression model. The EViews output shows that all correlation coefficients between the independent and control variables are below 0.8, confirming that the regression model is free from multicollinearity problems and can be considered robust for further analysis.

Panel Data Regression Test

Table 5.
Results of Panel Data Regression of the Common Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.273525	0.080320	-3.405441	0.0012
X1	3.717751	0.883458	4.208181	0.0001
X2	0.170643	0.089535	1.905884	0.0615
X3	-0.029529	0.078667	-0.375363	0.7087
XZ	8.033236	0.756644	10.61693	0.0000
R-squared				0.762509
Adjusted R-squared				0.118019
F-statistic				47.35768
Prob (F-statistic)				0.000000

Data source: Processed data from 2025

Financial perfomance = -0,273525 C + 3,717751 X1 + 0,170643 X2 – 0,029529 X3 + 8,033236 XZ

The regression results show that the constant of –0.273525 indicates that when Credit Risk (X1), Liquidity (X2), Capital Structure (X3), and the control variable Profitability (XZ) are all zero, the financial performance is –0.273525. The coefficient of Credit Risk (X1) is 3.717751, meaning that an increase in credit risk is associated with a 3.717751 rise in financial performance. Liquidity (X2) has a coefficient of 0.170643, indicating that higher liquidity improves financial performance by 0.170643. Conversely, Capital Structure (X3) shows a coefficient of –0.029529, signifying that greater capital structure levels reduce financial performance by 0.029529. Lastly, the control variable Profitability (XZ) carries the

highest coefficient, 8.033236, implying that higher profitability substantially enhances financial performance by 8.033236.

The coefficient of determination (R^2) test shows that the adjusted R-squared value is 0.746408, meaning that the independent variables, credit risk (X1), liquidity (X2), capital structure (X3), and profitability (XZ), collectively explain 74.64% of the variation in financial performance, while the remaining 25.36% is influenced by factors outside the model. The F-test further indicates a Prob (F-statistic) of 0.000000, which is well below the 0.05 significance level, confirming that these independent variables simultaneously exert a significant effect on financial performance.

The t-test results reveal a more nuanced picture. Credit risk (X1) shows a probability value of 0.0001 and a t-statistic of 4.208181, indicating a significant positive impact on financial performance. Profitability (XZ) likewise demonstrates a strong influence, with a probability of 0.0000 and a t-statistic of 10.61693, supporting its significant effect. In contrast, liquidity (X2) records a probability of 0.0615 and a t-statistic of 1.905884, and capital structure (X3) records a probability of 0.7087 and a t-statistic of –0.375363, both exceeding the 0.05 threshold; thus, neither variable significantly affects financial performance individually.

The Impact of Credit Risk on Financial Performance

Based on the partial t-test results, the Credit Risk (NPL) variable shows a probability value of 0.0001 (<0.05) with a t-statistic of 4.208181, indicating a positive and significant effect on the financial performance of conventional banks as measured by ROE. The coefficient of 3.717751 implies that improved credit risk management enhances financial performance. This finding aligns with risk management theory, which posits that lower levels of non-performing loans strengthen bank profitability by reducing potential losses. It also supports Hypothesis 1 (H1) that credit risk (NPL) affects banks' financial performance (ROA) and is consistent with the empirical evidence of Lubis et al. (2019) and Sanggel (2019), both of whom found a significant influence of NPL on profitability, underscoring that effective credit risk control is a key driver of banking financial performance**.**

The Effect of Liquidity on Financial Performance

The partial test results reveal that Liquidity (LDR) has a probability value of 0.0615, exceeding the 0.05 threshold, with a t-statistic of 1.905884, indicating no significant effect on the financial performance of conventional banks. Although the coefficient of 0.170643 reflects a positive relationship, it remains statistically insignificant, which may stem from differences in fund management strategies across banks. An excessively high LDR can increase liquidity risk, whereas a low LDR may indicate idle, unproductive funds; thus, an increase in LDR does not necessarily translate into higher profitability. Consequently, Hypothesis 2 (H2), which posits that liquidity risk (LDR) affects financial performance (ROA), is not supported. This finding aligns with Silitonga and Manda (2022), who likewise report that LDR has no significant impact on ROA.

The Influence of Capital Structure on Financial Performance

The capital structure variable (CAR) shows an insignificant effect on financial performance, with a probability value of 0.7087 (>0.05) and a t-statistic of –0.375363. The coefficient of –0.029529 indicates a negative relationship; however, the effect is not statistically significant, suggesting that capital adequacy (CAR) in conventional banks is not a key driver of profitability. Excessively high capital levels may reduce asset utilization

efficiency because funds are not fully allocated to productive activities. These results fail to support Hypothesis 3 (H3), which posited that capital structure influences financial performance, and align with Assa and Loindong (2023), who also found CAR to have no significant impact on Indonesian banks' ROA**.**

The Effect of Profitability as a Control Variable on Financial Performance

The test results reveal that profitability (ROA) as a control variable shows a probability value of 0.0000 < 0.05 with a t-statistic of 10.61693, indicating a positive and significant effect on financial performance. The coefficient of 8.033236 further confirms that profitability is the dominant factor determining banks' financial performance. These findings support Hypothesis 4 (H4) and align with signaling theory, which posits that high profitability sends a positive signal to investors regarding a bank's performance, consistent with Irawan and Kusuma (2019), who emphasize the critical role of profitability in shaping corporate financial outcomes**.**

Simultaneous Effect (F Test)

The F-test results reveal that credit risk (NPL), liquidity (LDR), capital structure (CAR), and profitability (ROA) jointly exert a significant influence on the financial performance of conventional banks, as indicated by a probability value of 0.0000 < 0.05 and an F-statistic of 41.37413, confirming the regression model's overall validity. The coefficient of determination (R^2) of 0.7464 further shows that 74.64% of the variation in banks' financial performance is explained by the independent and control variables, while the remaining 25.36% is driven by factors beyond the model. These findings support the study's overall hypotheses, although only credit risk and profitability demonstrate significant individual effects, underscoring that effective credit risk management and strong profitability are the primary determinants of conventional banks' financial performance in Indonesia.

CONCLUSION

This study finds that credit risk (NPL) significantly improves the financial performance of conventional banks, showing that effective control of non-performing loans strengthens profitability by reducing losses. Liquidity (LDR) has a positive but insignificant effect, indicating that variations in liquidity ratios do not directly drive profits, while capital structure (CAR) shows a negative, insignificant impact, suggesting excess capital may lower efficiency if not used productively. Profitability (ROA) proves to be a key positive determinant of bank performance, reinforcing firm value and investor confidence. Together, NPL, LDR, CAR, and ROA explain 74.64% of performance variation, with the rest influenced by factors outside the model. The study is limited by its narrow variables, short 2021–2024 timeframe, and reliance on secondary data without explicit macroeconomic or policy considerations. Banks should strengthen credit risk management with early-warning systems, optimize liquidity use, and balance capital to maintain efficiency. Investors should prioritize profitability metrics (ROA, ROE) and monitor NPL levels. Future studies should add variables such as operational risk, cost efficiency (BOPO), or firm size, extend the time horizon, and include external factors like inflation, exchange rates, and the Bank Indonesia policy rate for a more comprehensive view.

REFERENCES

Abidin, M. S. (2015). Dampak Kebijakan E-Money. Syria Studies, 7(1), 37–72. Https://Www.Researchgate.Net/Publication/269107473_What_Is_Governance/Link/548173090cf22525dcb61443/Download%0ahttp://Www.Econ.Upf.Edu/~Reynal/Civil Wars_12december2010.Pdf%0ahttps://Think-Asia.Org/Handle/11540/8282%0ahttps://Www.Jstor.Org/Stable/41857625

Akbar, A. (2021). Pengaruh Likuiditas Dan Solvabilitas Melalui Profitabilitas Terhadap Nilai Perusahaan. Eksis: Jurnal Ilmiah Ekonomi Dan Bisnis, 12(2), 253. Https://Doi.Org/10.33087/Eksis.V12i2.276

Al-Amin, A.-A., Andespa, W., & Bashir, H. (2022). Peran Baitul Maal Wa Tamwil (Bmt) Sidogiri Unit Cabang Sui Kunyit Terhadap Pemberdayaan Usaha Mikrokecil Di Desa Sui Kunyit Hulu. Bullet: Jurnal Multidisiplin Ilmu, 1(6), 1214–1227.

Amin, A.-A., & Taufiq, M. M. (2023). Analisis Pengaruh Hifdz Al Maal Terhadappengelolaan Harta Pada Pedagang Muslim Pasar Aur Kuning Kota Bukittinggi. Jesi (Jurnal Ekonomi Syariah Indonesia), 12(2), 163–169.

Anam, C. (2018). Pengaruh Risiko Kredit Dan Likuiditas Terhadap Kinerjakeuangan Perbankan Pada Bank Umum Konvensionalyang Terdaftar Di Bei (2012-2016). Jurnal Bisnis Dan Perkembangan Bisnis, 2(2), 66–85.

Anindyastri, R., Lestari, W. D., & Sholahuddin, M. (2022). Pengaruh Teknologi Finansial (Fintech) Terhadap Kinerja Keuangan Perbankan Syariah (Studi Pada Perbankan Syariah Yang Terdaftar Di Bursa Efek Indonesia) Periode Bursa 2016-2020). 7.

Annisa, I. N., & Rafki Nazar, M. (2015). Influence Of Ownership Structure With Control Variable Profitability, Firm's Age, And Firm's Size To Corporate Social Responsibility Disclosure (Study On Manufacturing Companies In Indonesia Stock Exchange During The Years 2011 - 2013). E-Proceeding Of Management, 2(1), 313.

Apt, S., & Swi, P. (2020). Analisis Rasio Solvabilitas Dan Profitabilitas Untuk Menilai Kinerja Keuangan Pt Sri Rejeki Isman Tbk. Jurnal Ilmiah Feasible (Jif), 2(2), 192. Https://Doi.Org/10.32493/Fb.V2i2.2020.192-203.6434

Assa, V., & Loindong, S. S. R. (2023). Analisis Pengaruh Risiko Kredit, Kecukupan Modal Dan Likuiditas Terhadap Kinerja Keuangan Pada Bank Bumn Di Bursa Efek Indonesia (Bei). Jurnal Emba : Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi, 11(4), 1048–1057. Https://Doi.Org/10.35794/Emba.V11i4.51747

Basuki, H., & Abrohim , M. B. (2024). Analysis of the Perception of Islamic Boarding School Residents Towards Halal Labeled Food (Case Study: PPAI Mambaunnur Islamic Boarding School). *Malacca: Journal of Management and Business Development*, *1*(2), 72–78. https://doi.org/10.69965/malacca.v1i2.80

Caporale, G. M., Lodh, S., & Nandy, M. (2017). The Performance Of Banks In The Mena Region During The Global Financial Crisis. Research In International Business And Finance, 42(September 2016), 583–590. Https://Doi.Org/10.1016/J.Ribaf.2017.07.003

Darmawan, M. Dasar-Dasar Memahami Rasio Dan Laporan Keuangan. Uny Press, 2020.

Dewi, I. R., Handayani, S. R., Dan Nazula, N. F. (2014). Pengaruh Struktur Modal Terhadap Nilai Perusahaan (Studi Pada Sektor Pertambangan Yang Terdaftar Di Bei Periode 2009-2012). Jurnal Administrasi Bisnis (Jab), 17(1), 1–9.

Efendi, A. S. (2013). Analisis Pengaruh Struktur Kepemilikan, Kebijakan Dividen Dan Kebijakan Hutang Terhadap Nilai Perusahaan Dengan Variabel Kontrol Ukuran

Perusahaan, Pertumbuhan Perusahaan Dan Kinerja Perusahaan (Studi Pada Perusahaan Manufaktur Yang Terdaftar Di Bei Perio. Repository Universitas Diponegoro, 1–127. Http://Eprints.Undip.Ac.Id/42178/

Irawan, D., & Kusuma, N. (2019). Pengaruh Struktur Modal Dan Ukuran Perusahaan. Jurnal Aktual Stie Trisna Negara, 17(1), 66–81.

Irianto, S. E., & Yudhinanto, Y. (2020). Development Of Regional Strategic Framework For Nutrition Action Plan As A Tool For Health And Nutrition Diplomacy Of The Prevention Of Non-Communicable Disease (Ncd) In Asean Countries. Journal For Quality In Public Health, 4(1), 119–125. Https://Doi.Org/10.30994/Jqph.V4i1.171

Isbahi, M. B. (2023). Factors Influencing Purchase Behavior: Consumer Interest, Price, and Product Quality (Literature Review HRM). *Danadyaksa: Post Modern Economy Journal*, *1*(1), 18–36. https://doi.org/10.69965/danadyaksa.v1i1.6

Kusdiyanto, & Kusumaningrum, D. D. (2015). Pengaruh Good Corporate Governance Dan Leverage Terhadap Kinerja Keuangan Studi Pada Perusahaan Manufaktur Yang Terdaftar Di Bai Tahun 2013-2014. Benefit Jurnal Manajemen Dan Bisnis, 19(2), 1–8. Https://Doi.Org/10.1016/J.Talanta.2014.08.015

Lazar, S. (2016). Determinants Of Firm Performance: Evidence From Romanian Listed Companies. Review Of Economic And Business Studies, 9(1), 53–69.

Lestari, W., Kusumastuti, A., Ma'ruf, M., Mukharomah, W., & Sholahuddin, M. (2020). A Panel Data: Capital Structure Of The Companies Registered In The Jakarta Islamic Index (Jii). Https://Doi.Org/10.4108/Eai.21-9-2019.2293951

Liana, L. (2009). Using Mra With Spss To Test The Effect Of Moderating Variables On The Relationship Between Independent Variables And Dependent Variables. Jurnal Teknologi Informasi Dinamik, 14(2), 90–97. Https://Www.Unisbank.Ac.Id/Ojs/Index.Php/Fti1/Article/View/95

Mahrani, W. (2023). Peranan Perbankan Dalam Meningkatkan Perekonomian Indonesia. Jurnal Al Wadiah, 1(2), 164–177. Https://Doi.Org/10.62214/Jaw.V1i2.138

Makkulau, A. R. (2020). Analisis Kinerja Keuangan Bank Syariah Yang Terdaftar Di Bursa Efek Indonesia (Bei) Periode Tahun 2015-2018. Jurnal Mirai Managemnt, 6(2), 122–136. Https://Journal.Stieamkop.Ac.Id/Index.Php/Mirai

Nur Amalia, A. (2021). Pengaruh Ukuran Perusahaan, Leverage Dan Struktur Modal Terhadap Kinerja Keuangan. Jurnal Ilmu Dan Riset Manajemen, 10(5), 1–17.

Nuryanto, U. W., Salam, A. F., Sari, R. P., & Suleman, D. (2020). Pengaruh Rasio Kecukupan Modal , Likuiditas , Risiko Kredit Dan Efisiensi Biaya Terhadap Profitabilitas Pada Bank Go Public. 7(1), 1–9.

Ponttie. (2007). Analisis Pengaruh Rasio-Rasio Keuangan Terhadap Kinerja Bank Umum Di Indonesia (Studi Empiris Bank-Bank Umum Yang Beroperasi Di Indonesia). Tesis, 1–65.

Purwaningsih, E. (2019). Struktur Kepemilikan Memoderasi Pengaruh Profitabilitas Terhadap Kebijakan Dividen. Jurnal Of Economic, 10(2), 111–120.

Putri, A. P. J., & Wahyudi, I. (2023). Pengaruh Risiko Kredit, Risiko Likuiditas, Modal Bank Dan Efisiensi Operasional Terhadap Profitibilitas Bank. Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (Mea), 7(3), 79–94. Https://Doi.Org/10.31955/Mea.V7i3.3313

Rayen, Sonia Jenifer, Et Al. "An Iot Assisted Weather Prediction And Information Monitoring Scheme Based On Intensive Learning Strategy." 2023 International

Conference On Advances In Computing, Communication And Applied Informatics (Accai). Ieee, 2023.

Read, C. (2014). Jensen And Meckling. The Corporate Financiers, 3, 305–360. Https://Doi.Org/10.1057/9781137341280.0038

Rorong, A. P. (2022). Analisis Rasio Keuangan Untuk Menilai Kinerja Keuangan Pada Pt. H.M Sampoerna Tbk. Yudishtira Journal : Indonesian Journal Of Finance And Strategy Inside, 2(3), 412–424. Https://Doi.Org/10.53363/Yud.V2i3.55

Sante, Z. V., Murni, S., & Tulung, J. E. (2021). Pengaruh Risiko Kredit, Risiko Likuiditas Dan Risiko Operasional Terhadap Profitabilitas Perusahaan Perbankan Yang Terdaftar Di Lq45, Buku Iii Dan Buku Iv Periode 2017-2019. Emba, 9(3), 1451–1462.

Sathierbach, (2015). Proceedings Of The National Academy Of Sciences, 3(1), 1–15. Http://Dx.Doi.Org/10.1016/J.Bpj.2015.06.056%0ahttps://Academic.Oup.Com/Bioinformatics/Article-Abstract/34/13/2201/4852827%0ainternal-Pdf://Semisupervised-3254828305/Semisupervised.Ppt%0ahttp://Dx.Doi.Org/10.1016/J.Str.2013.02.005%0ahttp://Dx.Doi.Org/10.10

Setyowati, R., & Lestari, W. D. (2024). The Influence Of Capital Structure And Firm Size On Financial Performance. Atlantis Press International Bv. Https://Doi.Org/10.2991/978-94-6463-204-0_75

Silitonga, R. N., & Manda, G. S. (2022). Pengaruh Risiko Kredit Dan Risiko Likuiditas Terhadap Kinerja Keuangan Pada Bank Bumn Periode 2015-2020. Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship, 12(1), 22. Https://Doi.Org/10.30588/Jmp.V12i1.948

Spence. (1973). Job Market Signaling Author (S): Michael Spence Source : Thequarterly Journal Of Economics , Vol . 87 , No . 3 (Aug ., 1973), Pp . 355-374published By : The Mit Press Stable Url : Http://Www.Jstor.Org/Stable/1882010. 87(3), 355–374.

Sudaryo, Y., & Widiarni, F. (2015). Analisis Hubungan Rasio Likuiditas, Dan Rasio Solvabilitas Terhadap Rasio Profitabilitas Pada Pt Telkom Tbk. Jurnal Pada Stie Indonesia Membangun, 188–210.

Sugiyono. 2012. Metode Penelitian Bisnis. Bandung: Cv. Alfabeta.

Swot, A., Strategi, M., Sepeda, P., Indah, P. T. S., Bisnis, J. A., Fitri, W., Pengembangan, S., Usaha, B., Kubang, T., By, H. R., Andalas, U., Pengembangan, S., Distilasi, U., Daun, M., Tadaluko, U., Indonesia, B., Ekonomi, K., Regional, K., Sumatera, P., … Indonesia, U. P. (2018). Daftar Pustaka. 2013, 2018.

Tamba, Erida Gh, And Anis Chariri. Pengaruh Struktur Kepemilikan Terhadap Pengungkapan Tanggung Jawab Sosial Perusahaan (Studi Empiris Pada Perusahaan Manufacturing Secondary Sectors Yang Listing Di Bei Tahun 2009). Diss. Universitas Diponegoro, 2011.

Wolff, Octavia Regina, Sri Murni, And Paulina V. Rate. "Analisis Pengaruh Firm Size, Loan To Deposit Ratio, Capital Adequacy Ratio, Dan Non Performing Loan Terhadap Profitabilitas (Return On Asset) Bank Umum Swasta Nasional Yang Terdaftar Di Bei (2013-2017)." Jurnal Emba: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi 7.3 (2019).

Yanti, D., Alfiana, Y., Veronica, A., & Khatarina, K. (2021). Kinerja Keuangan Pada Perusahaan Retail Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Ilmiah Akuntansi Rahmaniyah, 4(2), 106. Https://Doi.Org/10.51877/Jiar.V4i2.194