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Revisiting Third Party Funds and Non-Performing Loans on Profitability Before, During, and After COVID

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ABSTRACT

This study was conducted to analyze the effect of third party funds and non performing loans on profitability. The study was conducted using annual reports that had been made by state-owned banks for the period 2019-2024. This research is tested using data panel with help from Eviews13 program. Results of this research shows that TPF have a moderate effects on ROA and NPL have a small negative effects on ROA.

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INTRODUCTION

The banking sector plays a crucial role in supporting economic growth by functioning as a financial intermediary that mobilizes funds from surplus units and channels them to deficit units. The performance and sustainability of banks therefore become a major concern for regulators, investors, and the public. One of the most commonly used indicators to evaluate bank performance is profitability, as it reflects management efficiency in utilizing available resources to generate earnings. Among various profitability measures, Return on Assets (ROA) is widely adopted because it represents a bank's ability to generate profit from its total assets and is considered more appropriate for assessing banking performance compared to equity-based measures.

In March 2020, the World Health Organization (WHO) officially declared corona virus disease 2019 (COVID-19) a global pandemic, marking the beginning of unprecedented public health and socioeconomic disruptions worldwide, including in Indonesia. In response, governments and financial authorities implemented various policy measures such as credit restructuring programs, liquidity support, and regulatory relaxation to maintain financial system stability. These extraordinary conditions inevitably affected banking operations, particularly in terms of fund mobilization, credit distribution, and risk management.

This study aims to analyze the influence of third-party funds and non-performing loans on profitability, measured by Return on Assets (ROA), using annual report data of Indonesian state-owned banks from 2019 to 2024. The findings are expected to provide insights for bank management in optimizing funding strategies and controlling credit risk to enhance profitability, particularly in the context of economic recovery following the COVID-19 pandemic. Furthermore, this study contributes to the banking literature by offering updated empirical evidence on profitability determinants in state-owned banks during a period of unprecedented economic disruption.

In addition to operational challenges, the COVID-19 pandemic significantly altered the structure of banking risks and funding behavior. During the crisis period, many borrowers experienced declining income and business disruptions, which increased the probability of loan default and pressured asset quality. At the same time, uncertainty encouraged households and firms to hold more liquid assets, potentially affecting the composition and growth of third-party funds. For state-owned banks, government intervention through restructuring programs and liquidity policies played a crucial role in stabilizing both funding and credit risk. Therefore, examining the dynamics of third-party funds and non-performing loans during the pre-pandemic, pandemic, and post-pandemic periods provides a more comprehensive understanding of bank profitability performance.

Furthermore, state-owned banks have a strategic role in Indonesia's financial system due to their dominant market share and direct government ownership. Their operational policies are often aligned with national economic objectives, including credit distribution to priority sectors and support for economic recovery programs. This dual role—commercial institution and development agent—creates a unique structure of risk and return compared to private banks. Consequently, analyzing profitability determinants in state-owned banks offers important policy implications not only for bank management but also for regulators in designing sustainable financial system strategies.

This study differs from previous research by focusing on a multi-period analysis covering before, during, and after the COVID-19 pandemic. Most prior studies examine profitability determinants in normal economic conditions, while limited research evaluates how crisis conditions alter the relationship between funding, credit risk, and profitability. By incorporating the 2019–2024 period, this research captures structural shifts in banking behavior and contributes updated empirical evidence to the banking performance literature.

Based on past research, there's a gap that can be researched further. (Khoiruddin & Utami, 2023) said that if the non-performing loan is increased, profitability is decreased. That results denies by (Hasanah & Hariyono, 2022), (Putri, 2024), and (Damanik, 2025) that said non-performing loan not have impact on profitability. (Parlindungan, Dewi, Widyarini, Soei, & Candraningrat, 2024), (Asri & Suarjaya, 2018), and (Putri, 2024) said that third party funds affects profitability. This denies research by (Khoiruddin & Utami, 2023) and (Larasati, Marlina, & Hidayati, 2017) that said third party funds not affected profitability.

LITERATURE REVIEW

Theoretical Grounding

This study is grounded in Intermediation Theory, Risk–Return Trade-Off Theory, and Banking Efficiency Theory. Intermediation Theory explains that banks generate profitability by channeling third-party funds into productive loans. Therefore, an increase in third-party funds is expected to enhance ROA.

Meanwhile, Risk–Return Trade-Off Theory suggests that higher credit risk, reflected in non-performing loans, reduces profitability due to increased default risk and provisioning costs. Banking Efficiency Theory further explains that bank profitability depends on how efficiently management allocates funds and controls credit risk.

Third Party Fund

Third party fund is one of bank source of funds. This source of funds is the most important source of funds for bank operations and is a measure of the bank's success if it is able to finance its operations from this source of funds. Sources of funds from the wider community can be in the form of checking deposits, savings deposits, and time deposits (Kasmir, 2018).

Non Performing Loan

A non performing loan is a loan where the borrower fails to make payments according to contractual obligations. An NPL becomes impaired when the amount expected to be repaid falls below the contractual value recorded on the bank's balance sheet (Bholat, Lastra, Markose, Miglionico, & Sen, 2017).

Profitability, Return of Assets (ROA)

Return on assets demonstrates a company's ability to use all of its assets to generate after-tax profit. This ratio is important for management to evaluate the effectiveness and efficiency of its management in managing all of its assets. A higher ROA indicates a more efficient use of the company's assets, or in other words, a higher profit can be generated with the same amount of assets, and vice versa (Sudana, 2019).

Past Research

Based on past research, non performing loan have impact on and not have impact on profitability. This shown in (Khoiruddin & Utami, 2023), that said if the non performing loan is increased, profitability is decreased. That results denies by (Hasanah & Hariyono, 2022), (Putri, 2024), and (Damanik, 2025) that said non performing loan not have impact on profitability.

Also based on past research, third party funds have impact on and not have impact on profitability. This shown in (Parlindungan, Dewi, Widyarini, Soei, & Candraningrat, 2024), (Asri & Suarjaya, 2018), and (Putri, 2024) that said third party funds affects profitability. This denies research by (Khoiruddin & Utami, 2023) and (Larasati, Marlina, & Hidayati, 2017) that said third party funds not affected profitability.

Third-Party Funds on Profitability

Previous research examining the relationship between third-party funds and profitability has shown an influence. This was demonstrated by researchers (Parlindungan et al., 2024), (Asri & Suarjaya, 2018), and (Putri, 2024). Therefore, the author hypothesizes the following:

H1: Third-party funds have a significant positive effect on profitability.

Non-Performing Loans on Profitability

Previous research examining the relationship between non-performing loans and profitability has shown an influence. This was demonstrated by researchers (Riadi & Anggrayni, 2023). Therefore, the author hypothesizes the following:

H1: Non-performing loans do not have a significant positive effect on profitability.

Conceptual Framework

Based on the previous empirical studies and relevant theoretical foundations discussed in the preceding sub-chapters, this research develops a conceptual framework to illustrate the relationships among the variables under investigation. The framework is constructed by synthesizing established theories and prior findings that explain how the independent variables influence the dependent variable. By integrating these perspectives, the researcher formulates a structured model that serves as the basis for hypothesis development and empirical testing as follows:

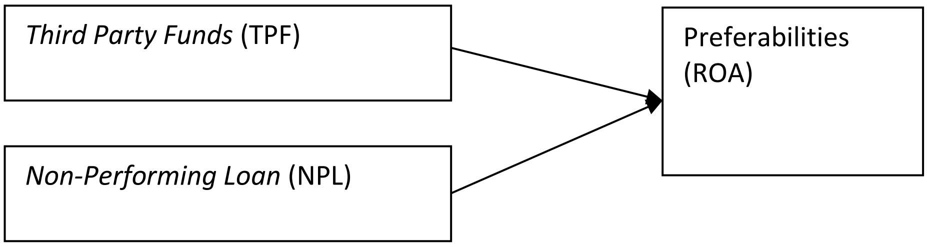

Figure 1. Conceptual Framework

METHODOLOGY

This research uses a quantitative approach. Data is measured on a nominal scale by processing secondary data. The secondary data used are the financial reports of state-owned banks for the years 2019-2024.

This research processes panel data regression model, regresion using a combination of cross-sectional and time series data. The cross section in this study is shown from the number of samples of state-owned bank issuers which is more than one, namely 5 issuers, while the time series is shown by the sample period of each sample issuer which is more than one, namely from 2019 to 2024. This research is using Eviews13 software to facilitate research data processing.

Before conducting the panel data regression analysis, this study performs classical assumption tests to ensure that the regression model meets the Best Linear Unbiased Estimator (BLUE) criteria. The classical assumption tests include the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The normality test is conducted to determine whether the residuals are normally distributed. The multicollinearity test aims to examine whether there is a high correlation among the independent variables, namely third-party funds and non-performing loans. The heteroscedasticity test is used to assess whether the variance of the residuals remains constant across observations, while the autocorrelation test is performed to detect correlation between residuals across time periods. These tests also conducted using EViews13 software. If violations of the classical assumptions are detected, appropriate corrective measures are applied to ensure the robustness and validity of the regression results.

In this study, the dependent variable used is profitability, expressed in return on assets (ROA). Independent variable used is third-party funds and non-performing loans. The population used in this study was all banks in Indonesia. To select the sample, the author chose purposive sampling. Therefore, the author chose state-owned banks as the sample for this study. The fundamental difference between state-owned banks and other banks is the bank's full adherence to government regulations.

RESEARCH RESULT

The classical assumption tests indicate the presence of heteroscedasticity and autocorrelation, which are common in panel financial data. Therefore, the regression model was estimated using robust standard errors to ensure unbiased and consistent parameter estimates.

Table 1. *Correlation Table*

	TPF	**NPL**	**ROA**
TPF	**1.000000**	**0.106721**	**0.438892**
NPL	**0.106721**	**1.000000**	**-0.144444**
ROA	**0.438892**	**-0.144444**	**1.000000**

Table 2. *Correlation Rank*

No.	Score	Description
1.	$0 \leq n < 0.2$	Very small or no correlation
2.	$0.2 \leq n < 0.4$	small correlation
3.	$0.4 \leq n < 0.7$	Moderate correlation
4.	$0.7 \leq n < 0.9$	Big correlation
5.	$0.9 \leq n < 1$	Very big correlation

Based on the output of the EViews 13 program, NPL has a negative score between 0 and 0,2, so NPL has a very small negative relationship with ROA. In practical terms, this means that an increase in non-performing loans tends to be associated with a slight decrease in profitability (ROA), but the relationship is very small and weak. Therefore, changes in NPL only marginally affect ROA.

NPL has a score between 0 and 0,2, so NPL has a very small positive relationship with TPF. It indicates that higher third-party funds are slightly associated with higher NPL levels, but the relationship is very weak and likely not economically significant.

TPF has a score between 0,2 and 0,4, so TPF has has a moderate positive relationship with ROA. This means that increases in third-party funds tend to be associated with increases in ROA. Compared to NPL, TPF shows a stronger relationship with profitability, suggesting that the bank's ability to collect funds from customers contributes more meaningfully to improving financial performance.

DISCUSSION

The results of this study indicate that Third-Party Funds (TPF) have a moderate positive effect on profitability as measured by Return on Assets (ROA). This finding confirms the financial intermediation theory, which states that banks function primarily as intermediary institutions that collect funds from the public and channel them into productive assets in the form of credit. The greater the volume of third-party funds successfully mobilized, the greater the opportunity for banks to expand lending and generate interest income, which ultimately increases profitability.

This result is consistent with previous findings by (Parlindungan et al., 2024), (Asri & Suarjaya, 2018), and (Putri, 2024), who also found a positive relationship between TPF and ROA. In the context of state-owned banks during 2019–2024, this relationship becomes particularly relevant. During the COVID-19 pandemic period, public trust in state-owned banks tended to remain stable due to government backing and perceived safety. This stability in fund collection allowed state-owned banks to maintain liquidity and continue their intermediation function despite economic uncertainty. As economic conditions gradually recovered after the pandemic, increased credit distribution supported by strong TPF growth contributed to improvements in ROA.

These findings imply that management strategies focused on increasing public deposits through competitive interest rates, digital banking services, and customer trust enhancement—are crucial for sustaining profitability. For state-owned banks, maintaining public confidence is not only important for liquidity but also for long-term financial performance.

On the other hand, the results show that Non-Performing Loans (NPL) have a small negative effect on ROA. This finding aligns with risk-return theory, where higher credit risk leads to increased loan loss provisions, reduced interest income, and ultimately lower profitability. Even small, when NPL levels rise, banks must allocate larger reserves to cover potential losses, which directly reduces net income and weakens asset productivity.

This result is consistent with prior research by (Khoiruddin & Utami, 2023), (Tangngisalu et al., 2020), (Dewi & Badjra, 2020), and (Siahaan et al., 2021), all of whom found that higher NPL ratios significantly reduce profitability. In the 2019–2024 period, especially during the COVID-19 pandemic, many borrowers experienced financial distress, which increased credit risk across the banking sector. Although government restructuring policies helped mitigate a sharp spike in NPL, the pressure on asset quality still affected profitability levels. This indicates that credit risk management remains a critical determinant of bank performance, particularly during economic downturns.

From a managerial perspective, these findings highlight the importance of strengthening credit risk assessment, monitoring systems, and loan restructuring strategies to minimize the adverse impact of non-performing loans. For state-owned banks, balancing credit expansion supported by strong TPF with prudent risk management practices is essential to maintain sustainable profitability.

Overall, the findings of this study confirm that profitability in state-owned banks is significantly influenced by both funding capacity (TPF) and credit quality (NPL). While increased third-party funds enhance banks' ability to generate income, poor credit quality can erode those gains. Therefore, optimal profitability can only be achieved when effective fund mobilization is accompanied by strong credit risk control.

Another important finding of this study is the relatively weak magnitude of the relationship between NPL and ROA. Although theoretically credit risk significantly affects profitability, the small correlation coefficient suggests that state-owned banks may have effective risk mitigation mechanisms. Loan restructuring policies implemented during the COVID-19 period may have temporarily suppressed the recorded NPL ratio, thereby reducing its statistical impact on profitability. This indicates that regulatory intervention can moderate the direct effect of credit risk on financial performance.

Moreover, the moderate positive relationship between TPF and ROA highlights the importance of liability management strategies. In highly competitive banking markets, the cost of funds becomes a critical factor. If third-party funds increase but are accompanied by high interest expenses, profitability gains may be limited. Therefore, not only the volume but also the structure and cost efficiency of TPF determine its ultimate impact on ROA. This finding suggests that future research could incorporate additional variables such as Net Interest Margin (NIM) or Operational Efficiency Ratio (BOPO) to provide a more comprehensive profitability model.

Overall, the interaction between funding capability and credit risk control becomes increasingly relevant during periods of economic instability. Banks that successfully balance aggressive fund mobilization with prudent credit management are more resilient in maintaining profitability. This reinforces the strategic importance of integrated asset–liability management practices in state-owned banking institutions.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions of this research are based on the following analysis:

1. The research results show that TPF has a positive effect on ROA.
2. The research results show that NPL has a negative effect on ROA.

ADVANCED RESEARCH

This research has several limitations, including the absence of annual reports from BSI in 2019 and 2020 because BSI was only established in 2021.

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