

Which is More Influential? Internal Factors or External Factors of Banks on the Profitability of Conventional Banks

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Abstract—This study looks at how macroeconomic variables such as inflation and exchange rates, as well as internal issues such as bad debts and loan-to-deposit ratio, affect bank profitability as determined by return on assets. Using the eviews 12.0 program, panel data regression is used as an analytical tool in this study. There are 47 banks in Indonesia listed on the Indonesia Stock Exchange between 2018 and 2022. The results concluded that External factors are factors that have a stronger influence on profitability because after testing simultaneously there are two significant variables, namely inflation and exchange rates and for internal factors only one variable, namely non-performing loans so that external factors are stronger on the profitability of conventional banks in the Indonesian Stock Exchange.

Keywords: Loan to Deposit Ratio; Non-Performing Loans; Inflation; Exchange Rate; Bank Profitability; Return of Assets

1. INTRODUCTION

In the age of globalization, banks play a crucial role in the economic growth of a nation since they act as the engine of the economy and raise the standard of living for a large number of people (Purwanti, 2018). A bank is a type of financial institution that oversees all financial transactions and serves as a bridge between people who have money and people who need money. Banks must continue to be profitable in order to keep the public's trust and fulfill their role as a development agent, which includes promoting economic growth, job opportunities, and community welfare. According to Sunarti(2018), traditional banks are financial institutions that offer and charge compensation in the form of interest or a specific amount of compensation in a specific percentage of the funds for a specific period of time as part of their activities, both in collecting funds and in distributing money. In Indonesia, banks that are focused on traditional values make up the bulk of those now under development. This is inextricably linked to the history of the Indonesian people, as banking in Indonesia began during the Dutch colonial era. Financial establishments that follow conventional or secular standards are referred to as conventional banks. Financial institutions that use standard business practices but do not adhere to sharia law are referred to as conventional banks. They offer a range of banking services, including as savings accounts, deposits, interest-bearing loans, credit cards, and investment products with an interest-based profit model. The financial authorities in the nations where conventional banks conduct business typically regulate them, and sharia law does not apply to their business operations. The strong connection between interest-based principles and procedures and banking mechanisms, namely banking's role as an organization serving as a middleman between creditors and debtors when it comes to the distribution and withdrawal of cash from the general population. When considering the guiding principles and operating procedures of conventional banking, these two issues cannot be separated (Yusriadi, 2022). The level of success a bank has had in its operational endeavors can be seen in terms of bank profitability. In determining the overall profitability of the banking industry, banking profitability is the primary and most significant component. beginning with evaluating the assets, debt, liquidity, and so forth. By examining its financial statements, one can determine a bank's profitability. Financial ratios can be established based on this report to gauge the bank's state of health. The financial ratio known as ROA, or return on assets, assesses how well a corporation makes use of its assets to produce profits. A company's net profit is divided by all of its assets to determine its ROA. It gives a sense of how effectively a management team handles a company's assets to produce profits. The more effectively a corporation uses its assets to produce profits, the greater its ROA. Investors and financial analysts use ROA as one of the key metrics to assess a company's financial performance. Indonesia made the official announcement of a Covid-19 case in March of 2020. In reality, this pandemic has had an influence on a variety of industries, including the commercial banks and the national financial system. Strength and profitability will be impacted by the pandemic on banking operations. The Covid-19 pandemic poses a threat because it could result in a number of hazards for the banking industry, including the risk of default, the risk of asset depreciation, market risk, and so forth, all of which could have an impact on banking profitability.

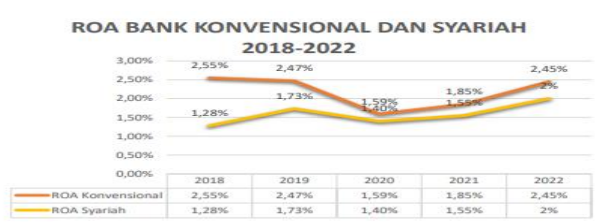


Figure 1. Percentage Growth Rate of Return on Assets 2018-2022

According to the Financial Services Authority (OJK), Sharia Banks' average ROA increase was 1.6% between 2018 and 2022 compared to conventional banks' average ROA growth of 2.2%. Because they have a higher average ROA increase than Sharia banks from 2018 to 2022, conventional banks were picked. The impact of internal and external factors might result in increases or decreases in ROA as a measurement of profitability (Purwoko & Sudityatno, 2019).

In general, there are two categories of factors that impact profitability: internal factors and external factors (Purwoko & Sudityatno, 2019). The profitability of banks is specifically impacted by internal factors, which are under management's control. Non-performing loans and loan to deposit ratio are two examples of internal bank factors. Although macroeconomic and external factors are uncontrollable variables that have no direct bearing on bank management, they can nevertheless indirectly affect the economy and thus have an impact on bank profitability. Inflation and exchange rates are two examples of external forces.

The loan to deposit ratio is used to demonstrate a bank's capacity to draw in public deposits or outside capital through the issuance of credit. Because more money is placed in the form of given credit, the LDR rises, increasing the company's profit level. As a result of a reduction in the placement of money in the form of disbursed credit, the LDR also affects the company's profit level (Purwanto, 2018).

All industries, including banking, were impacted by the COVID-19 pandemic's arrival in Indonesia. Since many businesses went out of business and were unable to repay loan principal and interest, interest rates on loans dropped as a result of the fear that defaulting on loans would result in an increase in non-performing loans.

Non-performing loans (NPLs) are loans or lines of credit that have not made interest or principal payments for a predetermined amount of time. In the context of banking, NPL is frequently viewed as a sign of credit failure that might give a general idea of the caliber of bank assets. In general, a bank is at greater risk the larger the percentage of NPLs in its credit portfolio. A financial institution's ability to manage NPLs effectively is crucial to its overall financial stability. Banks frequently employ a range of tactics to lower their NPL ratios, including credit restructuring, the sale of receivables, and the write-off of bad debts.

The price or exchange rate of one currency versus another used in foreign exchange operations is referred to as the exchange rate in traditional banking. By establishing buying and selling prices based on changes in the market, conventional banks offer currency exchange services to their clients. Numerous variables, including as the state of the global economy, interest rates, the rate of inflation, and the monetary policy of the relevant nation, might have an impact on the determination of this exchange rate. As one of their sources of income from providing foreign exchange services, conventional banks often set a profit margin from the difference between the selling and buying values of currency.

According to research findings (Oktavia & Musdholifah, 2018), one macro variable that significantly and favorably affects bank profitability is the rate of inflation. It demonstrates how rising inflation will make it harder for people to meet their basic needs. As a result, they will look for a solution, which is to borrow money from banks, which can boost profitability.

It is crucial to conduct this research in order to determine the significance of the various studies that have been conducted regarding the impact of the loan to deposit ratio, non-performing loans, exchange rate, and inflation on bank profitability. These studies are still contradictory (research gap) with one another. The impact of non-performing loans, inflation, exchange rates, and loan-to-deposit ratios on the profitability of conventional banking firms listed on the Indonesia Stock Exchange.

The rationale behind the investigation of conventional banking is that, according to data from the Financial Services Authority (OJK), in 2020, the profitability of conventional banks as determined by return on assets (ROA) was higher than that of sharia banks. Additionally, the role of banks is expected to have a substantial impact on Indonesia's economy and the welfare of society going forward. "The influence of internal bank factors and macroeconomic conditions on the profitability of conventional banks" is the title under which this research was written.

These earlier empirical results suggest that there is still disagreement among the causes of traditional bank profitability, particularly with regard to the relative importance of internal vs external factors.

There isn't any research that thoroughly examines internal and external influences in Indonesia, and prior studies haven't settled on which factor is most prevalent. This study will serve as a starting point for analyzing the relationship between internal and external factors and the profitability of Indonesia's conventional banks.

2. RESEARCH METHODS

2.1 Bank Profitability

Profitability, according to Suwikyo (2018), is a ratio that illustrates the degree of efficacy attained by bank operating efforts. This ratio serves as a gauge for the company's capacity to raise revenue while cutting expenses. Aside from that, this ratio demonstrates the company's capacity to make the most profit out of all the money it has. Bank profitability, or the capacity of the bank to raise the value of its operations, is achieved by growing earnings. Bank profitability can be tracked year over year to make necessary adjustments if a given year's banking profitability falls short of expectations.

The author of this study employs return on assets, or ROA, as a measure of bank profitability. The profitability ratio known as return on assets, or ROA, is used to assess how profitable management is overall or in terms of generating profits. Because every bank wants to be very profitable, maintaining current levels of profitability is crucial. An increase in the profitability ratio indicates the bank's effective operations.

2.2 Loan to Deposit Ratio

Virnanda (2022) defines signal theory as a management action intended to advise or apprise creditors or investors of the company's future prospects. A bank will be able to turn a profit if its loan to deposit ratio is high since it will provide a good signal to creditors and investors.

The definition of a loan to deposit ratio is given by Kasmir (2018) as follows: "The loan to deposit ratio, also known as the liquidity ratio, is a ratio that describes the company's ability to meet its short-term obligations (debt)." In the meantime, the Loan to Deposit Ratio (LDR) is defined as follows by Gunawan(2019): "LDR is an indicator of bank health." The evaluation of the bank's ability to maintain sufficient levels of liquidity and the effectiveness of its management of the liquidity ratio is known as the liquidity assessment. Financial analysts most frequently utilize LDR to evaluate a bank's profitability, particularly the overall amount of credit the bank extends using cash it receives.

The loan to deposit ratio significantly and favorably affects bank profitability, according to research by (Lotfalipour & Bazargan, 2020) (Dsouza et al., 2022) (Purwanty, 2018) (Khalik, 2018) (Yeasin, 2022) (Oktavia & Musdholifah, 2018) The bank's strong profitability is demonstrated by the rise in the loan to deposit ratio, particularly when it comes to satisfying its short-term client obligations. Conversely, the findings of studies conducted by (Andiansyah, 2020) (Abdelaziz et al., 2022) demonstrate that the loan to deposit ratio significantly and negatively affects bank profitability. gives evidence of the notion that banks incur significant costs as a result of their lending to deposit ratio. Because there is little risk involved in lending money to banks, banks will make money, and as a result, the loan to deposit ratio has a negative and substantial impact on bank profitability.

H1: Loan to deposit ratio has a positive effect on bank profitability

2.3 Non-Performing Loans

According to the signal theory, the impact of non-performing loans (NPL) on bank profitability can be explained as a negative signal that affects bank employee productivity. When a significant number of non-performing loans appear in the bank's portfolio, this could indicate that the bank is exposed to a high credit risk and may experience difficulties in adjusting the loan's quality.

One of the biggest hazards facing the banking sector is non-performing loans. This activity, which is one of the means of making money, implies bad credit payments and even nonpayment, which puts the bank at risk of losses and reduces profitability (Thalassinos & Thalassinos, 2019). Since they exhibit the overall quality of the bank's credit portfolio, non-performing loans are significant and require careful attention. It is critical for risk management and financial stability to comprehend the variables influencing non-performing loans (Ozili, 2019). The argument put up by Naili and Lahrichi (2022) is that non-performing loans serve as an indicator of the nation's general stability and can therefore impact interest revenue, investment, and liquidity, potentially leading to bankruptcy issues and a fragile economic system.

According to study findings Singh (2021), nonperforming loans (NPL) significantly and favorably impact bank profitability. The quantity of credit extended is commensurate with the rise in credit risk; however, the credit extension stems from a favorable assessment, which enables borrowers to satisfy principal and interest payments, so generating profits for the bank. In keeping with studies by (Hediati & Hasanuh, 2021)(Nurfitriani, 2021), and others that demonstrate non-performing loans (NPL) have a favorable and noteworthy impact on bank profitability. However, research by (Oktavia & Musdholifah, 2018)(Yeasin, 2022) (Martiningtiyas & Nitinegeri, 2020) demonstrates that non-performing loans (NPL) have a negative impact on bank profitability.

H2: Non-performing loans have a negative effect on bank profitability

2.4 Inflation

According to Keynes' theory, money is essentially a monetarily based concept. The main effect of this theory on bank profitability is that when inflation experiences a rise, banks in Indonesia, as the central bank, frequently use bunga suku to gauge inflation. By using the bank's pinjaman that is provided to the general public, kenaikan suku bunga has the potential to increase bank profitability. As a country's rate of inflation rises, so does its profitability or the amount of money a bank makes from the contributions of its constituents.

The general rate at which prices for goods and services rise is known as inflation. Because greater inflation will discourage investors from investing in the company, enterprises are prevented from carrying out manufacturing(Rumengan et al., 2019). The definition of inflation, according to Bronfen-brenner and F.D. Holzmann, is a combination of factors including high total income per capita, rising prices, a decline in the value of money in relation to the foreign exchange rate, and an overall state of excess demand, or having too much money.

It has already been demonstrated that inflation affects bank profitability. According to the research findings of (Oktavia & Musdholifah, 2018)(Lotfalipour & Bazargan, 2020)(Abdelaziz et al., 2022), (Rizal et al., 2021), one of the macro variables that positively and significantly affects bank profitability is the rate of inflation. Because people's decisions about what to save and invest depend on their income, inflation has a beneficial impact on profitability. In the meantime, study findings by penelitian (Bahjat et al., 2022)(Gumbo et al., 2022)(Prastiwi, 2022) demonstrate that inflation significantly and negatively affects bank profitability. A high rate of inflation indicates a high rate of price growth overall. This suggests that more people are taking out loans from banks, which is consistent with the growing risk of bad credit and might lower bank profitability.

H3: Inflation has a positive effect on bank profitability

2.5 Exchange Rate

Theory's Purchase Power Parity, also known as *paritas daya beli*, was first described by Gustav Cassel in the year 1920. It stated that the difference between the value of one currency and another currency is determined by the buyers of that currency in each country. The theoretical basis is the comparison of trade balances using exchange rates across all nations. If the value of domestic currency is higher than that of foreign currency, then goods imported from foreign countries may be valued more in domestic currency. This can lead to an increase in import duties and perhaps reduce bank profitability if the bank has an export policy or is involved in international trade.

Exchange rate is the ability of goods to be exchanged for other goods on the market. Exchange rate in financial management is defined as a level of currency that will be exchanged for another currency. Exchange rates during simple societies could be determined from how much or how little human productivity or work was done in producing a good or service. Meanwhile, according to Amrillah(2020) the exchange rate is the price of one currency expressed in terms of another currency. Simply put, the exchange rate can be referred to as the level of value of one currency against another currency.

Prior research has demonstrated how the exchange rate affects bank profitability. Based on the findings of the studies conducted by (Gumbo et al., 2022),(Bahjat et al., 2022)(Sasmita et al., 2018) (Lotfalipour & Bazargan, 2020)demonstrates how the exchange rate significantly and negatively affects bank profitability. After examining the effects of this variable, it can be concluded that rising exchange rates are a sign of rising foreign exchange market profits, which leads banks to allocate loan funds as capital in order to earn interest profits. However, by allocating these funds to the foreign exchange market, the bank avoids receiving income, which lowers bank profitability. Nonetheless, study findings (Prastiwi, 2022)(Tumewang et al., 2019) demonstrate that bank profitability is positively and significantly impacted by the currency rate. A rise in the exchange rate is a sign of higher foreign exchange market profits, which encourages banks to invest in the foreign exchange market and earn more returns than they would from giving out loans to the general public and this can boost bank profitability.

H4: The exchange rate has a negative effect on bank profitability

The impact of the independent variables loan to deposit ratio, non-performing loans, exchange rate, and inflation on the dependent variable bank profitability is the unit of analysis in this study. The study's sample consists of 47 Indonesian banks, both conventional and sharia banks, that were registered on the Indonesia Stock Exchange between 2018 and 2022. Thus, 37 traditional banks that have been listed on the Indonesia Stock Exchange for five years (2018–2022) constitute the analysis unit. Panel data regression is used as an analysis technique in this research using *eviews 12.0* software as the analysis approach.

Purposive sampling is the sample strategy used in this study. This means that the banking sector particularly conventional banks that are selected to serve as a research sample must fulfill a number of requirements. These include being a conventional bank that uses the rupiah and was listed on the Indonesia Stock Exchange prior to 2018 and that has published reports in the 2018–2022 period consecutively, as well as having data from financial reports and annual reports that is necessary for research variables. Secondary data, or data gathered indirectly from reliable sources that have published it, was employed in this study. The Indonesia Stock Exchange (www.idx.co.id), Bank Indonesia (www.bi.go.id), Central Statistics Agency (www.bps.go.id), Financial Services Authority (www.ojk.go.id), and each company's website for a five-year period between 2018 and 2022 provided the conventional banking financial and annual reports from which this data was gathered.

The panel data regression approach is used for data submission and analysis in this study. It comprises three models: common effect, fixed effect, and random effect. The Chow, Hausman, and Lagrange Multiplier tests are used to evaluate the models. After that, the term "classical assumption tests" describes a set of tests used in regression analysis to make sure the regression model satisfies the fundamental presumptions of the field. These presumptions consist of the following: autocorrelation is absent, residual normality, heteroscedasticity, and multicollinearity. The purpose of this test is to verify the validity and reliability of the regression results as well as the accuracy of the statistical interpretation that follows. Testing classical assumptions is a crucial step in assuring the validity of research findings and the quality of regression analysis because failure to do so may lead to bias in estimates and statistical inference. The chosen models will next be examined in light of the findings from the Coefficient of Determination Test (R²), Partial Significance Test (t-Test), and Simultaneous Significance Test (F Test).

3. RESULTS AND DISCUSSION

3.1 Model Feasibility Test

Regression model selection in panel data analysis refers to choosing a suitable statistical model to describe the relationship between panel data variables. A few of the methods used to identify the optimal model are the Chow test, Hausman test, and Lagrange Multiplier test.

Table 1. Regression Model

Regression Model	
Chow Test:	
- Prob. c-s F	0.0000
- Prob. Chi-square	0.0000
Hausman Test:	
- Prob. c-s random	0.3295
LM Test:	
- Breusch-Pagan	0.000
Conclusion: The best model is REM	
Normality Test:	
- Jarque-Bera	0.513909
- Prob.	0.773404

3.1.1 Chow Test

The following hypotheses are tested using the Chow test:

Ho: prob value > 0.05; the chosen model is the Common effect

H1: prob value < 0.05 Fixed Effect is the model that was chosen.

Based on the analysis of table 1, it can be inferred that the Fixed Effect model was selected for this test and that H1 is acceptable because the cross-section f value in the Chow test is 0.0000 or less than 0.05.

3.1.2 Hausman Test

To test hypotheses, the Hausman test is employed, particularly:

Ho: value of prob. < 0.05 Fixed Effect

H1: prob value is the model that has been chosen. 0.05 Random effect is the chosen model.

The random cross-section result in table 1 above is 0.3295 > 0.05, indicating that the random effect model was selected for this Hausman test.

3.1.3 Langrange Multiplier Test

The Hausman test is used to test hypotheses, specifically:

Ho: prob value. > 0.05 the selected model is Random effect

H1: prob value. < 0.05 the selected model is Common effect

As can be observed from table 1 above, the Random Effect Model is the model selected for the Langrange Multiplier test, with the Breusch Pagan probability value of 0.000 being less than 0.05.

3.1.4 Normality Test

The probability value of the normality test is 0.773404, which is greater than 0.05, based on table 1 above.

3.2 Assumption Test Classic

In this research, the classic assumption tests of heteroscedasticity, and multicollinearity were applied to panel data. Assumption test outcomes from traditional studies This is how it is.

Table 2. Assumption Test Classic

Multicollinearity Test		Heteroscedasticity Test	
Variable:	VIF	Variable:	Prob.
- LDR	1.046573	- LDR	0.1814
- NPL	1.054627	- NPL	0.8373
- INF	5.629505	- INF	0.8036
- KURS	5.631960	- KURS	0.7533
Conc: Multicollinearity does not occur		Conc: Heteroscedasticity does not occur	

3.2.1 Multicollinearity Test

In order to identify multicollinearity issues in statistical models used for regression analysis or other modeling applications, the multicollinearity test is utilized. When two or more independent variables in a model have a high connection with one another, this phenomenon is known as multicollinearity, and it can have an impact on the interpretation and dependability of analytic results.

The variance inflation factor (VIF) value and tolerance value can be used to detect whether multicollinearity exists in the regression model. The chosen independent variable's variability that cannot be accounted for by other independent variables is measured by the tolerance value. Because $VIF = 1/\text{tolerance}$, a low tolerance value denotes strong collinearity

and is equivalent to a high VIF number. Tolerance values of 0.10 or VIF values greater than 10 are utilized as the cutoff values.

By applying the Variance Inflation Factors (VIF) approach to the preceding figure, it is possible to determine that all correlation coefficients between independent variables are less than 10. As a result, multicollinearity issues are not present in the research's data.

3.2.2 Heteroscedasticity Test

To determine whether regression analysis or other statistical models have heteroscedasticity issues, one might apply the heteroscedasticity test. Heteroscedasticity occurs when there is a systematic fluctuation in the residual variance (error) of a regression model when the value of the independent variable changes. Stated differently, the error variation does not remain constant over the independent variable's value range. The probability value of each independent variable, as shown in table 2 above, is more than 0.05, indicating that there are no signs of heteroscedasticity in the research data.

3.3 Hypothesis Testing

In research, judgments or decisions about the population are made using a statistical method known as hypothesis testing, which is based on sample data. Finding out if a claim or hypothesis about the parameters or characteristics of a population is true is the fundamental objective of hypothesis testing.

Table 3. Hypothesis Testing

	LDR	NPL	INF	KURS
Coefficient	7.998781	-0.272564	0.245755	-0.041996
T-Statistic	0.092709	-11.66396	4.104418	-2.240764
Prob.	0.9263	0.0000	0.0001	0.0265
Conclusion	No Significant	Effect and significant	Effect and significant	Effect and significant

Research hypotheses on differences between two groups or samples are frequently assessed using the t test, which is typically utilized when the data are normally distributed. Several factors need to be taken into account while doing the t test, such as:

- 1) If there is a significant difference between the independent and dependent variables, the independent variable has a partial influence.
- 2) If there is a significant difference between the independent and dependent variables, the independent variable has no partial effect.

The following conclusion can be drawn from the partial test (t) findings shown in figure 9 above:

- a. The variable loan to deposit ratio (X1) yielded a computed t value of 0.096047 (<) t table, or 1.65397, and the prob value from the t test findings. We have $X1 = 0.9236 (>) 0.05$. Opposite to the theory in chapter 2 above, this demonstrates that the loan to deposit ratio (X1) has no impact on bank profitability. We can therefore conclude that bank profitability is not impacted by the loan to deposit ratio.
- b. Based on the NPL variable (X2), the t test yielded a t value of 12.74686 (>) t table, or 1.65397, and a prob value of 0.0000 (<) 0.05 for X2. According to the t test results above, nonperforming loans (X2) have an impact on bank profitability, which is consistent with the hypothesis from chapter 2 above. Thus, it follows that the profitability of banks is impacted by non-performing loans.
- c. Using the Inflation variable (X3) as the test variable, the computed t value of 3.659187 (>) t table was 1.65397, and the prob value of X3 was 0.0001 (<) 0.05. This supports the theory in chapter 2 above and demonstrates how inflation (X3) affects bank profitability. Thus, it follows that bank profitability is impacted by inflation.
- d. The Exchange Rate (X4) variable's t test findings yielded an estimated t value of 1.997959 (>) t table, or 1.65397, and an X4 prob value of 0.0265 (<) 0.05. This supports the theory in chapter 2 above and demonstrates how the exchange rate (X4) affects bank profitability. Thus, it can be said that bank profitability is impacted by the exchange rate.

The f statistical test simply establishes whether all of the independent variables in the model concurrently and collectively affect the dependent variable. Two criteria are used in this test, which are as follows: 1) H1 is accepted if f has a significance value of 0.05 or below, indicating that each independent factor significantly affects the dependent variable. 2) If $f > 0.05$ has a significant value, indicating that the independent variable has no effect on the dependent variable, then H1 is rejected. Based to figure 9, the variables LDR, NPL, Inflation, and Exchange Rate all affect ROA simultaneously. The profitability value of the F statistics is $43.55927 > F$ table is 2.43, and the sig value is $0.0000 < 0.05$.

The coefficient of determination, also known as R-squared (R2), is a statistic that illustrates how much of the variance in the dependent variable in a regression model can be explained by the independent variables. The modified R Square value, as indicated by figure 9 above, is 51.7065%, or 0.517065. The coefficient of determination value indicates that the profitability variable can be explained by the independent variables (LDR, NPL, Exchange Rate, and Inflation) by 51.7065%, with additional variables not included in this study model accounting for the remaining 48.2935% of the explanation.

3.5 Discussion

3.5.1 The effect of loan to deposit ratio on bank profitability

The results of the research show that bank profitability is unaffected by the loan to deposit ratio. The test's findings contradict the initial hypothesis, which held that bank profitability is significantly positively impacted by the loan to deposit ratio. Consequently, the study's findings show that bank profitability is completely unaffected by a higher level of bank liquidity.

According to signal theory, the amount of bank liquidity may be a significant signal for stakeholders and investors. High liquidity banks typically send out encouraging signals about their capacity to meet their financial commitments, which can boost investor confidence and lower borrowing rates. Excessive liquidity, however, may also mean that the bank is not using its resources as profitably as possible, which could mean lower potential earnings.

According to research studies (Murwaningsari, 2019), this is the case. Since banks are actively disbursing credit, there are risks associated with this, including the potential for third-party funds to be withheld and a high loan-to-deposit ratio at the bank. These indicators point to the bank's low LDR capability, which prevents it from disbursing credit in line with demand and results in the loss of the bank's opportunity to turn a profit. The findings of this study are consistent with those of (Poniman & Saragih, 2022) which demonstrates that a bank's profitability is unaffected by its loan to deposit ratio.

3.5.2 The effect of non-performing loans on bank profitability

The study's findings suggest that the variable of non-performing loans has a detrimental effect on bank profitability. The test's findings support the first hypothesis—that liquidity hurts banks' bottom lines—which was put forth at the outset of the study. Accordingly, the study's findings indicate that a bank's profitability will decline the higher its credit risk level.

The impact of non-performing loans (NPL) on bank profitability can be explained as a negative signal on bank performance within the context of signal theory. An abundance of non-performing loans (NPLs) in a bank's loan portfolio may be a sign of elevated credit risk and possible asset quality management issues. High NPLs could be interpreted by stakeholders, regulators, and investors as an indication of instability and unpredictability, which would erode their trust in the bank. Consequently, banks might have to bear more expenses, such higher borrowing rates and lower consumer interest rates, which could eventually hurt their bottom line.

Samosir (2020) explains that risk is typically associated with something negative or a departure from anticipated outcomes. The findings of this study are consistent with those of studies by (Martiningtiyas & Nitinegeri, 2020), which demonstrate that a bank's earnings decrease with its non-performing loan (NPL) level.

3.5.3 The effect of inflation on bank profitability

The study's findings suggest that the inflation factor positively affects bank profitability. The test findings support the hypothesis, which was put forth at the outset of the study, that inflation increases bank profitability. Thus, the findings of this study indicate that a bank's profitability increases with a nation's rate of inflation.

The theoretical foundation, which is Keynes' theory about flowers, is consistent with the findings of the study. This hypothesis primarily affects bank profitability by suggesting that negative real interest rates can increase banks' interest profits. This is particularly evident in circumstances where the interest rates that banks charge their clients (such interest on savings accounts or deposits) are often lower than the interest rates that they obtain from lending money.

According to research, this was done by (Oktavia & Musdholifah, 2018). Profitability benefits from inflation since people's decisions about what to save and invest depend on their income as well. People's income will rise in response to rising inflation, which will boost their motivation to save and invest. In addition, studies by (Lotfalipour & Bazargan, 2020)(Abdelaziz et al., 2022), (Rizal et al., 2021) demonstrate that inflation clearly increases bank profitability.

3.5.4 The effect of exchange rate on bank profitability

The study's findings suggest that bank profitability is negatively impacted by the exchange rate variable. The test results support the initial hypothesis of the study, which states that bank profitability is negatively impacted by exchange rates. Hence, the study's findings indicate that a bank's profitability level decreases with a greater rupiah exchange rate relative to the US dollar.

Theoretically, purchasing power parity theory supports the findings of the research. In this particular situation, a substantial decrease in the currency exchange rate might have a detrimental impact on bank profits. Imported items from other nations may cost more in domestic currency if the value of the home currency declines relative to other currencies. This might lead to higher import expenses and potentially worse profitability for banks financing foreign trade or having exposure to imports.

According to research (Lotfalipour & Bazargan, 2020) the exchange rate significantly and negatively affects bank profitability. After examining the effects of this variable, it can be concluded that rising exchange rates are a sign of rising foreign exchange market profits, which leads banks to allocate loan funds as capital in order to earn interest profits. However, by allocating these funds to the foreign exchange market, the bank forfeits income, which lowers profitability. The findings of this study are consistent with those of studies by (Gumbo et al., 2022),(Bahjat et al., 2022)(Sasmita et al., 2018). These studies all found that a country's bank profitability will decrease when its exchange rate increases.

4. CONCLUSION

Based on research findings regarding the impact of internal factors (loan to deposit ratio and mixed credit) and macroeconomic variables (tukar and inflation) on bank profitability, the following conclusions can be drawn: In a nutshell, throughout the years 2018–2022, the loan to deposit ratio had no effect on the conventional bank's profitability. Finally, non-performing loans and bad debt have a negative impact on bank profitability in conventional banks from 2018 to 2022. and Inflasi has a positive impact on bank profitability at conventional banks from 2018 to 2022. Throughout 2018–2022, the concurrent variables LDR, NPL, Inflasi, and Nilai Tukar had an adverse effect on ROA in conventional banks. The external factor is one that has a greater impact on profitability because, after simultaneous research, two significant variables are found: inflation and tukar interest rate. For the external factor, only one variable—credit—is present, meaning that the external factor has a greater impact on profitability than the conventional bank's profitability at the Indonesia Stock Exchange. It is anticipated that this research will contribute to understanding how loan-to-deposit ratios, non-performing loans, inflation, and exchange rates affect banks' ability to make profits in the years 2018–2022. Additionally, this research will provide guidance for managers and employees of businesses to evaluate and increase bank profits. Finally, this research will only be conducted on banks that are listed on the Indonesian Stock Exchange in the years 2018–2022, which have already met the criteria for a minimum of 35 banks and have not yet met all 47 banks.

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