

The Influence of Bank Health and Interest Rates on Bank Profitability and Moderated By Economic Growth

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ABSTRAK

Penelitian ini memiliki tujuan untuk mengetahui pengaruh tingkat kesehatan bank dan tingkat suku bunga terhadap profitabilitas perusahaan perbankan yang terdaftar pada Bursa Efek Indonesia tahun 2018-2021 serta dimoderasi oleh pertumbuhan ekonomi. Jenis data yang digunakan adalah data sekunder dari laporan keuangan perbankan, data BI Rate dan data PDB tahun 2018-2021. Teknik penyampelan yang digunakan adalah purposive sampling dan didapatkan 21 sampel Bank Umum Konvensional. Teknik analisis data menggunakan analisis regresi data panel dan MRA menggunakan software Eviews 12. Hasil penelitian ini adalah secara parsial kesehatan bank yang diukur dengan metode RGEC berpengaruh tetapi hanya pada faktor Good Corporate Governance dan Faktor Earning, akan tetapi faktor Risk Profil dan Capital tidak berpengaruh, selanjutnya untuk tingkat suku bunga berpengaruh secara negatif terhadap Profitabilitas. Untuk uji moderasi kesehatan bank hanya faktor CAR yang mampu dimoderasi oleh pertumbuhan ekonomi,

Kata kunci : BI Rate; Kesehatan Bank; Profitabilitas; dan PDB

ABSTRACT

His research aims to determine the effect of bank soundness and interest rates on the profitability of banking companies listed on the Indonesia Stock Exchange in 2018-2021 and moderated by economic growth. The data type used is secondary data from banking financial reports, BI Rate data, and GDP data for 2018-2021. The sampling technique used was purposive sampling, and 21 samples were obtained from conventional commercial banks. The data analysis technique uses panel data regression analysis, and MRA uses E-views 12 software. The results of this study are that partially, the soundness of the bank as measured by the RGEC method affects, but only the Good Corporate Governance and Earning factors. However, the Risk Profile and Capital factors have no effect, so interest rates have a negative effect on profitability. For the bank health moderation test, only the CAR factor can be moderated by economic growth

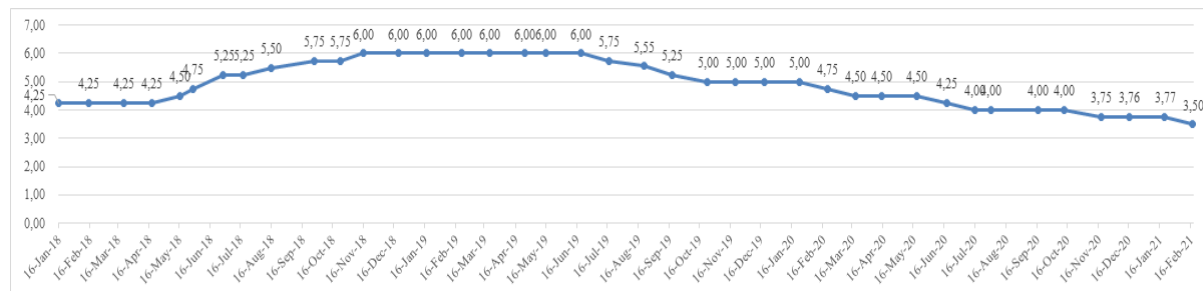
Keywords : BI Rate; Bank Soundness Level; Profitability; and GDP

Introduction

Banks are financial institutions that have an essential role in realizing the country's economy because banks have a role as financial intermediaries (Fahrial, 2018). The critical part of the bank makes it necessary to monitor its development of the bank and make continuous improvements. The bank is also a profit-oriented company, so all of its activities must get the maximum profit to be used for company development (Liviawati et al., 2018). However, during 2018-2021, banking operational activities experienced several problems, including the issue of bad credit or NPLs that occurred around 2020-2021, when Indonesia was facing the Covid-19 pandemic. In 2020, Indonesian banking began to experience an increase in value. NPL reached 3.06% and continued to increase until it peaked in August 2021 at 3.35% but managed to fall in December 2021 to 3.00%. This data comes from (Banking Statistics data in Indonesia) with an average NPL value of 3.00%, a company declared healthy. It shows that banks in Indonesia have succeeded in overcoming the NPL problem that occurred even during the Covid 19 pandemic. Even though the development of NPL values ended well in 2021, there are other problems faced by banks in Indonesia, namely the issue of interest rate fluctuations.

Graph 1 above shows that the BI Rate in 2018 was 4.25%, but every month it continued to increase until it peaked in 2019, reaching 6.00%. A high increase in the BI rate causes the company's profitability to decrease because the public will prefer to save rather than make credit transactions which are considered burdensome for customers due to the high-interest costs they have to incur, so banks must lose income from loan interest (Khotijah et al., 2020). These problems are one of the internal and external factors that affect the company's profitability. Banking is a profit-oriented company, so a bank's performance can be measured using the company's profitability ratios presented

in financial reports (Kasmir, 2017). The company's profitability ratios can be measured using the ROA financial ratio. According to Bank Indonesia, the Return On Assets Ratio measures profitability. The higher the ROA level, the higher the profit level the Bank will get (Ardana, 2018)



Source: processed data

Graph 1
Development of BI Rate 2018-2021

Internal factors and external factors can influence company profitability. Internal factors such as bank health, this is because if a bank wants to have good profitability, then the company must have a soundness level which states that the bank is healthy so that external parties have confidence in the bank, especially for investing or saving, if investors make considerable savings it will become profitable for the company. According to Bank Indonesia, most of the bank's assets come from public deposits. So the soundness level of the bank positively influences company profitability (Setiawan, 2017). According to Bank Indonesia Regulation No. 13/1/PBI/2011 Article 7 states that "bank soundness assessment can use a risk approach (Risk Based Bank Rating)." The RBBR method, also known as RGEC, uses four assessment factors: Risk Profile, Good Corporate Governance, Earnings, and Capital. Furthermore, external factors that affect company profitability are interest rates and economic growth. A significant increase in interest rates will increase investor interest in investing but reduce financing or credit activities so that credit interest income decreases and reduces bank profitability. Interest rates in Indonesia have experienced quite significant fluctuations, which has impacted the level of profit received by banks, thereby affecting bank profitability (Pebruary & Shalihul Aziz Widya, 2017).

The economic growth factor is an external factor that influences bank profitability, and this is because if a country's economic growth is getting better, then people's purchasing power will increase, and this will increase people's ability to carry out banking transactions such as saving and applying for credit matters, This is done because the community feels they are financially capable so that it will increase the Bank's profitability (Anugrah et al., 2020). This research aims to identify and analyze bank soundness variables and interest rates on bank profitability and determine the effect between variables if moderated by economic growth.

Landasan Teori

Teori Sinyal (Signaling Theory)

This theory comes from Spence's "Job Market Signaling" research in 1973. His research states that company management must provide relevant information to stakeholders so that this information can be used to assist decision-making for the company (Spence, 1973). So, if the information or signal is in a negative form, it will give negative things. If it is a positive signal, it will have a positive influence. Bank health is one of the positive signals given by companies to stakeholders presented in financial reports. Information on bank health will influence investment or transaction decision-making by stakeholders, which will later have an impact on profitability (Sotarduga Sihombing & Siagian, 2021).

Teori klasik Tingkat Suku Bunga

This theory assumes that savings or investment is a function of the interest rate, meaning that high and low-interest rates will affect the savings or investments made by customers. So that this theory explains that if the interest rate increases, then the desire of people to invest or save will also

increase, but conversely, if the interest rate decreases, then the desire of people to save or invest will decrease. When the interest rate decreases, the return rate will also decrease (Upadiyanti et al., 2018). On the other hand, increasing people's desire to save and increasing the return received will reduce bank income from the credit side and increase financing returns on savings so that the profit earned will decrease. Thus, an increase in interest rates will reduce company profitability (Khotijah et al., 2020).

Profitabilitas

Profitability Is the company's ability to earn profits in a certain period. According to (Kasmir, 2017) , profitability describes a bank's level of managerial efficiency in obtaining profit. High profitability will illustrate that the company can carry out operational activities properly and allows for business development (Warsa & Mustanda, 2016). So, the better the profitability, the better the company will be.

Bank health

A bank can usually carry out banking operations and fulfill all obligations correctly and in accordance with applicable regulations (Novriansyah et al., 2020). The soundness level of the bank needs to be maintained because this will affect the relationship between the bank and the stakeholders. Bank Indonesia Regulation No. 13/1/PBI/2011 concerning soundness level explains if a bank's soundness level can be measured using the Risk-Based Bank Rating or RGEC method. This method uses four assessment factors, namely Risk Profile, Good Corporate Governance, Earnings, and Capital. The risk profile assessment factor uses credit risk projected by the Non-Performing Loan (NPL) ratio. NPL is a ratio that measures the percentage of non-performing loans to the amount of credit disbursed by a bank, so the NPL ratio measures the percentage of non-performing loans in a bank (Riza et al., 2020). Thus, the higher the NPL, the higher the lousy credit and indicating the poor health of the bank.

The factor of implementing Good Corporate Governance, the implementation of GCG if done properly can be used as the main tool for a company in gaining company trust, this is because GCG principles must have high standards in all respects. So that GCG can be used for companies in conducting bank health assessments with the aim of maintaining trust (Fauziah, 2017). Assessment of Good Corporate Governance is an assessment of the quality of management of a bank based on GCG principles (Riza et al., 2020). The three aspects of GCG assessment are Governance structure, Governance Process, Governance Outcome. This study uses the results of self-assessment as an indicator. The earnings assessment factor (profitability) is assessing the bank's soundness from the point of view of profitability or assessing the bank's performance in obtaining and stabilizing profits to increase in the future. This factor assessment uses the calculation of the Net Interest Margin (NIM) ratio. NIM is a ratio that describes the difference between interest income and interest costs on asset profit interest (Putra & Nurmaningsih, 2019). So the higher the NIM ratio, the better the company is in earning profits, so the bank is said to be healthier. So this will increase bank profitability bank (Paramartha & Darmayanti, 2017). The Capital assessment factor is an assessment factor for the capital aspects of the bank. The capital aspect can be seen by capital adequacy. A bank's capital adequacy is used as an assessment of bank health because it shows the bank's ability to carry out operational activities properly (Riza et al., 2020). The capital adequacy ratio (Capital Adequacy Ratio) can measure the capital aspect. CAR is the ratio used by banks to cover possible risks faced in carrying out operations using bank capital

Interest rate

It is a monetary policy tool carried out by the government to control economic stability. If interest rates are increased, the economic costs of consumption using bank loans will be more expensive, so people's desire to make credit decreases (Cahyani, 2018). High-interest rates impact company profits because the higher the interest rate, the higher the interest costs that must be paid because people choose to save. Meanwhile, loan interest income decreases and reduces bank profitability (Khotijah et al., 2020). Interest rates can be measured using the Bi Rate indicator because the BI Rate is the benchmark interest rate from Bank Indonesia.

Economic growth

It is the process of changing a country's economic conditions for the better (Nurhadi & Suwakir, 2020). The calculation indicator uses Gross Domestic Product (GDP). In general, GDP means the final value of a good or service obtained by a country during a specific period. Thus, it causes an increase in GDP followed by an increase in people's income, thereby increasing people's ability to save, which impacts bank profitability (Pebruary & Shalihul Aziz Widya, 2017). According to Keynes's theory, the amount of bank savings affects consumer income.

METHODS

This study used a quantitative research method using panel data regression analysis. The data used in this study is secondary data originating from the banking annual financial reports for 2018-2021, BI Rate data for 2018-2021, and GDP data for 2018-2021. This research has a population scope: banking companies registered on the IDX during 2018-2021. A sample is selected using a purposive sampling technique using several criteria adapted to the research objectives. After that, get a research sample of 21 established commercial bank companies. This study uses panel data regression analysis with two equations :

$$Y_{it} = a + b_1X_{1i} + b_2X_{2i}$$

$$Y = a + b_1X_1 + B_2X_2 + B_3Z_i + (B_4X_1*Z_i) + (B_5X_2*Z_i)$$

RESULT

Table 1
Classical Assumption Test Results

Classical Assumption Test	Testing	Criterion	Value	Decision
Normality Test	Prob Jarque Bera	Prob > 0,05	0,080084	Normally distributed data.
Multicollinearity Test	Variance Inflation Factor	VIF < 10	< 10	The data is free from multicollinearity.
Autocorrelation Test	Durbin Watson test	Du < Dw < 4-du	Dw= 2,105383	The data is free from autocorrelation.
Heterokedasticity Test	Uji Glejser test	Prob > 0,05	0,9115	The data is free from heteroscedasticity

Source: processed data

Table 1 shows the results of the classical assumption test on four tests: the data normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The normality test uses the Jarque-Bera test, which has criteria if probability > 0.05, then the data is declared normally distributed. Table 1 shows that the Jarque-Bera probability value is 0.080084 > 0.05, so the data is normally distributed. The next test is a multicollinearity test that uses the Variance Inflation Factor test. With the VIF value criterion <10, the data does not occur in multicollinearity, meaning there is no correlation between the independent variables. The next test is the autocorrelation test using the Durbin-Watson test. The criteria for the Durbin-Watson test are the value of du < dw < 4-du. Table 1 shows that if the Durbin-Watson value is 2.105383, this value is greater than the du value and less than the 4-du value, so the data does not have autocorrelation. The next test is the heteroscedasticity test using the Glejser test. The Glejser test has probability criteria > 0.05, so the data is free from heteroscedasticity problems. Table 1 shows that if the probability value is 0.9115, the probability > 0.05 means the data is declared free from heteroscedasticity. The classical assumption test on this data is declared complete and can continue to estimate model selection.

Table 2
Model Selection Estimation Test Results

Model selection test	Criterion	Value	Decision
Chow test	Prob < 0,05 FEM, Prob > 0,05 CEM	0,0000	Model FEM
Housman test	Prob < 0,05 FEM, prob > REM	0,0409	Model FEM
Lagrange Multiplier test	Breusch-Pagan < 0,05 FEM, Breusch-Pagan > 0,05 REM.	0,0000	Model FEM

Source: processed data

Testing the estimation of model selection in panel data regression can be done using three tests, namely the chow test, Housman test, and LM test. The Chow test obtained a probability of 0.0000, meaning the selected model is FEM. Furthermore, the Housman test obtained a 0.0409 < 0.05,

so the chosen model was FEM. Furthermore, the LM test obtained a $0.0000 < 0.05$, so the chosen model was FEM. So for regression testing using the Fixed Effect Model.

Table 3 shows the results of the regression equation 1, and the explanation of the results is as follows:

1. The results of the t-test on NPL to ROA have a probability value of $0.6463 > 0.05$, meaning that NPL has no significant effect on profitability.
2. The results of the t-test on GCG on ROA have a probability value of 0.0475 with a negative coefficient, meaning that GCG has a significant and negative effect on profitability.
3. The test results on NIM on ROA have a probability value of 0.0097 , meaning that NIM has a significantly positive effect on profitability.
4. The test results on CAR for ROA have a probability value of $0.7289 > 0.05$, meaning that CAR has no significant effect on profitability.
5. The test results on CAR for ROA have a probability value of $0.7289 > 0.05$, meaning that CAR has no significant effect on profitability.

Table 3
Equation 1 partial test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.004371	0.005605	0.779739	0.0438
NPL	0.009951	0.021574	0.461258	0.6463
GCG	-0.006138	0.003296	-2.862460	0.0475
NIM	0.222211	0.083134	2.672919	0.0097
CAR	0.003593	0.010238	0.350908	0.7289
BI_RATE	0.270093	0.072131	3.744500	0.0004

Source: processed data

Table 4
Moderation Test Results 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001852	0.011778	2.157307	0.0575
NPL	0.199228	0.132337	1.505464	0.1380
GCG	0.004769	0.004848	2.483030	0.0329
NIM	0.129858	0.199265	2.651689	0.0217
CAR	0.053482	0.019947	2.681258	0.0097
PDB	0.368139	0.233916	2.573811	0.0124
NPL_PDB	-6.144469	3.489252	-1.760970	0.0839
GCG_PDB	0.147193	0.159311	0.923937	0.3596
NIM_PDB	4.270127	3.599494	1.186313	0.2407
CAR_PDB	1.174982	0.477234	2.462078	0.0170

Source: processed data

Table 4 shows the results of the moderation equation 1, and the explanation of the results is as follows.:

1. The results of the t-test on economic growth, which moderates NPL to ROA, have a probability value of $0.0839 > 0.05$, meaning that NPL, which GDP moderates, do not have a significant effect on profitability.
2. The results of the t-test on economic growth that moderates GCG on ROA have a probability value of $0.3596 > 0.05$, meaning that GDP moderates GCG does not have a significant effect on profitability.
3. The results of the t test on economic growth which moderates NIM on ROA have a prob value of $0.2407 > 0.05$, meaning that NIM which is moderated by GDP does not significantly affect profitability.
4. The results of the t-test on economic growth, which moderates CAR on ROA, have a probability value of $0.0170 < 0.05$, meaning that CAR, which GDP moderates, has a significant effect on profitability.

Table 5 shows the results of the moderation equation 2 with the results of the t-test on the Bi Rate moderated by economic growth on ROA, which has a probability value of 0.2715 > 0.05, meaning that NPL which GDP moderates, does not significantly affect profitability. Table 6 shows the results of the regression coefficient test by measuring the R Square value. Table 6 shows the results of R Square of 0.916235, which means that in this regression, 91% of the independent variables affect the dependent variable, and 9% of the external variables affect.

The soundness of the bank affects profitability

The partial test results for each bank health factor show that the bank health factors that can influence profitability are only GCG and earnings. GCG is measured using the composite value of the self-assessment results. The test results show a negative effect, meaning the profitability value will be smaller if the composite value gets more significant. This is because, according to the composite rating criteria, the smaller the composite rating, the healthier a bank will be (Sarra et al., 2022). thus, forming a significant adverse effect between GCG on company profitability. This statement is supported by research (Wibowo et al., 2020). Furthermore, the influence of the earning factor, as measured by NIM, shows a positive influence on profitability. This happens because NIM is a ratio that shows the company's ability to earn profits, so an increase in the value of NIM will also increase the value of company profitability. This research is supported by Setiawan, 2017) which states that the projected bank health with NIM influences company profitability. The health of the Bank on the Risk Profile and Capital factors does not affect company profitability. The Risk Profile calculated by the NPL indicator does not affect company profitability. This is because the average NPL of banking companies in 2019 was 0.0189, which indicates that the company is in good health. However, on the other hand, the company's profitability has decreased. Thus, the NPL ratio does not affect company profitability. This is supported by research (Liviawati et al., 2018) which found that bank health as measured by risk profile does not affect company profitability. Furthermore, the Capital factor, the test results state that the capital factor does not affect company profitability. This is because the average CAR value of banking companies is very fluctuating, which in 2019 decreased and increased again, which is not in line with fluctuations in the value of profitability company, so it can be concluded that if the health of a bank as measured by the capital factor does not affect company profitability, these results are supported by research (Liviawati et al., 2018) which obtains results if the health of a bank as measured by the capital factor does not affect profitability.

Table 1
Moderation Test Results 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.063614	0.051695	1.230565	0.0276
BI_RATE	-1.464498	1.409754	-2.038838	0.0330
PDB	1.016210	1.038572	2.124978	0.0317
BIRATE_PDB	31.09169	28.01297	1.109903	0.2715

Source: processed data

Table 6
Regression Coefficient Test Results

R-squared	0.916235	Mean dependent var	0.016101
Adjusted R-squared	0.866299	S.D. dependent var	0.011179
S.E. of regression	0.004088	Akaike info criterion	-7.879426
Sum squared resid	0.000869	Schwarz criterion	-6.953401
Log likelihood	362.9359	Hannan-Quinn criter.	-7.507172
F-statistic	18.34798	Durbin-Watson stat	2.104156
Prob(F-statistic)	0.000000		

Source: processed data

Interest rates affect profitability

Based on the results of the partial test conducted shows that if the interest rate has a significant negative effect on profitability, this means that when interest rates increase, the level of profitability

decreases. The statement aligns with developments in the average interest rate and company profitability. In 2021 interest rates will decrease, and company profitability will increase. These results follow the classical interest rate theory, which explains that an increase in interest rates will increase public interest in saving and reduce credit so that bank receipts from the credit interest side decrease, which results in a decrease in bank profitability. These results are in line with the research. (Cahyani, 2018).

Economic growth can moderate the effect of bank soundness on profitability

Based on the results of the moderation test conducted, economic growth is only able to moderate the influence of bank capital on profitability, for risk profile, good corporate governance, and earnings factors are not able to be moderated. The capital factor on profitability can be moderated by economic growth because the capital factor, as measured using the CAR ratio, describes the capital adequacy of banks. Increased economic growth will increase people's ability to save. This can increase bank income from saving transactions and impact increasing the capital owned by banks. These results are supported by research conducted by (Nisak, 2021), which states that economic growth can moderate the effect of CAR on banking profitability.

Economic growth can moderate the effect of interest rates on profitability

Based on the results of the moderation test conducted, the results show that economic growth cannot moderate the effect of interest rates on profitability, and This is because the effect of interest rates on profitability is a negative influence, and economic growth has a positive influence, and this shows that there is a difference in the influence which results in no effect if both of them affect profitability.

CONCLUSION

The results of this study can be concluded that the bank's soundness, as measured by the risk profile and capital factors, does not have a partial effect on bank profitability. Bank health, as measured by the Good Corporate Governance factor, negatively influences bank profitability, and Earning has a significantly positive effect on bank profitability. The influence of interest rates partially has a significant negative effect on profitability. The results of testing the moderation of economic growth can only moderate the effect of bank soundness on the capital factor on banking profitability. In contrast, the risk profile, earning, capital, and interest rate factors cannot be moderated by economic growth.

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