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Analyzing the Effect of Risk-Based Bank Rating (RBBR) Ratio on Stock Returns: A Comparative Study between Bank BUKU III and BUKU IV in Indonesia

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ABSTRACT

In recent years, traditional banks in Indonesia have been facing numerous challenges which require banks to have a good health level to survive. Although it is logical to assume that BUKU IV are the best performer among other BUKU groups due to their large core capital, it needs to be statistically proven. Therefore, this study aims to examine the impacts of RBBR ratios on the stock returns of the two largest BUKU groups—BUKU III and BUKU IV—and compare both results. This study uses five independent variables namely NPL, LDR, ROA, NIM, and CAR; one control variable, bank size; and dummy variables, BUKU III and BUKU IV. This study also uses purposive sampling technique to determine the research sample. The RBBR analysis is used to examine the banking health level of each RBBR ratio and multiple regression analysis is performed for testing the hypotheses. The first result of this study shows that BUKU IV was healthier regarding NPL, LDR, ROA, and NIM than BUKU III whereas the latter was healthier in terms of CAR compared to BUKU IV. The second result indicates that NPL, LDR, and NIM had no effect on stock returns of BUKU III and BUKU IV. Meanwhile ROA had a negative effect and CAR had a positive effect on stock returns of BUKU III and BUKU IV. It is also noted that there was no difference between the stock returns of BUKU III and the stock returns of BUKU IV.

Keywords: *Bank's Health, Risk-Based Bank Rating, BUKU III, BUKU IV, Stock Return*

INTRODUCTION

The banking sector is transforming from being established in physical branches to adopting information technology (IT) and big data, together with highly specialized human capital (OECD, 2020). According to a survey conducted by PwC Indonesia (PricewaterhouseCoopers, 2018), most banks in Indonesia, including local banks, joint-venture banks, and Sharia banks, have already incorporated digital initiatives into their respective corporate strategy with some have started their process toward digital transformation. The main reason for their digital strategy is to enhance the experience of both their customers and employees.

In 2018, Indonesia was amid booming e-commerce and e-payment, a digital move led by many local companies (PricewaterhouseCoopers, 2018). Around 72% of bankers in Indonesia perceived Go-Jek as a new threat with its facilities like Go-Pay and other services. In addition, up to 66% of bankers in Indonesia saw Alibaba and its facilities as having the potential to be a major threat to the banking industry. Digital technology may increase competition and banking markets' contestability (OECD, 2020). According to CNBC Indonesia (2018), digital disruption allows FinTech to improve efficiency, which led to a declining income of banks' customer finance

segment by 40%. However, the banking sector has to face yet another challenge.

The announcement of a cluster of pneumonia cases in 2019 marked the emergence of coronavirus in Wuhan, China (Daryanto & Meiliawati, 2022). The virus was known as a new coronavirus named SARS-CoV-2 and caused Covid19 diseases. Due to the alarming level of threat and severity, WHO declared Covid-19 a pandemic and released a strategic plan to assist countries around the world fight, and solving the pandemic (World Health Organization, 2020). The strategy was to limit transmission between humans by restricting people's movement (Daryanto & Meiliawati, 2022). This strategy, however, was a double-edged sword. Although it successfully prevented the healthcare system from collapsing, it posed negative impacts on the economy of the affected countries. The Covid-19 pandemic caused a recession and even depression in countries around the world.

The economy of Indonesia began to drop in the first quarter of 2020 (Daryanto & Meiliawati, 2022). To survive the pandemic, some companies laid off many of their workers resulting in an increased amount of likely borrowers who did not have sufficient cash for consumption. For banks, it means that they also have to endure the rising ratio of non-performing loans because more and more people become unable to pay their loans (Daryanto & Meiliawati, 2022).

One of the lessons learned from these issues is that banks must be able to adapt and immediately respond to new changes. Especially when the coronavirus came along as the newest global disruptive event, banks must stay agile and be responsive to face the challenges that come their way. In order to do that, banks should have a good level of health. The importance of banks' health or bank soundness was highlighted by the liquidity difficulties in Indonesia from both the Asian financial crisis and the Global Financial Crisis which were caused by one of the bank's functions as an agent of trust. As the central bank, Bank Indonesia needs to assess the the health of banks and the resilient system. Therefore, Bank Indonesia issued Bank Indonesia Regulation No. 6/10/2004 about the Rating of Commercial Banks Soundness in 2004 to measure the bank soundness using the CAMELS method in which there are six dimensions: Capital, Asset, Management, Earnings, Liquidity, and Sensitivity to Market Risk.

In 2017, the Indonesian government through the Financial Service Authority (OJK) issued the Circular Letter of OJK No. 14/SEOJK.03/2017 about Risk-Based Bank Rating (RBBR) to assess the health level of banks by evaluating their risk profile, good corporate governance, earnings, and capital factors. This new regulation uses the risk approach and is an improved method of the CAMELS that was formerly used. According to Suryani and Habibie (2017), this improvement assists banks in identifying problems earlier so that any needed improvements can be made to avoid more serious crises in the future.

The health level of banks indicates how well they can manage their clients' funds. On the subject of investment, banks with a good health level generally have small investment risk so it offers more value to the investors. They also tend to have higher stock prices than those with sufficient or poor health levels (Sianturi, 2019). With higher stock prices, their investors may expect to receive more returns (Tahmat, 2020).

In 2012, Bank Indonesia (BI) issued Bank Indonesia Regulation (PBI) No. 14/26/PBI/2012 about Business Activities and Office Networks Based on Bank's Core Capital which classifies banks into four different Bank Umum Kelompok Usaha (BUKU) groups:

1. BUKU I : Banks with a core capital less than IDR 1 trillion.
2. BUKU II : Banks with a minimum core capital of IDR 1 trillion and a maximum of IDR 5 trillion.
3. BUKU III : Banks with a minimum core capital of IDR 5 trillion and a maximum of IDR 30 trillion.
4. BUKU IV : Banks with a minimum core capital of IDR 30 trillion.

Some previous studies have assessed the impact of banking health level on stock returns using public banks that belongs to a specific BUKU category or even disregarding the BUKU classification as the research sample. For example, Daryanto and Meiliawati (2022) only examined the soundness of BUKU IV Indonesian banks whereas Asna and Nu (2006) assessed publicly listed banks on the Jakarta Stock Exchange (JSX) during the 2002 – 2004 period. Although it is logical to assume that BUKU IV are the healthiest among other BUKU groups due to the size of their core capital, it needs to be statistically proven. Therefore, this study is conducted to examine the impacts of three RBBR factors, which are risk profile, earnings, and capital, on stock returns of the two biggest BUKU groups in Indonesia—BUKU III and BUKU IV banks—and compare both results from 2017 to 2021.

LITERATURE REVIEW (INI BELOM)

Risk-Based Banking Rating (RBBR)

The Indonesian government through both Bank Indonesia and the Financial Services Authority (OJK) issued the updated approach under Bank Indonesia Regulation No. 13/1/PBI/2011 and Circular Letter No. 14/SEOJK.03/2017 respectively to conduct bank soundness assessment using a risk approach called Risk-Based Bank Rating (RBBR). Banks are obliged to conduct this assessment. This method assesses the banking health by evaluating its risk profile, earnings, and capital factors.

HYPOTHESIS DEVELOPMENT

Effects of NPL ratio on Stock Return

The non-performing loans (NPL) ratio is used to calculate the non-performing loans to third parties like private customers or institutional bodies. A high level of credit risk indicates that the operational activities of the bank undergo less effective application of risk management. Therefore, if something like that occurs, it will be impactful if the stock return drops because the company is in difficulty and investors are likely to refrain from investing. Previous research that has been carried out by Syam (2017) and Heryana (2018) respectively shows that NPL has a negative influence and even has no effect on stock returns. Hence, the following hypothesis can be developed according to this information:

H1: NPL has a negative effect on stock returns.

Effects of LDR ratio on Stock Return

The loan-to-deposit ratio (LDR) ratio represents the liquidity risk. It illustrates the ability of the credit issued by the bank to fulfilling its obligations to meet the demand of its depositors to withdraw their money. If the liquidity capacity of a bank goes lower, its liquidity value gets higher. Based on research by Daryanto and Meiliawati (2022) and Patricia et al. (2021), LDR positively influences stock returns. Hence, the following hypothesis can be developed according to this information:

H2: LDR has a positive effect on stock returns.

Effects of ROA ratio on Stock Return

The return on assets (ROA) is a ratio that calculates the amount of return rate according to the total assets of the company. If the ROA is high, investors will become more interested to invest in the company, increasing stock returns and the trading volume of banking stock. Previous studies done by Daryanto and Meiliawati (2022), Yani and Santosan (2020), and Syam (2017) indicate that ROA positively impacts stock returns. Hence, the following hypothesis can be developed according to this information:

H3: ROA has a positive effect on stock returns.

Effects of NIM ratio on Stock Return

The net interest margin (NIM) is a ratio used to examine how well a bank's management is in controlling its productive assets to generate net interest income. The higher the value of the NIM is, the more profitability of a bank will increase. Based on the research conducted by Daryanto and Meiliawati (2022), shows that the NIM ratio positively affects stock returns. However, in another research done by Heryana (2018), the NIM has no influence on stock returns. Hence, the following hypothesis can be developed according to this information:

H4: NIM has a positive effect on stock returns.

Effects of CAR ratio on Stock Return

The capital adequacy ratio (CAR) is a ratio to analyze the company's ability to generate income. The ratio is useful to cover possible losses regarding crediting or trading securities (Praditasari & Amanah, 2017). When purchasing bank stocks, investors take the capital aspect of the bank into consideration which can be calculated by the CAR. The improvement in the health of the banking sector increases investors' interest to buy stocks. Another interpretation is that banks with high CAR have the ability to increase the arising losses better to decrease any liquidation possibility. Banks that can avoid liquidation are those that have high capital. As a result, investors can feel safer when investing and they can still receive the expected return. According to research done by Patricia et al. (2021), Yani and Santosan (2020), and Heryana (2018), CAR has a positive influence on stock returns. Hence, the following hypothesis can be developed according to this information:

H5: CAR has a positive effect on stock returns.

Effects of Bank Size on Stock Return

The size of a bank illustrates how much power it has. In general, the larger the bank is, the higher the capitalization value it will have (Nugraha & Haryanto, 2021). Larger banks are more likely to gain increased public trust, which gives a positive signal to investors to invest in their stocks. As a result, it will increase the investors' interest, leading to a higher stock demand and eventually to increased stock returns. According to Nugraha and Haryanto (2021), Hao Liu et al (2021), Yong and Laing (2020), and Broadstock et al (2021), bank size has a positive influence on stock returns. Hence, the following hypothesis can be developed according to this information:

H6: Bank size has a positive effect on stock returns.
H7: There is a difference between the stock returns of BUKU III and the stock returns of BUKU IV.

METHODOLOGY

Population and Sample

This study uses total population sampling, defined as a purposive sampling technique involving the examination of an entire population that has specific characteristics set like particular traits, knowledge, and skills (Lærd, 2012). Hence, the research sample is selected based on the criteria as follows:

1. Banks that are consistently listed on the Indonesian Stock Exchange (IDX) from 2017 to 2021.
2. Banks providing complete quarterly financial statements from 2017 to 2021.
3. Banks that are categorized as conventional that actively traded in the Indonesia Stock Exchange (IDX) from 2017 to 2021.
4. Banks under the BUKU IV category with a minimum core capital of IDR 30 trillion.
5. Banks under BUKU III category with a core capital between IDR 5 trillion to IDR 30 trillion.

With these criteria in mind, this study uses the following lists of BUKU III and BUKU IV banks as the research sample:

1. BUKU III Banks:
   Out of 18 BUKU III banks based on CNBC Indonesia (2021), only 11 of them meet the research sample criteria of this study. Therefore, the researcher only uses 61.1% of the BUKU III population which can be seen in the following table:

Table 1 Research Sample: BUKU III Banks

No.	Bank Name	Stock Code
1	PT Bank China Construction Bank Indonesia Tbk	MCOR
2	PT Bank OCBC NISP Tbk	NISP
3	PT Bank Maybank Indonesia Tbk	BNII
4	PT Bank Tabungan Negara (Persero) Tbk	BBTN
5	PT Bank BTPN Tbk	BTPN
6	PT Bank Sinarmas Tbk	BSIM
7	PT Bank Woori Saudara Indonesia 1906 Tbk	SDRA
8	PT Bank Mayapada Internasional Tbk	MAYA
9	PT Bank Mega Tbk	MEGA
10	PT Bank Jago Tbk	ARTO
11	PT Bank Pembangunan Daerah Jawa Timur Tbk	BJTM

(CNBC Indonesia, 2021)

2. BUKU IV:
   All 8 BUKU IV banks based on CNBC Indonesia (2021) meet the aforementioned research sample criteria. Therefore, this study uses 100% of the BUKU IV population which can be seen in the following table:

Table 1 Research Sample: BUKU III Banks

No.	Bank Name	Stock Code
1	PT Bank Central Asia Tbk	BBCA

2	PT Bank Rakyat Indonesia (Persero) Tbk	BBRI
3	PT Bank Mandiri (Persero) Tbk	BMRI
4	PT Bank Negara Indonesia (Persero) Tbk	BBNI
5	PT Bank Pan Indonesia Tbk	PNBN
6	PT Bank Danamon Indonesia Tbk	BDMN
7	PT Bank CIMB Niaga Tbk	BNGA
8	PT Bank Permata Tbk	BNLI

(CNBC Indonesia, 2021)

Measurement of Variables

A. Independent Variables

Independent variable is the variable that causes a change in a phenomenon and influences the dependent variable (Kumar, 2011). In this study, the researcher uses five ratios from the Risk-Based Bank Rating (RBBR) factors as follows:

1. Non-Performing Loans (NPL)

   Non-performing loans (NPL) is a condition when the debtor is unsuccessful in making contractual payments which are usually in the form of interest with the principal (Casu et al., 2015). The formula to calculate NPL and its parameter criteria is shown in the following equation and table:

$$NPL = \frac{Total\ Non\ Performing\ Loans}{Total\ Loans}$$

Table 3 NPL Parameter Criteria

Criteria	Criteria Category
NPL < 2%	Very Healthy
2% <= NPL < 5%	Healthy
5% <= NPL < 8%	Quite Healthy
8% <= NPL < 12%	Less Healthy
NPL >= 12%	Unhealthy

Source: BI Circular Letter No. 13/24/DPNP/2011

2. Loan-to-Deposit Ratio (LDR)

   Loan-to-deposit ratio (LDR) is a traditional measure of liquidity risk (Casu et al., 2015). The formula to calculate LDR and its parameter criteria is shown in the following equation and table:

$$LDR = \frac{Total\ \ Loans}{Third\ Party\ Funds\ (Deposits)}$$

Table 4 LDR Parameter Criteria

Criteria	Criteria Category
LDR <= 75%	Very Healthy
75% < LDR <= 85%	Healthy
85% < LDR <= 100%	Quite Healthy
100% < LDR <= 120%	Less Healthy
LDR > 120%	Unhealthy

Source: BI Circular Letter No. 13/24/DPNP/2011

3. Return on Assets (ROA)

   Return on assets (ROA) is a measure of the company's profitability. Banks with a high ROA are better in the eyes of investors because it indicates that they can turn assets into profitability better than those with a low ROA. The formula to calculate ROA and its parameter criteria is shown in the following equation and table:

$$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$$

Table 5 ROA Parameter Criteria

Criteria	Criteria Category
ROA > 1.5%	Very Healthy
1.25% < ROA <= 1.5%	Healthy
0.5% < ROA <= 1.25%	Quite Healthy
0% < ROA <= 0.05%	Less Healthy
ROA <= 0%	Unhealthy

Source: BI Circular Letter No. 13/24/DPNP/2011

4. Net Interest Margin (NIM)
   Net interest margin (NIM) is the ability of banks in placing productive assets owned by companies to generate net interest income (Sari & Dahar, 2016). The formula to calculate NIM and its parameter criteria is shown in the following equation and table:

$$NIM = \frac{Net\ Interest\ Income}{Productive\ Assets} \times 100\%$$

Table 6 NIM Parameter Criteria

Criteria	Criteria Category
NIM > 3%	Very Healthy
2% < NIM <= 3%	Healthy
1.5% < NIM <= 2%	Quite Healthy
1% < NIM <= 1.5%	Less Healthy
NIM <= 1%	Unhealthy

Source: BI Circular Letter No. 13/24/DPNP/2011

5. Capital Adequacy Ratio (CAR)
   Capital Adequacy Ratio (CAR) is a measure of the banks' financial strength. The formula to calculate CAR and its parameter criteria is shown in the following equation and table:

$$CAR = \frac{Tier\ 1\ Capital + Tier\ 2\ Capital}{Risk\ Weighted\ Assets}$$

Table 7 CAR Parameter Criteria

Criteria	Criteria Category
CAR >= 12%	Very Healthy
9% <= CAR < 12%	Healthy
8% <= CAR < 9%	Quite Healthy
6% <= CAR < 8%	Less Healthy
CAR <= 6%	Unhealthy

Source: BI Circular Letter No. 13/24/DPNP/2011

Since this research examines two different BUKU categories, independent dummy variables are used which covers NPL, LDR, ROA, NIM, and CAR of BUKU III and BUKU IV. A dummy variable is a branched variable created from an originally qualitative variable (Hardy, 1993). It also allows the researcher to divide observations into categories (Hardy, 1993, p. 82). Therefore, this study uses dummy variables to classify BUKU categories. A dummy variable with a value of 1 shows that its coefficient will change the intercept while a value of 0 illustrates that the variable coefficient will not influence the dependent variable (Wijaya, 2020). This study uses a dummy variable of 0 to indicate BUKU III whereas a dummy variable of 1 indicates BUKU IV.

B. Dependent Variable

Dependent variable is a variable that is affected by independent variables (Sugiyono, 2018). The dependent variable used in this study is the stock returns of publicly listed banks categorized in BUKU III and BUKU IV during the 2017 – 2021 quarterly period which will be calculated. The amount of the stock return is reflected in the actual return. The formula to calculate the actual stock return is

$$Stock\ Return\ (SR_{i,t}) = \frac{Stock\ Price_{i,t} - Stock\ Price_{i,t-1}}{Stock\ Price_{i,t-1}}$$

Where:
$SR_{i,t}$ = Stock return of a company *i* at *t* period.
$Stock\ Price_{i,t}$ = Stock price of the company *i* at *t* period.
$Stock\ Price_{i,t-1}$ = Stock price of the company *i* at *t-1* period.

C. Control Variable

A control variable is a variable that is not a part of the main interest but serves as an influential third factor that is to be controlled or eliminated (Salkind, 2010). Although this type of variable does not take part in the test and may not be measured, it is of significance due to its effects on the test results (Helmenstine, 2020). Since BUKU III and BUKU IV have different sizes in their core capital, this study uses bank size as a control variable.

Data Analysis Technique

This study uses descriptive analysis to ensure data accuracy and to test the hypotheses (Sekaran & Bougie, 2016). In practice, software programs that are used to perform the statistical analysis are Microsoft Excel and EViews 12. Since the data used for this study are time series and cross-sectional the use of EViews 12 is necessary because this software provides statistical analysis and tools to perform multiple regression analysis for this research. At first, the data is processed in Microsoft Excel before being inputted into EViews 12 to test the hypotheses and obtain valid assumptions and authentic conclusions.

RESULT AND DISCUSSION

Risk-Based Bank Rating Analysis

A. Risk Profile

1. Non-Performing Loans (NPL)
   a. BUKU III

Table 8 Average NPL Ratios of BUKU III Banks 2017 – 2021

No.	Stock Code	Average	Category
1	MCOR	3.12%	Healthy
2	NISP	1.91%	Very Healthy
3	BNII	3.76%	Healthy
4	BBTN	3.52%	Healthy
5	BTPN	1.04%	Very Healthy
6	BSIM	5.42%	Quite Healthy
7	SDRA	1.58%	Very Healthy
8	MAYA	4.42%	Healthy
9	MEGA	1.89%	Very Healthy
10	ARTO	4.49%	Healthy
11	BJTM	4.13%	Healthy
Average		3.21%	Healthy

Source: Quarterly Reports of CCB, OCBC NISP, Maybank, BTN, BTPN, Sinarmas, Woori Saudara, Mayapada, Mega, Jago, and Jatim.

Table 8 shows that the average non-performing loans (NPL) of public listed banks under the BUKU III category in Indonesia from Q1 2017 to Q4 2021 is 3.21%, which was also considered

healthy. OCBC NISP, BTPN, Bank Woori Saudara, and Bank Mega were categorized as very healthy during the period with an average NPL ratio of 1.91%, 1.04%, 1.58%, and 1.89% respectively. The rest of the banks had healthy predicates except Bank Sinarmas which was categorized as quite healthy with an average ratio of 5.42%. Bank Sinarmas has the highest average NPL because it has the highest NPL among other banks, which is 11.16% in Q2 2021 (see Appendix 1) due to a poor performance during the second quarter of 2021.

b. BUKU IV

Table 9 Average NPL Ratios of BUKU IV Banks 2017 – 2021

No.	Stock Code	Average	Category
1	BBCA	1.69%	Very Healthy
2	BBRI	2.64%	Healthy
3	BMRI	3.13%	Healthy
4	BBNI	2.78%	Healthy
5	PNBN	3.04%	Healthy
6	BDMN	3.31%	Healthy
7	BNGA	3.46%	Healthy
8	BNLI	3.91%	Healthy
Average		2.99%	Healthy

Source: Quarterly Reports of BCA, BRI, Mandiri, BNI, Panin, Danamon, CIMB Niaga, and Permata

Table 9 shows that the average non-performing loans (NPL) of public listed banks under the BUKU IV category in Indonesia from Q12017 to Q4 2021 is 2.99%, which was considered healthy. Most banks had healthy predicates with an average NPL ratio ranging from 2.64% to 3.91% while BCA was the only bank to be categorized as very healthy during the period with an average NPL ratio of 1.69%. BCA has the lowest average NPL because they were able to maintain a very healthy predicate throughout the observed period with an NPL ranging from 1.34% to 1.60% (see Appendix 1).

2. Loan-to-Deposit Ratio (LDR)

a. BUKU III

Table 10 Average LDR Ratios of BUKU III Banks 2017 – 2021

No.	Stock Code	Average	Category
1	MCOR	84.93%	Healthy
2	NISP	86.58%	Quite Healthy
3	BNII	88.06%	Quite Healthy
4	BBTN	104.02%	Less Healthy
5	BTPN	126.59%	Unhealthy
6	BSIM	71.78%	Very Healthy
7	SDRA	134.90%	Unhealthy
8	MAYA	84.13%	Healthy
9	MEGA	63.10%	Very Healthy
10	ARTO	89.40%	Quite Healthy
11	BJTM	63.04%	Very Healthy
Average		90.59%	Quite Healthy

Source: Quarterly Reports of CCB, OCBC NISP, Maybank, BTN, BTPN, Sinarmas, Woori Saudara, Mayapada, Mega, Jago, and Jatim.

Table 10 shows that the average loan-to-deposit ratio (LDR) of public listed banks under the BUKU III category in Indonesia from Q1 2017 to Q4 2021 is 90.59%, which was considered quite healthy. It means that these banks still have enough liquidity to cover any unpredictable fund requirements. Bank Sinarmas, Bank Mega, and Bank Jatim were categorized as very healthy during the period with an average LDR of 71.78%, 63.10%, and 63.04% respectively. Meanwhile, Bank CCB and Bank Mayapada were classified as healthy with a respective average LDR of 84.93% and 84.13%. OCBC NISP, Maybank, and Bank Jago were categorized as quite healthy with a respective average LDR of 86.58%, 88.06%, and 89.40%. Finally, BTN and BTPN were respectively considered less healthy and unhealthy with an average LDR of

104.02% and 126.59%. The LDR of BTPN increased significantly to 137.38% due to a merger with PT Bank Sumitomo Mitsui Indonesia (SMBCI) which took place on February 1, 2019. The CEO of BTPN, Ongki Wanajati, stated that the financial performance of that period did not reflect their actual performance. BTPN recorded its performance for only two months while the performance of the retail banking business is three months (CNBC Indonesia, 2019). The performance of the other one month was included in their return earnings that could not be acknowledged as profits.

b. BUKU IV

Table 11 Average LDR Ratios of BUKU IV Banks 2017 – 2021

No.	Stock Code	Average	Category
1	BBCA	73.93%	Very Healthy
2	BBRI	89.00%	Quite Healthy
3	BMRI	89.50%	Quite Healthy
4	BBNI	88.45%	Quite Healthy
5	PNBN	95.12%	Quite Healthy
6	BDMN	92.05%	Quite Healthy
7	BNGA	89.51%	Quite Healthy
8	BNLI	82.51%	Healthy
Average		87.51%	Quite Healthy

Source: Quarterly Reports of BCA, BRI, Mandiri, BNI, Panin, Danamon, CIMB Niaga, and Permata

Table 11 shows that the average loan-to-deposit ratio (LDR) of public listed banks under the BUKU IV category in Indonesia from Q1 2017 to Q4 2021 is 87.51%, considered quite healthy. It means that these banks still have enough liquidity to cover any unpredictable fund requirements. Similar to NPL, only BCA was categorized as very healthy during the period with an average LDR of 73.93%. Meanwhile, Bank Permata is the only one with a healthy predicate with an average LDR of 82.51%. The rest of the banks had quite healthy predicates with an average LDR ranging from 88.45% to 95.12%. Unlike other quite healthy banks, Panin Bank had an LDR of more than 100% from Q2 2018 to Q1 2020 (see Appendix 1). In 2018, the bank implemented a strategy to maintain financial stability by improving the cost of funds structure amidst the increasing BI rates. However, adjustments in deposit interest rates and the increase in BI rates caused the third-party fund collection to be off target. Meanwhile, the bank held back its plans to issue continuous bonds and waited for the right momentum in the midst of rising market uncertainty, which resulted in an increase in LDR amounting to 110.07% in Q4 2018 from 96.28% in Q4 2017. The LDR of Panin Bank remained within the range of 100% in the following year because its attempt to manage its third-party funds more efficiently caused interest rates to decrease, thus leading the bank to fail in accumulating the third-party funds as expected.

B. Earnings

1. Return on Assets (ROA)
   a. BUKU III

Table 12 Average ROA Ratios of BUKU III Banks 2017 – 2021

No.	Stock Code	Average	Category
1	MCOR	0.62%	Quite Healthy
2	NISP	2.00%	Very Healthy
3	BNII	1.09%	Quite Healthy
4	BBTN	1.09%	Quite Healthy
5	BTPN	1.74%	Very Healthy
6	BSIM	0.72%	Quite Healthy
7	SDRA	2.26%	Very Healthy
8	MAYA	0.81%	Quite Healthy
9	MEGA	2.84%	Very Healthy
10	ARTO	3.98%	Unhealthy
11	BJTM	3.07%	Very Healthy

Average	1.11%	Quite Healthy

Source: Quarterly Reports of CCB, OCBC NISP, Maybank, BTN, BTPN, Sinarmas, Woori Saudara, Mayapada, Mega, Jago, and Jatim.

Table 13 shows that the average return on assets (ROA) of public listed banks under the BUKU III category in Indonesia from Q1 2017 to Q4 2021 is 1.11%, considered quite healthy. It means that these banks convert their assets into net income with sufficient effectiveness. OCBC NISP, BTPN, Bank Woori Saudara, Bank Mega, and Bank Jatim were categorized as very healthy during the period with an average ROA of 2%, 1.74%, 2.26%, 2.84%, and 3.07% respectively. The rest of the banks except Bank Jago had quite healthy predicates with an average ROA ranging from 0.62% to 1.09%. Bank Jago was the only bank classified as unhealthy because the average of its ROA reached -3.98% because its net income was in the red from Q2 2017 until Q3 2021, making its ROA negative as well.

b. BUKU IV

Table 13 Average ROA Ratios of BUKU IV Banks 2017 – 2021

No.	Stock Code	Average	Category
1	BBCA	3.55%	Very Healthy
2	BBRI	3.06%	Very Healthy
3	BMRI	2.71%	Very Healthy
4	BBNI	2.17%	Very Healthy
5	PNBN	1.83%	Very Healthy
6	BDMN	2.00%	Very Healthy
7	BNGA	1.69%	Very Healthy
8	BNLI	0.92%	Quite Healthy
Average		2.24%	Very Healthy

Source: Quarterly Reports of BCA, BRI, Mandiri, BNI, Panin, Danamon, CIMB Niaga, and Permata

Table 13 shows that the average return on assets (ROA) of public listed banks under the BUKU IV category in Indonesia from Q1 2017 to Q4 2021 is 2.24%, considered very healthy. It means that these banks were effective in converting their assets into net income. All banks except Bank Permata received very healthy predicates during the period with an average ROA ranging from 1.69% up to 3.55%. Bank Permata was the only bank that had a quite healthy predicate with an average ROA of 0.92%. The majority ROA of Bank Permata was between 0.50% and 1.25% from Q1 2017 to Q4 2021 (see Appendix 1). Its lowest ROA period was 0.5% in Q2 2018. At that time, its financial performance was reflected in a decline in its net income by 56.18% compared to the same period of the previous year. In addition, Bank Permata had to bear a significant increase in operating expenses (CNBC Indonesia, 2018). Excluding the net interest, the operating expenses of Bank Permata rose by 35.58%, reaching IDR 2.61 trillion. On the other hand, the net interest income increased by 2.86% because management succeeded in suppressing interest expenses from IDR 3.08 trillion to IDR 2.73 trillion. Due to its weaker performance in Q2 2018, its ROA fell in that quarter.

2. Net Interest Margin (NIM)

a. BUKU III

Table 14 Average NIM Ratios of BUKU III Banks 2017 – 2021

No.	Stock Code	Average	Category
1	MCOR	3.85%	Very Healthy
2	NISP	4.05%	Very Healthy
3	BNII	4.13%	Very Healthy
4	BBTN	3.83%	Very Healthy
5	BTPN	6.48%	Very Healthy
6	BSIM	6.66%	Very Healthy
7	SDRA	4.24%	Very Healthy
8	MAYA	2.56%	Healthy
9	MEGA	5.19%	Very Healthy

10	ARTO	4.64%	Very Healthy
11	BJTM	6.07%	Very Healthy
Average		4.70%	Very Healthy

Source: Quarterly Reports of CCB, OCBC NISP, Maybank, BTN, BTPN, Sinarmas, Woori Saudara, Mayapada, Mega, Jago, and Jatim.

Table 14 shows that the average net interest margin (NIM) of public listed banks under the BUKU III category in Indonesia from Q1 2017 to Q4 2021 is 4.70%, considered very healthy. It means that these banks also obtain interest income through the provision of credit options. All banks except Bank Mayapada received very healthy predicates during the period with an average NIM ranging from 3.83% up to 6.66%. Bank Mayapada was the only bank that had a quite healthy predicate with an average NIM of 2.56%. Its NIM exceeded 3% from Q1 2017, before dropping significantly in Q4 2019 from 3.61% to -0.95% in Q1 2020 (see Appendix 1). At that time, its net interest income decreased from IDR 689.87 trillion in Q4 2019 to -IDR 181.37 trillion in Q1 2020. This decline was due to the weakening demand for credit and the decreasing interest rate rendered. The credit's interest rate was reviewed and adjusted by the bank to comply with the interest rate reduction policy by BI and liquidity condition.

b. BUKU IV

Table 15 Average NIM Ratios of BUKU IV Banks 2017 – 2021

No.	Stock Code	Average	Category
1	BBCA	5.93%	Very Healthy
2	BBRI	7.11%	Very Healthy
3	BMRI	5.22%	Very Healthy
4	BBNI	5.03%	Very Healthy
5	PNBN	4.64%	Very Healthy
6	BDMN	5.67%	Very Healthy
7	BNGA	5.07%	Very Healthy
8	BNLI	4.18%	Very Healthy
Average		5.36%	Very Healthy

Source: Quarterly Reports of BCA, BRI, Mandiri, BNI, Panin, Danamon, CIMB Niaga, and Permata

Table 15 hows the average net interest margins (NIM) of public listed banks under the BUKU IV category in Indonesia from Q1 2017 to Q4 2021 is 5.36%, considered very healthy. It means that these banks obtain interest income through the provision of credit options. All banks were categorized as very healthy during the period with an average NIM ratio ranging from 4.18% up to 7.11%. Among these banks, BRI was the one that earned the highest interest from its loans because the bank managed to maintain the ratio between 5.70% to 8.15% from Q1 2017 to Q4 2021 (see Appendix 1).

C. Capital

Capital Adequacy Ratio (CAR)

a. BUKU III

Table 16 Average CAR Ratios of BUKU III Banks 2017 – 2021

No.	Stock Code	Average	Category
1	MCOR	22.29%	Very Healthy
2	NISP	19.29%	Very Healthy
3	BNII	20.82%	Very Healthy
4	BBTN	18.15%	Very Healthy
5	BTPN	24.34%	Very Healthy
6	BSIM	18.56%	Very Healthy
7	SDRA	21.12%	Very Healthy
8	MAYA	14.71%	Very Healthy
9	MEGA	25.12%	Very Healthy

10	ARTO	109.79%	Very Healthy
11	BJTM	22.72%	Very Healthy
Average		28.81%	Very Healthy

Source: Quarterly Reports of CCB, OCBC NISP, Maybank, BTN, BTPN, Sinarmas, Woori Saudara, Mayapada, Mega, Jago, and Jatim.

Table 16 shows the average capital adequacy ratio (CAR) of public listed banks under the BUKU III category in Indonesia from Q1 2017 to Q4 2021 is 28.81%, considered very healthy. It means that these banks could also anticipate the risk by providing a considerable amount of capital. All banks were categorized as very healthy during the period with an average CAR ratio ranging from 14.71% up to 109.79%. Among these banks, Bank Jago was the one that had the best ability to deal with a possible risk of loss. The CAR of Bank Jago increased significantly in Q4 2019 to 148.28% from 15.47% in Q3 2019 (see Appendix 1) because the new controlling investors, WTT and MEI, had injected capital in form of a capital deposits fund in late December 2019 as part of the early rights issue process. This right issue was given by the bank as part of its plan to conduct a Limited Public Offering. In Q1 2021, its CAR rose significantly again to 538.01% from 91.38% in Q4 2020 because of the March 2021 Rights Issue. The second right issue was taken as corporate action to strengthen its capital. With such a high CAR, the bank had the necessary capital reserves for covering all identified risks and making sure that sustainable capital was available to overcome those risks.

b. BUKU IV

Table 17 Average CAR Ratios of BUKU IV Banks 2017 – 2021

No.	Stock Code	Average	Category
1	BBCA	23.91%	Very Healthy
2	BBRI	21.26%	Very Healthy
3	BMRI	20.53%	Very Healthy
4	BBNI	18.32%	Very Healthy
5	PNBN	24.97%	Very Healthy
6	BDMN	24.10%	Very Healthy
7	BNGA	19.81%	Very Healthy
8	BNLI	23.30%	Very Healthy
Average		22.02%	Very Healthy

Source: Quarterly Reports of BCA, BRI, Mandiri, BNI, Panin, Danamon, CIMB Niaga, and Permata

Table 17 shows the average capital adequacy ratio (CAR) of public listed banks under the BUKU IV category in Indonesia from Q1 2017 to Q4 2021 is 22.02%, considered very healthy. It means that these banks could anticipate the risk by providing a considerable amount of capital. All banks were categorized as very healthy during the period based on the Circular Letter of Bank Indonesia No. 13/24/DPNP/2011 standard with an average CAR ratio ranging from 18.32% up to 24.97%. Among these, Bank Panin was the one that had the best ability to deal with a possible risk of loss. It shows that the bank was able to maintain a strong capital condition and excellent financial performance amidst the uncertainty challenges of economy and market conditions. The bank was able to anticipate all major risks including market risk, credit risk and operational risk and to support future busines growth.

Descriptive Statistics

Table 18 Descriptive Statistics Result

	NPL	LDR	ROA	NIM	CAR	Bank Size	Stock Returns
Mean	0.03117	0.89294	0.01588	0.04977	0.25952	18.73087	0.060147
Median	0.03005	0.88125	0.01785	0.04820	0.21070	18.96511	0.015350
Maximum	0.11160	1.71320	0.04220	0.04820	5.38010	21.17610	5.497000
Minimum	0.00000	0.41220	-0.15890	-0.00950	0.12490	13.40705	-0.762900
Std. Dev.	0.01555	0.21628	0.01888	0.01419	0.36762	1.574631	0.380561

Observation	380	380	380	380	380	380	380

Table 18 shows that the total observation of each variable is 380 which comes from 19 banks under BUKU III and BUKU IV categories taken from the year of 2017 to 2021 that are calculated on quarterly basis thus, 20 x 19 = 380 data observations. The table also shows that the study uses one dependent variable (stock returns), five independent variables (NPL, LDR, ROA, NIM, and CAR), and one control variable (bank size).

The mean result of NPL is 0.031174 or 3.12% which is deemed healthy. It can be assumed that the credit risk that the average BUKU III and BUKU IV banks had to endure did not jeopardize bank profitability. It is also apparent that the median NPL is 0.030050 or 3.01%. Moreover, the maximum NPL is 0.111600 or 11.16% which comes from Bank Sinarmas whereas the minimum NPL is 0.000000 or 0% which comes from Bank Jago. The standard deviation for NPL is 0.015552 which is less than 2, indicating that the measurement is closer to the true value.

In addition, the mean result of LDR is 0.892943 or 89.29% which is deemed quite healthy. It can be assumed that the average BUKU III and BUKU IV banks had sufficient liquidity in covering any unpredictable fund requirements. It is also apparent that the median LDR is 0.881250 or 88.13%. Furthermore, the maximum LDR is 1.713200 or 171.32% which comes from Bank BTPN whereas the minimum LDR is 0.412200 or 41.22% which comes from Bank Sinarmas. The standard deviation for LDR is 0.216282 which is less than 2, also indicating that the measurement is closer to the true value.

Furthermore, the mean result of ROA is 0.015882 or 1.59% which is deemed very healthy. It can be assumed that the average BUKU III and BUKU IV banks were very efficient in using their assets to generate income. It can also be seen that the median ROA is 0.017850 or 1.79%. In addition, the maximum ROA is 0.042200 or 4.22% which comes from Bank Mega whereas the minimum ROA is -0.158900 or -15.89% which comes from Bank Jago. The standard deviation for ROA is 0.018883 which is less than 2, also indicating that the measurement is closer to the true value.

Meanwhile, the mean result of NIM is 0.049774 or 4.98% which is deemed very healthy. It can be assumed that the average BUKU III and BUKU IV banks provided credit options to obtain interest income from other firms. It is also apparent that the median NIM is 0.048200 or 4.82%. Moreover, the maximum NIM is 0.098500 or 9.85% which comes from Bank BTPN whereas the minimum NIM is -0.009500 or -0.95% which comes from Bank Mayapada. The standard deviation for NIM is 0.014186 which is less than 2, also indicating that the measurement is closer to the true value.

As for the capital adequacy ratio (CAR), its mean result is is 0.259518 or 25.95% which is deemed very healthy. It can be assumed that the average BUKU III and BUKU IV banks were able to deal with a possible risk of loss. It can also be seen that the median CAR is 0.210700 or 21.07%. Furthermore, the maximum CAR is 5.380100 or 538.01% which comes from Bank Jago whereas the minimum CAR is 0.124900 or 12.49% which comes from Bank Mayapada. The standard deviation for NIM is 0.367617 which is less than 2, also indicating that the measurement is closer to the true value.

Additionally, the mean and median results of bank size is 18.73087. The maximum bank size is 21.17610 and its standard deviation for is 1.574631 which is less than 2, also indicating that the measurement is closer to the true value.

Finally, the mean result of stock returns is 0.060147. It can be assumed that the investors obtained an average return of 6.0147% from their investments in 19 banks from 2017 to 2021. It can also be known that the median stock return is 0.015350. Furthermore, the maximum stock return is 5.497000 which comes from Bank Jago in the third quarter of 2019 whereas the minimum stock return is -0.762900 which also comes from Bank Jago in the first quarter of 2020. The standard deviation for stock returns is 0.380561 which is lower than 2, indicating that the measurement is closer to the true value.

Difference of Means Test: Independent Sample T-Test

Table 19 Independent Sample T-Test Results

	NPL		**LDR**		**III vs IV**	
	III	**IV**	**III**	**IV**	**NPL**	**LDR**

Mean	0.032074	0.029938	0.905929	0.875088	N/A	
Observation (N)	220	160	220	160	380	380
df	378	378	378	378	378	378
t-Statistic	N/A				1.322859	1.374033
P-Value					0.1867	0.1702

	ROA		**NIM**		**III vs IV**	
	III	**IV**	**III**	**IV**	**ROA**	**NIM**
Mean	0.011126	0.022421	0.047010	0.053574	N/A	
Observation (N)	220	160	220	160	380	380
df	378	378	378	378	378	378
t-Statistic	N/A				6.018156	4.568535
P-Value					0.0000	0.0000

	CAR		**Bank Size**		**III vs IV**	
	III	**IV**	**III**	**IV**	**CAR**	**Bank Size**
Mean	0.288088	0.220236	17.87656	19.90553	N/A	
Observation (N)	220	160	220	160	380	380
df	378	378	378	378	378	378
t-Statistic	N/A				1.781512	16.06712
P-Value					0.0756	0.0000

	Stock Returns		
	III	**IV**	**III vs IV**
Mean	0.069208	0.047689	N/A
Observation (N)	220	160	380
Df	378	378	378
t-Statistic	N/A		0.543729
P-Value			0.5869

Table 19 shows two types of data used to perform independent sample t-test, namely data from BUKU III banks and data from BUKU IV banks. The first result shows that the means of bank size of BUKU IV is the highest compared to other averages, reaching 19.90553. Meanwhile, the lowest mean result goes to the ROA ratio of BUKU III which hit 0.011126. As for the second result, table 19 indicates whether there is any statistical difference in the variables of BUKU III and BUKU IV. It is shown that only the ROA, NIM, and bank size of both BUKU groups have a p-value of lower than 0.05 which are all 0.0000. Therefore, the null hypothesis is rejected thus, there is a statistical difference only in the ROA, NIM, and bank size of BUKU III and BUKU IV.

Classical Assumption Test: Multicollinearity Test

The multicollinearity test is a measure to determine whether there is a high correlation between independent variables. There is a multicollinearity problem in a regression model if the result of the test shows that the VIF value of the regression model is equal to or greater than 10 which also means that the null hypothesis is rejected. However, if the VIF value of a regression model is equal to or lower than 10, it indicates that the null hypothesis is not rejected therefore, there is no multicollinearity between the independent variables. In this study, the multicollinearity test is performed once because this study has one regression model. The table below summarizes the result:

Table 22 Multicollinearity Test Result

Variables	**Variance Inflation Factor (VIF)**
NPL	1.569986
LDR	1.250939
ROA	2.273924

NIM	1.268118
CAR	1.501464
Bank Size	1.771238
Note: Control Variable: Bank Size Dependent Variable: Stock Returns	

Table 22 indicates that the VIF values of all independent and control variables are lower than 10 which means the null hypothesis is not rejected and therefore, there is no multicollinearity problem between the independent variables. It can be concluded that the multicollinearity test is passed.

Significance Test

Table 23 Significance Test Results

Variables	Significance Test	Value
NPL	Coefficient	0.417124
	P-Value	0.7818
LDR	Coefficient	-0.132529
	P-Value	0.1638
ROA	Coefficient	-4.740790
	P-Value	0.0017
NIM	Coefficient	1.548427
	P-Value	0.3007
CAR	Coefficient	0.179491
	P-Value	0.0036
Bank Size	Coefficient	-0.014769
	P-Value	0.4662
Dummy	Coefficient	0.060809
	P-Value	0.2368
Adjusted R^2		0.116919
F-statistics		8.168427
Prob (F-Statistics)		0.000000

A. Partial Test (t-Test)

Table 23 shows the results of the partial T-test in the form of coefficient and p-value. The tested data are measured using two criteria. If the results of the p-value are lower than the significance level of 0.05 and 0.10 therefore, the null hypothesis is rejected which indicates that there is a partial effect between the independent variables towards the dependent variables. And if the p-value is greater than the significance level of 0.05 and 0.10 therefore, the null hypothesis is not rejected which indicates that there is no partial effect between the independent variable and the dependent variable. The following is the explanation of independent variables toward the dependent variable:

1. Effect of NPL Ratio on Stock Returns
   Table 23 shows that NPL has a p-value of 0.7818, which is greater than 0.05 and 0.10. Thus, the null hypothesis is not rejected, indicating there is no partial effect between NPL towards stock returns. It can be assumed that NPL had no significance on the banking stock returns of both BUKU III and BUKU IV. It can be assumed that NPL had no effect on stock returns because investors did not take into account the non-performing loans that BUKU III and BUKU IV banks were facing during the period of 2017 - 2021 on the condition that the net NPLs of those banks were below the limit determined by Bank Indonesia, which is 5%.

2. Effect of LDR Ratio on Stock Returns
   Table 23 shows that LDR has a p-value of 0.1638, which is greater than 0.05 and 0.10. Thus, the null hypothesis is not rejected, indicating there is no partial effect between LDR towards stock returns. It can be assumed that LDR had no significance on the banking stock returns of both BUKU III and BUKU IV. It can be assumed that LDR had no effect on stock returns because the ratio was not a

determining factor for BUKU III and BUKU IV banks to channel funds in the form of credit during the 2017 - 2021 period.

3. Effect of ROA Ratio on Stock Returns
   Table 23 shows that ROA has a p-value of 0.0017, which is lower than the significance level of 0.05 and 0.10. Thus, the null hypothesis is rejected, which also means that ROA had a partial effect on stock returns of both BUKU III and BUKU IV. It is also stated that the coefficient value of ROA in is -4.740790 which can be concluded that ROA negatively affects stock returns of BUKU III and BUKU IV banks. It means that if their ROA increases by one percent, it will decrease the banks' stock returns by 4.740790 percent. It can be assumed that ROA had a negative effect on the stock returns of BUKU III and BUKU IV banks because investors saw that these banks had poor performances during the period of 2017 - 2021 due to their inefficient and ineffective management. As a result, it decreased stock prices and therefore declined stock returns

4. Effect of NIM Ratio on Stock Returns
   Table 23 shows that NIM has a p-value of 0.3007, which is greater than 0.05 and 0.10. Thus, the null hypothesis is not rejected, indicating there is no partial effect between NIM towards stock returns. It can be assumed that NIM had no significance on the banking stock returns of both BUKU III and BUKU IV. According to Heryana (2018), it can be assumed that NIM had no effect on their stock returns because investors did not pay much attention to NIM when investing in stocks of BUKU III banks during the 2017 - 2021 period. It means that the growth or decline of this ratio did not influence the market sentiment toward these banks (Ferrari & Daryanto, 2022).

5. Effect of CAR Ratio on Stock Returns
   Table 23 shows that CAR has a p-value of 0.0036, which is lower than significance levels of 0.05 and 0.10. Therefore, the null hypothesis is rejected, indicating that there is a partial effect between CAR towards stock returns of BUKU III and BUKU IV. It is also stated that the coefficient value of CAR is 0.179491 which can be concluded that CAR positively affects stock. It means that if the CAR of BUKU III and BUKU IV banks increases by one percent, it will rises the banks' stock returns 0.179491 percent. According to Suardana (2009), it can be assumed that CAR had a positive effect on the stock returns of BUKU III and BUKU IV because their large CAR during the period of 2017 - 2021 gave a positive signal to investors that they had enough capital to run their business and increase their profits. As a result, investors became more interested to invest in their stocks which eventually increased their stock returns.

6. Effect of Bank Size on Stock Returns
   Bank size is a control variable in this study. Table 23 shows that bank size has a p-value of 0.4662, which is greater than 0.05 and 0.10. Thus, the null hypothesis is not rejected, indicating there is no partial effect between bank size towards stock returns. It can be assumed that bank size had no significance on the banking stock returns of both BUKU III and BUKU IV.

As for dummy variables of this study, BUKU III and BUKU IV, their interpretations are different from other variables. Table 23 shows that the dummy has a p-value of 0.2368, which is greater than 0.05 and 0.10. Thus, the null hypothesis is not rejected, indicating that the dummy variables are statistically insignificant. The regression coefficient of the dummy shows that BUKU IV banks earned 0.060809 of stock return more than those of BUKU III during the observed period.

B. Simultaneous Test (F-test)

The F-test determines whether the independent variables have a simultaneous influence on the dependent variable. If the probability value of F-statistics is lower than the significance level of 0.05 thus, the null hypothesis is rejected. It means that all independent variables have the same effect on the dependent variable. However, if the p-value is greater than the significance level of 0.05 thus, the null hypothesis is not rejected. It indicates that all independent variables do not have the same effect on the dependent variable.

Table 23 shows that the p-value is 0.000000, which is lower than 0.05 thus, the null hypothesis is rejected. In other words, all independent variables in this study that consist of NPL, LDR, ROA, NIM, and CAR, as well as a control variable, bank size, and dummy variables, BUKU III and BUKU IV, had a

simultaneous effect on the dependent variable, which is stock returns.

C. Coefficient of Determination (Adjusted R^2)

Adjusted R^2 is performed to measure the ability of the regression model to explain the dependent variable based on a score ranging from 0 to 1. Table 23 shows the values of adjusted R^2 is 0.116919. It means that the independent variables can explain the dependent variable by 11.69%. The remaining percentages are explained by other variables.

Conclusion and Recommendations

Conclusion

It can be concluded that this study shows that BUKU IV was healthier regarding NPL, LDR, ROA, and NIM than BUKU III whereas the latter was healthier in terms of CAR compared to BUKU IV according to the RBBR analysis. In terms of the effect RBBR ratios had on the stock returns of both BUKU groups, this study indicates that their NPL, LDR, and NIM had no effect on stock returns whereas ROA and CAR had a negative and a positive effect. It is also noted that there was no difference between the stock returns of BUKU III and the stock returns of BUKU IV despite their differing core capital.

Recommendation

A. For Future Research

This study only covers a comparison between BUKU III and BUKU IV, future research is encouraged to examine other BUKU I and BUKU II as well as to broaden the perspective on the banking industry in Indonesia. In addition, it is suggested to incorporate the GCG factor because the variables used in this study are not broad enough to explain the entire correlation toward stock returns. It is also recommended to gather more extensive data daily or weekly for more accurate results. Lastly, future studies can include external independent variables like the inflation rate, exchange rate, and economic growth rate to assess the effects on stock returns.

B. For Investors

As the Indonesian government heavily regulates and monitors the health of the Indonesian banking industry, making investment decisions based on RBBR ratios are deemed unnecessary. Therefore, it is recommended that investors take other financial ratios namely the price-to-book value ratio (PBV), the price-to-earnings ratio (PER), earnings per share ratio (EPS), and other fundamental information when making investment decisions in bank stocks.

C. For Banks

Banks are advised to maintain and improve their performance to increase investors' interest in investing in their stocks. It will help rising their stock price and automatically affect the movement of their stock returns.

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