



Performance Analysis Bank Group Based on Core Capital 4 (KBMi4) 2017–2022

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ABSTRACT

In this research, a sample of banks from the KBMI 4 group is used to describe banking sustainability during the COVID-19 crisis. In this group, bank profits and assets increased during the event period. The aim of this research is to see and analyze the influence of six (six) independent variables on bank profit achievement. Apart from that, this research also evaluates and analyzes the influence of the type of ownership and the time period of the incident on the achievement of bank profits, to determine which entity is most effective in achieving bank profits at this time. In this research, multiple regression methods and difference tests were used. The results show that three variables (ASSET, BOPO, and LDR) have an impact on profits, while three variables (CAR, NPL, and NIM) have no influence. However, based on the type of bank ownership between State-Owned Enterprises and National Private Enterprises or based on the time period of the incident, there is no difference in influence in achieving bank profits.

INTRODUCTION

The COVID-19 pandemic has hampered and slowed down business operations, including the banking sector. In the banking industry, there was a "surprise" increase in debtor credit returns. However, the increase in operational costs is not always in line with the growth of the bank's main business, which ultimately results in a significant decline in profitability or bank performance.

Thus, the performance of banks that are members of the KBMI 4 group attracts attention because they are part of Indonesian conventional banking. These banks include BRI, Mandiri, BNI, and BCA, each of which has core capital of more than 70 trillion rupiah.

Table 1 projected in the following figure shows that the KBMI 4 bank group has a better business portfolio, including lending and raising third party funds, but their profits decreased in 2020.



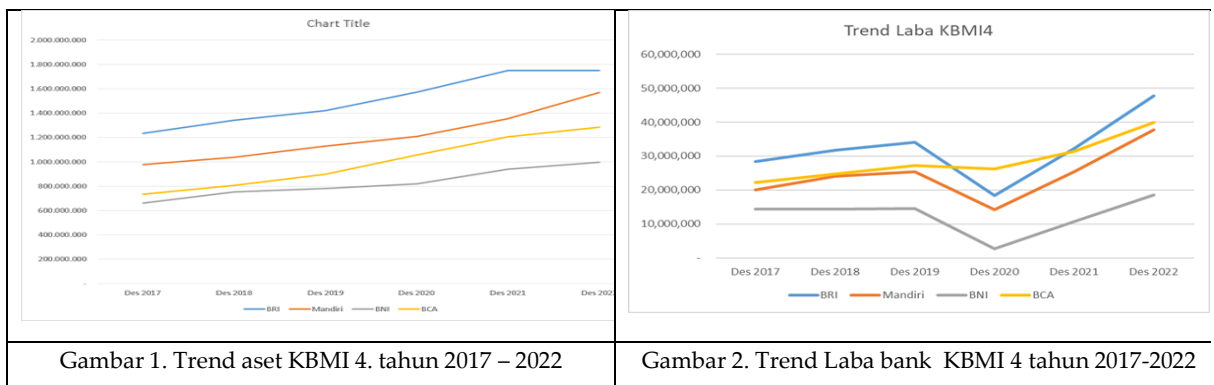


Table 1. Performance Comparison of KBMI 5 years 2017-2022

Bank	Keterangan	Des-18	Des-19	Des-20	Des-21	Des-22	Avg
BRI	Inc. Kredit	13,6%	6,9%	2,5%	7,2%	9,1%	7,8%
	Inc. DPK	36,3%	8,0%	8,6%	-32,2%	82,2%	20,6%
	Inc. Laba	11,4%	7,3%	-46,1%	75,5%	48,5%	19,3%
MDRI	Inc. Kredit	11,6%	10,2%	-3,6%	8,4%	12,6%	7,8%
	Inc. DPK	1,3%	10,4%	11,5%	12,9%	16,3%	10,5%
	Inc. Laba	20,3%	5,7%	-44,4%	79,5%	48,3%	21,9%
BNI	Inc. Kredit	15,9%	8,1%	5,6%	5,4%	10,5%	9,1%
	Inc. DPK	11,7%	4,9%	10,7%	15,4%	4,6%	9,5%
	Inc. Laba	-0,7%	1,9%	-81,1%	287,9%	73,4%	56,3%
BCA	Inc. Kredit	15,0%	9,4%	-2,1%	7,8%	11,4%	8,3%
	Inc. DPK	8,4%	11,1%	19,4%	15,8%	5,9%	12,1%
	Inc. Laba	11,5%	10,4%	-3,6%	19,5%	27,2%	13,0%
Aavg. KBMI4	Inc. Kredit	14,0%	8,6%	0,6%	7,2%	10,9%	8,3%
	Inc. DPK	14,4%	8,6%	12,5%	3,0%	27,2%	13,2%
	Inc. Laba	10,6%	6,3%	-43,8%	115,6%	49,4%	27,6%

Source ; processed data

Figure 1 and 2. Asset and Profit trend



Gambar 1. Trend aset KBMI 4. tahun 2017 – 2022

Gambar 2. Trend Laba bank KBMI 4 tahun 2017-2022

Source: Processed Data, 2024

From Figure 2, we can see that each bank in the KBMI 4 group experienced fluctuations in profit achievement during the crisis. Only BRI bank experienced the largest decline (amount) in profit achievement in 2020, but if we consider the percentage weight parameter (%), we will see that BNI bank experienced a larger decline, namely 81.1% (table 1). However, all KBMI 4 group banks experienced total profits in 2020.

The decrease in operational income caused a decrease in profits in 2020. This was caused by the composition of third party funds (DPK), which is an expensive source of funds, dominated by deposits (T/D). The average composition of third party funds is above 25%, except for Bank BCA at 20.7% (table 2), and additional credit risk costs (table 3) as a result of the migration pattern of credit collectibility which changed from Current to Substandard, Doubtful until traffic jam.



**Table 2. Composition of KBMI bank DPK 6 years 2017-2022**

Pos-pos		Des-17	Des-18	Des-19	Des-20	Des-21	Des-22	Avg
BRI	Giro (Current Asset)	0,0%	19,6%	17,3%	17,4%	30,7%	26,9%	18,7%
	Tabungan (Saving)	52,0%	42,2%	41,7%	43,6%	69,3%	40,1%	48,1%
	Deposito (T/D)	48,0%	38,2%	41,0%	39,0%	0,0%	33,1%	33,2%
MNDR	Giro (Current Asset)	26,8%	25,9%	29,0%	31,2%	36,9%	41,7%	31,9%
	Tabungan (Saving)	41,6%	40,7%	38,7%	37,3%	37,1%	35,9%	38,6%
	Deposito (T/D)	31,6%	33,4%	32,2%	31,5%	26,0%	22,4%	29,5%
BNI	Giro (Current Asset)	28,8%	30,4%	34,9%	35,0%	38,6%	41,2%	34,8%
	Tabungan (Saving)	34,9%	34,8%	31,9%	33,4%	30,8%	31,7%	32,9%
	Deposito (T/D)	36,3%	34,7%	33,2%	31,6%	30,6%	27,1%	32,2%
BCA	Giro (Current Asset)	26,0%	26,5%	26,4%	27,4%	29,4%	31,4%	27,9%
	Tabungan (Saving)	50,3%	50,2%	49,4%	49,5%	49,6%	50,8%	50,0%
	Deposito (T/D)	23,7%	23,3%	24,1%	23,1%	21,0%	17,7%	22,1%

Source ; processed data

Overall, although the business portfolio of KBMI 4 bank in 2020 increased, reflected in the increase in credit disbursement and continued increase in DPK collection, which resulted in growth in the bank's total assets, profit movements decreased during the COVID-19 pandemic. As a result, there has been a mismatch between increasing assets and increasing profits, especially in 2020. Subramanyam (2014) states that resources called assets should be able to be utilized to increase profits; in other words, increasing bank assets should be able to increase bank profits. In addition, the mismatch between business growth and bank profits is contrary to the research findings of Geby et al. (2023), who investigated banks listed on the JSE from 2015 to 2019. This research found that company net profits decreased.

The global COVID-19 pandemic has undoubtedly had a direct impact on banking financial performance. After the restructuring period ends, the impact of restructuring on bank performance will depend on each bank's buffer or buffer funds, according to the Indonesian Financial Services Authority (OJK). One indicator of bank performance is the increase in non-performing credit risk, which has an impact on the CKPN trend as in table 3. This is caused by external factors due to economic contraction and internal factors due to the quality of management of the bank's productive assets. On the one hand, new credit growth is hampered, on the other hand, credit quality declines. As a result, credit problems require special treatment.

Table 3. KBMI bank CKPN trend 4 years 2017-2022

Bank	2018	2018	2019	2020	2021	2022	Avg
BRI	3,11	3,26	3,36	5,42	6,16	6,11	4,57
Incremental		0,15	0,1	2,06	0,74	-0,05	0,60
Mandiri	3,76	3,40	2,88	5,36	5,04	3,91	4,06
Incremental		-0,36	-0,52	2,48	-0,32	-1,13	0,03
BNI	2,12	1,93	2,18	6,22	6,54	5,99	4,16
Incremental		-0,19	0,25	4,04	0,32	-0,55	0,77
BCA	2,14	1,93	1,89	2,78	2,98	3,01	2,46
Incremental		-0,21	-0,04	0,89	0,2	0,03	0,17

Source ; processed data

At the same time, the research results of Arafat et al. (2021) Review of Islamic Banking And Finance: Impact Of Covid-19 On The Performance And Stability Of Conventional And Islamic Banks In The GCC Region





has been strengthened. This research shows the significant impact of the COVID-19 pandemic on the stability of the financial performance of conventional and Islamic banks in the GCC region, Malaysia and Pakistan.

However, Pramitasari's (2021) research entitled Comparative Analysis of Banking Financial Performance Pre and Post Covid-19 found that the ROA, BOPO, CAR and LDR variables showed a significant increase in financial performance both before and during the Covid-19 pandemic, while the NPL and NIM did not show a significant increase in financial performance either before or during the Covid-19 pandemic.

Other researchers who support Pramitasari's (2021) findings found that banking financial performance was not affected by COVID-19. Research by Pandiangan et al. (2022) regarding a comparative analysis of bank financial performance during the COVID-19 pandemic shows that the comparison of financial ratio performance between Sharia Commercial Banks and Conventional Commercial Banks is the same in terms of cash flow. CAR, NPL, ROA and BOPO ratios.

Much empirical evidence is debated about the mismatch between size variables (Assets) and bank profits. One of them is research by Permana (2015), which found that bank size has a negative impact on the level of banking efficiency, while other research in the same period, Perwitaningtyas and Pangestuti (2015), found that bank size has a significant positive impact on the level of banking efficiency.

In addition, other research variables, CAR, NPL, BOPO, NIM, and LDR, continue to show differences in results between researchers. For example, analysis of the CAR variable on profits by Praskalin et al. (2023) shows that, although CAR or bank capital has a negative effect on profitability, research by Istinfarani (2020) shows that bank size (SIZE) and CAR have a positive effect on bank efficiency.

Consisting of three government-owned banks (BUMN) and one private-owned bank (BUSN), the performance of these KBMI 4 banks differs in the way they contribute to their profitability. According to Soejono (2008) and Hanousek et al. (2007), research on the influence of the type of company ownership found that company performance can be influenced by the type of ownership. In other words, owners have a significant impact on company performance.

Soejono (2010) conducted research to evaluate the performance of companies with various types of ownership compared to companies listed on the Indonesia Stock Exchange from 1999 to 2006. The results showed that state-owned companies were better than privately owned companies. Business success can be influenced by variations in these types of ownership.

According to Bonin et al. (2005) and Fries and Taci (2005), private banks are more efficient than government banks. This opinion was rejected by Soejono (2010). For reasons commonly used in various literature to show differences, such as transparency, efficiency, profits, productivity, monitoring systems (Marciano, 2008 and Husnan, 2001), in Sujono (2010).

Researchers drew attention to the number of anomalies, or differences, in the results of the above previous studies. In addition, they want to further investigate and analyze the main factors that influence the performance of each large bank, which caused a surge in their asset growth during the COVID-19 pandemic which was not matched by an increase in profits.

As a result, this research will investigate the factors that influence the financial performance of the KBMI 4 bank as proxied by profit. among assets, CAR, BOPO, LDR, NIM, and NPL. To do this, the multiple linear regression analysis method will be used. In addition, the Two-Way Annova difference test is used to compare bank financial performance based on ownership type in the KBMI 4 group, namely BUMN (BRI, Mandiri, and BNI), and BUSN (BCA). In addition, this comparison was carried out from 2017 to 2022.

LITERATURE RESEARCH

A. Stakeholder Theory and Signaling Theory

Sales levels, profits, return on capital, turnover, and market share are some indicators that can show how well a business is performing. Soeharto (2019) stated that there are a number of standards used to assess company performance. These criteria include criteria related to financial and non-financial aspects. Different methods for measuring company performance actually depend on the performance measurement itself. Each business has different benchmarks, including business field, background, legal status, capital structure, growth rate, and technology level. These differences will influence business behavior, which in turn influences performance and the benchmarks used (Dwi, 2000).





Performance is influenced by the type of company ownership. The research results show that management and the role of company owners are two components that influence business performance. Managers will receive different incentives and capacities based on different types of ownership (Baoubakri et al., 2022). According to research conducted by Soejono (2008), Hanousek et al. (2007), Ngoc and Ramstetter (2004), and Soejono (2010), the type of owner who is responsible for the performance of the business. This shows that company performance is strongly influenced by its owner.

Researchers such as Kim Luo (1999), Choi (1994), Lee & Miller (2017), and Hadjimanolis (2000) state that the most important company performance measurements are sales growth, employment growth, revenue growth, and increase in market share. It is also based on the argument that growth is a more accurate and easy to achieve measure compared to financial performance measures. Performance has many dimensions, according to other researchers, Lumkin and Dess (2015). Therefore, it is beneficial to combine various performance dimensions in empirical studies. Thus, it can be considered appropriate to consider growth and financial performance as different components of performance, as each has important and unique information. Growth and financial performance combined provide a broader picture of a company's true performance than measures used individually.

The purpose of collecting information as mentioned above is to measure the financial performance and growth of a company regardless. It is very important for related parties to use this information to analyze, consider and make further business decisions.

Therefore, this research refers to Stakeholder Theory, which is related to the way companies control their stakeholders. This theory is usually related to the way a company views the outside world from a management perspective (Gray, et al., 2020). Thus, the purpose of measuring performance and business growth which consists of a lot of information must be in accordance with the interests and expectations of stakeholders.

Signaling Theory explains how two parties use different information. says that all types of signals, also known as information, are issued with the aim of implying something in the hope that the market or external parties will change the way they view the company. In other words, the signals chosen must have informational power so that they can change the way external parties view the company. Including further investment options and plans that benefit stakeholders related to the company's operations.

B. . Performance meters of the banking industry

Assets, the Financial Services Authority (OJK) divides banks based on the size of their core capital. KBMI group 1 core capital is not more than 6 trillion, KBMI 2 core capital is between 6 and 14 trillion, KBMI 3 core capital is between 14 and 70 trillion, and KBMI 4 core capital is more than 70 trillion. Size, which is very commonly used in research on bank performance levels, is a measure presented by total assets and capital. The basis for this consideration is to find out whether increasing the amount of bank assets or capital can increase the level of efficiency or productivity (economies of scale).

According to Perwitaningtyas and Pangestuti (2015), bank size is a representation of the overall assets of a bank during a certain period as measured by assets. Ihnatov (2015), states that bank size refers to the number of assets owned by the bank. Because it can improve production efficiency, banks can achieve a better cost structure based on size. According to Al-Omar and Al-Mutairi (2008), bank size is the size of all assets owned by a bank. Since large banks have a high level of efficiency in achieving profits, they will be more profitable than small banks, according to.

Some researchers find a positive relationship between size and efficiency. Research such as Mahyudin (2005), Mardanugraha (2005), Yudhistira (2003), Ascarya and Yumanita (2005), Heralina (2007), and Mediadianto (2007) are examples. In other words, banks with larger assets or higher capitalization levels have a higher level of efficiency compared to banks with smaller assets. Banks with larger assets have the ability to generate greater profits when followed by the results of their operational activities.

Large banks usually have an advantage over medium or small banks because the size of the bank is determined by the amount of assets it owns. However, every asset always carries the opportunity for risk, which shows that there is a gap that apart from showing the amount of funds managed to generate profits, it also shows the amount of risk faced. Based on this explanation, a hypothesis can be formulated H1: There is an influence of assets on bank profits. Capital





Capital Adequacy Ratio ; is a consideration of the ability of bank capital to cover operating costs (Menicucci & Paolucci, 2016). The capital adequacy ratio, or solvency ratio, shows the bank's ability to cover the decline in assets caused by risky assets with its capital adequacy.

Bank capital is used to maintain public trust, especially borrowers, so that a higher CAR indicates better bank performance, which can protect its customers, increase customer confidence in the bank, which in turn can increase bank profits. According to studies by Mahyudin (2005) and Mediadianto (2007), CAR has a major impact on bank efficiency. Banks with high CAR values are more efficient, according to Dendawijaya (2009). CAR is a ratio that shows how much all bank assets contain elements of risk (credit, investments, securities and claims on other banks) which are financed by their own capital and funding from external sources.

The goal of capital is to create balance, take losses, and maintain consumer confidence. Therefore, capital is an important factor (Yuwono and Meiranto, 2012). Kuncoro and Suhardjono (2011) argue that CAR is a capital adequacy ratio which shows the bank's ability to maintain capital adequacy as well as the ability of bank management to find, measure, monitor and control risks that can affect the size of the bank's capital.

Bank Indonesia CAR Classification No. 6/10/PBI/2004, healthy must be more than 8 percent, quite healthy must be more than 8 percent, unhealthy must be more than 6.5 percent, and unhealthy must be more than 6.5 percent. Based on this explanation, the hypothesis; H1: There is an influence of CAR on bank profits.

NPLs ; This ratio shows how well the bank's credit or financing management is. A high NPL level indicates poor credit or financing management, while a low NPL level indicates good credit or financing management, which indicates an asset quality ratio. The risk of disbursed credit is greater in connection with a larger NPL. As a result, interest income will fall. This can be seen from the number of problematic loans or financing as indicated by the NPL value because it is inversely proportional to profitability and is part of the cause of the decline in bank profits. (Syakhrun et al. 2019).

If the level of non-performing loans is high, banks are reluctant to provide loans because they have to create larger write-off reserves to eliminate part of the capital that affects credit distribution. As a result, high levels of non-performing loans cause less credit to be granted, which ultimately reduces the efficiency of bank operations (Francisca, 2008). A high problematic active productive value (NPL) can influence a bank's policy in disbursing credit because the bank must create a larger write-off reserve (CKPN or Reserve for Impairment Losses). A high NPL value will also cause the funds channeled through credit to decrease. This is because an increase in NPLs can cause problems such as liquidity, profitability and bank solvency to emerge.

Based on Bank Indonesia Regulation No.06/10/PBI/2004 dated 12 April 2004, which regulates the assessment system for determining the soundness level of commercial banks, it is known that the critical threshold for non-performing loans (NPL) is 5%. If the NPL value increases, profitability will decrease. To calculate the NPL ratio, banks are classified according to their NPL level: Very Healthy if less than 2 percent, Healthy if between 2 percent and 5 percent, Fairly Healthy if between 5 percent and 8 percent, Unhealthy if between 8 percent and 12 percent, and Considered Very Unhealthy if more than 12 percent. Based on this explanation, the following hypothesis is formulated; H1: There is an influence of NPL on bank profits.

BOPO ; The BOPO ratio shows the relationship between operating costs and operating income. Operational costs include various costs incurred by the bank to run its main business, such as interest costs, marketing, labor and other operational costs.

The BOPO ratio shows how well a bank manages and controls operational costs compared to its operating income. As stated in Bank Indonesia Circular Letter Number 6/23/DPNP of 2004, banks that are considered healthy are expected to maintain a BOPO ratio of between 94 and 96 percent. A lower operating expense ratio is considered favorable because it shows that the bank can cover operational costs with its operating income. $BOPO = (\text{Operating Income} / \text{Operating Expenses}) \times 100\%$.

According to research conducted by Hairunnisa et al (2021) and Sudana and Marlina (2019), it is known that the operating cost ratio (BOPO) has a negative impact on return on assets (ROA) both before and after the Covid-19 pandemic. This occurs by comparing operating income with operating costs. A higher level of efficiency in managing operational costs is indicated by lower BOPO; ultimately, this will result in greater profits for the bank. In addition, according to Rivai et al. (2007), the main task of banks is to collect funds from the public and then redistribute them in the form of credit and other investments. This has a major impact on interest expenses and interest yields, both of which are important parts of a bank's BOPO component. Based on this explanation, the following hypothesis can be formulated: H1: BOPO affects bank profits.





NIM; is the net interest margin, which is obtained by dividing the amount of interest given to the lender by the bank's interest income. According to Pandaia (2012), Net Interest Margin (NIM) is a ratio that shows how well bank management manages productive assets to generate net interest income.

Net interest income is interest income after interest expenses have been deducted. According to Taswan (2010), the net interest margin ratio is the ratio of net interest income to average productive assets. This ratio shows the bank's ability to generate net interest income by deploying productive assets. According to Wulandari (2019), a higher level of net interest margin indicates that banks are more efficient in allocating their productive assets to credit. The net interest margin calculation assesses a bank's ability to manage interest rate-related risks. NIM is used to measure a bank's profitability, and a high net interest margin usually indicates high profits. A higher ratio indicates that interest income from productive assets managed by the bank increases.

Therefore, $NIM = (\text{interest income} - \text{interest expense}) / \text{average assets} \times 100\%$. Bank Indonesia's NIM standard is more than 6%. If the ratio is higher, interest income from productive assets managed by the bank will increase. Keeping this explanation in mind, the following hypothesis can be formulated: H1: NIM affects bank profits.

LDR; shows the amount of credit provided as a percentage of the total funds collected by the bank. Bank income is positively correlated with liquidity. LDR has a positive impact on profitability, according to Rahman and Isywardhana (2019). The profitability ratio, expressed as return on assets (ROA), shows a bank's pre-tax profit compared to its total assets. ROA shows the level of efficiency of the bank concerned in managing assets (Widyastuti and Aini, 2021). If the LDR ratio is high, it means that a lot of credit is being disbursed, and the bank will make a profit from credit interest. High profits can result from effective credit management by banks.

Interest income, interest expense and average productive assets are factors that influence NIM. By PBI number 23/2/PBI/2021 concerning the third amendment to Bank Indonesia Regulation number 20/8/PBI/2018 concerning the loan to value (LTV) ratio for property credit, the loan to value ratio for property financing, and down payments for credit or different types of motor vehicle financing. As a result, the tolerance limit (LDR) for the loan to deposit ratio is 85% to 110%.

However, a healthy LDR usually ranges between 78% and 92%, with several conditions where the LDR can be relaxed to 94% if the gross credit NPL and MSME NPL are below 5%. If the LDR is above the Bank Indonesia Standard, the bank is declared illiquid and considered unhealthy. LDR formula = $(\text{total loan amount} / \text{total deposit amount}) \times 100$ percent. Based on this explanation, the following hypothesis is formulated: H1: LDR affects bank profits,

Type of ownership; State Banks (BUMN), Indonesian Private Banks (BUSN), Foreign Private Banks, Regional Development Banks, and Mixed Banks are several types of banks based on type of ownership, according to Shawtari (2018). This type of ownership is very important for business performance (Latumaerissa, 2018). Bank financial performance will differ depending on different types of ownership. Zouari & Taktak (2014) state that when national investors are the largest shareholders, banks tend to show higher levels of performance. Thus, the performance of state-owned banks increases.

Soejono (2010) quotes the opinion of Hadad et al. (2003), which discusses how the type of ownership affects the profitability of companies listed on the Stock Exchange, where company performance is influenced by who is the owner. In addition, it is stated that ownership can come from the government, private sector, or both. Research by Soejono (2010) shows that state-owned companies have better financial performance than privately owned companies.

In contrast, Hadad et al. (2003) stated that state ownership of banks tends to cause a decline in performance, it is likely that the state manages companies worse than the private sector. Based on this explanation, a hypothesis is formulated: H1: There is a difference in profit achievement between state-owned banks and privately owned banks.

The aim of this research is to test and analyze the variables ASET, CAR, NPL, BOPO, NIM, and LDR which influence bank profit achievement in 2017-2022. And at the same time researching and analyzing bank entities based on ownership type, which bank in KBMI 4 showed the best performance during that period.





C. Conceptual Framework

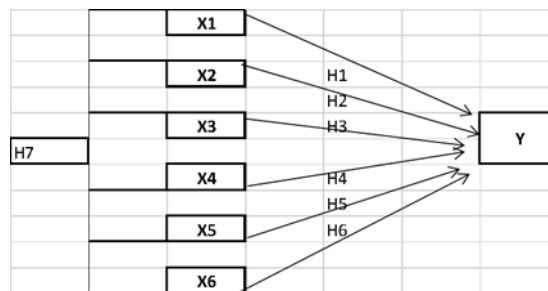
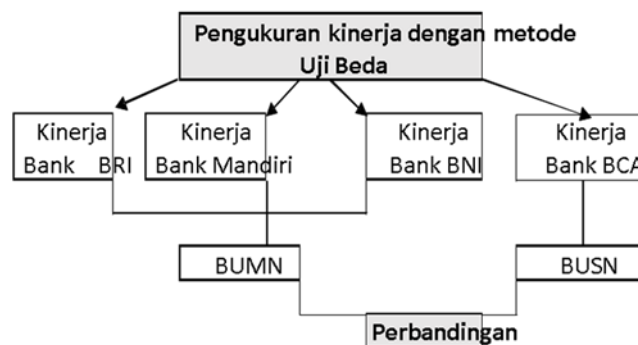


Figure 3. Regression Research Model

Source ; processed data

- H1: Assets have an influence on bank profit achievement
- H2: CAR has an influence on bank profit achievement
- H3: NPL has an influence on bank profit achievement
- H4: BOPO has an influence on bank profit achievement
- H5: NIM has an influence on bank profit achievement
- H6: LDR has an influence on bank profit achievement
- H7: Type of bank ownership influences profit achievement
- H8: Time period influences bank profit achievement



Source ; processed data

Figure 4. Different Test Research Model

METHOD

This research uses a comparative quantitative approach and describes the performance of each bank from 2017 to 2022. For the purposes of this research, secondary data from the OJK was used. In this study, two independent variables are used, one of which is the profit variable, which shows the bank's profitability, and the others are assets, capital suitability ratio (CAR), non-performing debt ratio (NPL), cost of operating income (BOPO), ratio NIM, and debt to deposit ratio (LDR).

The multiple linear regression analysis method is used to relate and investigate predictor variables, known as dependent variables, and response variables, known as independent variables. To be more accurate, variable data is standardized first with logarithmic transformation because it has different parameters. This research sample includes two different entities: BUMN (government ownership type) and BUMN (private





ownership type). Therefore, a difference test was carried out. to identify and evaluate the performance of each bank entity over the same time period

A. Regression Test

1. Descriptive Statistical Test

After the testing process through data transformation, the variable description becomes as follows:

Table 4 Descriptive statistics A

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	Mean	Std. Deviation	N
LABA	7,3367	0,25122	24
ASET	9,0300	0,11516	24
CAR	1,3321	0,05116	24
NPL	-0,1721	0,16280	24
BOPO	1,8292	0,06406	24
NIM	0,7521	0,06984	24
LDR	1,9163	0,05046	24

Source ; processed data

In the table above you can see that the number of samples is 24 samples in the KBMI 4 bank group. However, after standardizing the data (logarithmic transformation), by referring to table 4 there is a relevant picture of the average variable as follows: Average value of profit (dependent variable) of the group KBMI 4 bank amounting to Rp. 24,439,471.25 million (24.4 trillion), indicating that among the KBMI 4 bank groups there are banks that have the best average profit achievement (dependent variable) above the group average. Starting from BRI bank with an average achievement of Rp. 32 trillion, BCA bank average Rp. 28.6 trillion, Bank Mandiri averages Rp. 24.5 trillion, where the average profit of the three is still greater than the average profit of the bank group and only BNI bank has an average of Rp. 12.6 trillion - which profit is still below the average profit achieved by the bank group.

Tabel 5. Statistik deskriptif B

Tahun	Bank	ASET	Avrg	CAR	Avrg	NPL	Avrg	BOPO	Avrg	NIM	Avrg	LDR	Avrg	LABA	Avrg
2017	BRI	1076	1.400	22,96	22,65	0,88	0,85	69,14	71,27	7,93	7,01	88,13	87,14	28	32,10
2018		1234		21,21		0,92		68,48		7,45		89,57		32	
2019		1343		22,55		1,04		70,10		6,98		88,64		34	
2020		1422		20,61		0,80		81,22		6,00		83,66		18	
2021		1573		25,28		0,70		74,50		6,89		83,67		32	
2022		1751		23,30		0,73		64,20		6,80		89,17		48	
2017	MNDR	978	1.213	21,64	20,49	1,06	0,61	71,17	68,29	5,63	5,16	88,11	86,97	20	24,47
2018		1037		20,96		0,67		66,48		5,52		96,74		24	
2019		1129		21,39		0,84		67,44		5,46		96,37		25	
2020		1209		19,90		0,43		80,03		4,48		82,95		14	
2021		1356		19,60		0,41		67,26		4,73		80,04		25	
2022		1570		19,46		0,26		57,35		5,16		77,61		38	





2017	BNI	662	826	18,53	18,76	0,70	0,83	70,99	76,24	5,50	4,95	85,88	86,24	14	12,56
2018		755		18,51		0,85		70,15		5,29		88,76		14	
2019		780		19,73		1,25		73,16		4,92		91,54		15	
2020		818		16,78		0,95		93,31		4,50		87,28		3	
2021		941		19,74		0,73		81,18		4,67		79,71		11	
2022		998		19,27		0,49		68,63		4,81		84,25		19	
2017	BCA	735	998	23,06	24,59	0,45	0,58	58,65	56,69	6,19	5,78	75,20	71,22	22	28,63
2018		809		23,39		0,45		58,24		6,13		78,70		25	
2019		899		23,80		0,47		59,09		6,24		80,47		27	
2020		1056		25,83		0,74		63,45		5,70		65,77		26	
2021		1205		25,66		0,78		54,15		5,10		61,96		31	
2022		1283		25,77		0,59		46,54		5,34		65,23		40	
Average		1.109		21,6		0,7		68,1		5,7		82,9		24,4	

Note : Aset& Laba dalam triliun Rp

Source ; processed data

Meanwhile, the average of the independent variables is: Average total assets of the KBMI 4 bank group Rp. 1,109,141,893 million (Rp. 1,109 trillion). The banks that have the largest average assets (exceeding the group average sequentially) start with BRI bank with average assets of IDR. 1,399 trillion then Bank Mandiri Rp. 1,213 trillion where these two banks have achieved assets exceeding the average of the KBMI 4 group. Then BCA bank Rp. 997 trillion and BNI bank which has assets that are still below the group average, namely Rp. 825 trillion.

The average CAR value for the KBMI 4 bank group is 21.6%. The best average CAR value exceeding the average value of the KBMI 4 bank group was achieved by BCA bank at 24.6% and BRI bank at 22.7%. Meanwhile, the average CAR value for Bank Mandiri and Bank BNI is below the average CAR value for the KBMI 4 bank group, namely 20.5% (Mandiri) and 18.8% (BNI). However, the average CAR value of these four banks has far exceeded the minimum threshold set by the Financial Services Authority (OJK), namely a minimum of 8%. Thus, the KBMI 4 bank group is considered very capable of accelerating business growth or expansion as well as controlling/anticipating liquidity risks (business risks) in the event of default on the asset investment products it disburses. Because this high CAR is a buffer against bank investment risk (PBI No. 3/21/PBI/2001).

The average NPL value of the KBMI 4 bank group is 0.72%, sequentially starting from the best (lowest NPL of the group average) namely: BCA bank at 0.58% then Mandiri 0.61%, BNI 0, 83% and BRI 0.85%. The average NPL value of the KBMI 4 bank group is all within very healthy limits because the value is below 2% and does not experience significant fluctuations (flat fluctuation) as the best barometer for NPL measurement set by the OJK. This illustrates that banks in the KBMI 4 group during the 2017 – 2022 period have very healthy credit (liquidity) risk. Referring to banking regulations, a bank is categorized as healthy if the NPL does not exceed 5%, so that if the NPL is lower, the credit risk borne by the bank will also be low.

The average BOPO value is 68.1%. The best BOPO value was obtained by BCA bank with an average of 56.69%, followed by Mandiri bank with 68.29%, BRI bank with 71.27% and finally BNI bank with an average of 76.24%. In accordance with the provisions of SE BI No 6/23/DPNP of 2004, banks that are in the healthy category have a BOPO ratio of between 94 - 96%, meaning that if the BOPO is lower it shows the bank is more efficient. So it can be said that the four banks in KBMI 4 have efficient performance.

The average NIM value is 5.73% (close to 6%), meaning that on a pro-rata basis it almost meets the health qualifications. The standard banking NIM value from the OJK is a minimum of 6%. If a bank's NIM is > 6%, it is said to be in a healthy condition, whereas if the NIM ratio is less than 6%, a bank can be said to be less healthy or less safe. The order of KBMI 4 banks that achieved the best NIM value starts from: BRI bank at 7%, which is the highest achievement of other banks and this achievement exceeds the OJK provisions of 6%, then BCA bank at 5.8%, both of which (BRI and BCA) have achieved a NIM above the average value of the KBMI 4 bank group, namely 5.73%. Furthermore, Bank Mandiri was 5.2% and Bank BNI was 4.9%, where the NIM value of these last two banks was still below the average value for this group of banks. However, the NIM





achievement of all KBMI 4 banks during the 2017 - 2022 period did not experience significant fluctuations or was relatively flat.

The average LDR of 82.8% shows that KBMI 4 bank has the ability to return obligations to customers. The higher the LDR, the greater the liquidity, meaning that the bank will have difficulty fulfilling its short-term debt. On the other hand, the lower the LDR, the smoother it will be (liquid) even though it has the consequence that the potential for obtaining (opportunity) interest income is smaller.

According to OJK regulations which refer to SE BI Number 15/41/DKMP, states that a healthy LDR is between 78% - 92%. However, under certain conditions the maximum LDR limit is relaxed to 94%, namely if it meets the requirement that gross credit NPL and MSME NPL < 5%. On the other hand, the LDR value also shows the bank's ability to utilize productive assets to generate bank income.

The average LDR achievement in sequence starting from the best is BRI bank at 87.1%, Mandiri bank 87%, BNI bank 86.2% and BCA bank 71.2%. From a different point of view, it is known that optimizing the bank's LDR weight still depends on how much profitability the bank has generated. Then, apart from the lending product features, you must also pay attention to the bank's DPK (funding) composition, whether it tends to have a portion of cheap funds such as current accounts and savings (CASA) or expensive funds such as deposits. These two things will of course have a direct influence on determining the interest rate (pricing) for the credit products distributed.

2. Classic Assumption Test

a. Data Normality Test

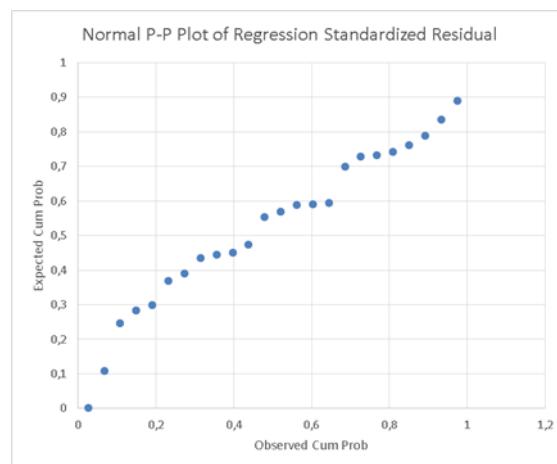


Figure 5. scatter plots

From the histogram graph below, you can see that the points are located around the diagonal, meaning that the normal distribution requirements have been met..





b. Multikolinieritas test

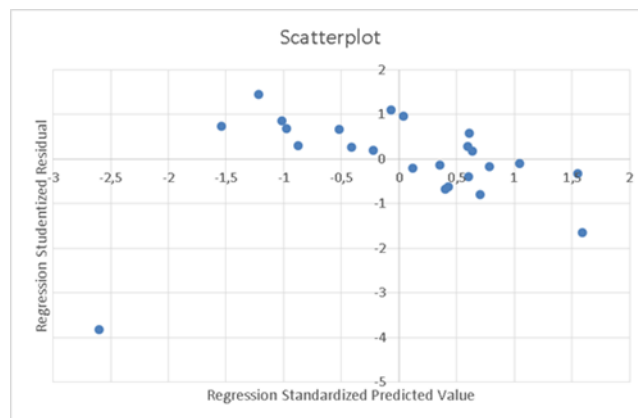
Table 6. Multikolinieritas

Model		Unstandardized		Standardized Coefficients	Collinearity Statistics	
		B	Std. Error	Beta	Tolerance	VIF
1	(Constant)	-0,769	2,377			
	ASET	0,871	0,190	0,399	0,784	1,276
	CAR	1,057	0,820	0,215	0,213	4,700
	NPL	-0,109	0,153	-0,070	0,602	1,662
	BOPO	-2,425	0,503	-0,618	0,360	2,776
	NIM	0,713	0,436	0,198	0,404	2,475
	LDR	1,415	0,624	0,284	0,378	2,645

Source ; processed data

All research variables have a VIF value below 10.0 and a tolerance value of more than 0.10, so it can be concluded that the regression model does not show symptoms of multicollinearity or does not exist. Obtained VIF values for all research variables < 10.0 and tolerance values for all variables > 0.10, so it can be concluded that the regression model is free from multicollinearity or there are no symptoms of multicollinearity

c. Heterokedastisitas test



Source ; processed data

Figure 6. Scatter Plots

It turns out that the scatterplot image does not have a clear pattern (wavy, spreads out, then narrows) and the points spread above and below zero on the Y axis, so it can be concluded that heteroscedasticity does not occur.





d. Autocorrelation Test Results

Table 7. Summary model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.948 ^a	0,899	0,864	0,09280	2,209

Source ; processed data

Based on table 7, it is known that the calculated value of Dw is 2.209, so the table value of Dw with a Sig level of 5% K (6) and N (24), will be obtained:

- o du is k=6 and N=24 is = 2.0352,
- o so that (4-du) = 1.9648
- o dl = 0.8371,
- o so that (4-dl) = 3.1629

It turns out that Dw 2.209 is not located between du to (4-du), nor is it located between the values dl 0.8371 and dU 2.0352, so it does not produce a definite conclusion as presented in table 8 below:

Table 8. Autocorrelation matrix

Hipotesis Nol	Keputusan	Kondisi			
<i>There is no positive autocorrelation</i>	<i>Reject</i>	$0 < d < dl$	0	Dw 2.087	dl 0.8371
<i>There is no positive autocorrelation</i>	<i>In Ragu</i>	$dl \leq d \leq du$	dl 0.8371	Dw 2.087	du 2.0352
<i>There is no positive autocorrelation</i>	<i>Reject</i>	$4 - dl < d < 4$	(4-dl) 3.162	Dw 2.087	4
<i>There is no positive autocorrelation</i>	<i>In Ragu</i>	$4 - du < Dw < 4 - dl$	1,9648 < 2,209 < 3,1629		
<i>No positive/ negative autocorrelation</i>	<i>Accepted</i>	$Du < d < 4 - du$	du 2,0352	Dw 2,209	(4-du) 1.9648

From the table above, it shows that there are symptoms of autocorrelation because the Durbin Watson value is not between $du < Dw < (4-du)$ but is between $(4-du) < Dw < (4-dL)$, so that the Run Test autocorrelation test is carried out using the results are as follows:

Table 9. Run Test

	Unstandardized Residual
Test Value ^a	0,01422
Cases < Test Value	12
Cases >= Test Value	12
Total Cases	24
Number of Runs	13
Z	0,000
Asymp. Sig. (2-tailed)	1,000

Source ; processed data

The condition is that if the value of Asymp.Sig. run test results > 0.05, then autocorrelation does not occur. Therefore based on the Asymp value. Sig. run test exceeds 0.05 or (1,000 > 0.05) then it meets the requirements for no autocorrelation.





e. Coefficient of determination (R2)

The coefficient of determination (R2) is used to determine the percentage of independent variables that can explain the dependent variable. The R2 (R square) value shows the existence of a relationship between the independent variables ASSETS, CAR, NPL, NIM, BOPO, LDR and the dependent variable which is proxied by profit. Where the R2 value = 0.899 means the level of relationship is very strong.

Table 10. Coefficient of determination

Model	R	R Square	Adjusted R Square
1	.948 ^a	0,899	0,864

Source ; processed data

The table above shows that all independent variables influence variable Y by 89.9%, the remaining 10.01% is influenced by other factors outside this research.

3. Hypothesis Testing

In this research, hypothesis testing uses multiple regression

Table 11. F test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,305	6	0,218	25,261	.000 ^b
	Residual	0,146	17	0,009		
	Total	1,452	23			

Source ; processed data

Based on the Sig value, the above shows that the Sig value results. equal to 0.000 which is smaller than 0.05 or (0.000 < 0.05). So simultaneously the independent variables (X) have a significant effect on the bank profit variable (Y). If based on calculated values and table values, with the condition that if F calculated > F table then it can be concluded that the independent variables have a simultaneous effect. With calculated F 25.261 and the formula t table = (k (number of variables): n (number of samples) – k), t table = alpha; then 6 ; (24 - 6) = (6 ; 18) is = 2.66, so 25.261 > 2.66. This means that it can be concluded that based on the F table simultaneously all independent variables have an effect on profit. Referring to the model summary R square = 0.899 (table 4.12) together the independent variables have an influence of 89.9%,

Table 12. T test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0,769	2,377		-0,323	0,750
	ASET	0,871	0,190	0,399	4,590	0,000
	CAR	1,057	0,820	0,215	1,289	0,215
	NPL	-0,109	0,153	-0,070	-0,710	0,487
	BOPO	-2,425	0,503	-0,618	-4,818	0,000
	NIM	0,713	0,436	0,198	1,636	0,120
	LDR	1,415	0,624	0,284	2,269	0,037

Source ; processed data

The results of searching for the t table with the formula (0.05/2; n – k – 1) are:





n = number of samples is 24

k = the number of variables studied is 6, so the t table is (0.025 ; 17) = 2.100

So the results of the partial hypothesis on the influence of each independent variable (X) on the dependent variable (Y) are as follows: a. The effect of assets on profits, the results of this research prove that the Sig value is $0.00 < 0.005$ and the t table results are $4.590 > 2.100$, showing that there is a significant influence between assets and profits. So the hypothesis H1 that assets have an influence on profit achievement is accepted. b. The effect of CAR on profits, the results of this research prove that the Sig value is $0.215 > 0.05$ and the t table results are $-1.289 < 2.100$, showing that there is no significant influence between CAR and profits. So the hypothesis H2 that CAR has an influence on profit achievement is rejected., c. The effect of NPL on profits, the results of this research prove that the Sig value is $0.487 > 0.05$ and the t table results are $0.710 < 2.100$, showing that there is no significant influence between NPL and bank profits. So these results state that the hypothesis H3, that NPLs have an influence on profit achievement, is rejected., d. The effect of BOPO on profits, the results of this research prove that the Sig value is $0.000 < 0.05$ and the t table results are $-4.818 > 2.100$, showing that there is a significant influence between BOPO and profits. So hypothesis H4 which states that BOPO has an influence on profit achievement, is accepted., e. The effect of NIM on profits, the results of this research prove that the Sig value is $0.120 > 0.05$ and the t table results are $1.636 < 2.100$, indicating that there is no significant influence between NIM and profits. So the hypothesis H5 that NIM has an influence on profit achievement is rejected., f. The effect of LDR on profits, the results of this research prove that the Sig value is $0.037 < 0.05$ and the t table results are $2.269 > 2.100$, indicating that there is a significant influence between LDR and profits. So the hypothesis H6 that LDR has an influence on profit achievement is accepted.

Referring to the research results above, there are differences in the influence of each financial performance variable on bank profits, and is supported by differences in theory and previous research regarding the influence of the type of corporate entity ownership on profit achievement, because this research sample has 2 (two) different entities, namely owned banks. government and privately owned banks, it would be relevant if the author simultaneously analyzed the influence of the type of bank ownership and the time period of the incident including the magnitude of the effect on profits in order to obtain empirical evidence of a comparison of the achievement of the best performance between the two bank entities and the time period of the incident.

B. Anova test

a. Normalitas data test

Table 13. Normalitas

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Parameter	0,243	24	0,001	0,928	24	0,086

Source ; processed data

Because the amount of research data was $24 < 50$ (small), Shapiro Wilk was used with a Sig value of $0.086 > 0.05$, thus fulfilling the full normality test.

b. Homogenitas test

Tabel 14. Homogenitas (levene's test)

		Levene	df1	df2	Sig.
Laba	Based on Mean	2,195	5	12	0,123
	Based on Median	0,300	5	12	0,904
	Based on Median and	0,300	5	5,010	0,894
	Based on trimmed mean	1,936	5	12	0,162

Source ; processed data





Obtained Sig value. > 0.05, then it is concluded that the variables that influence bank profit achievement are homogeneous or similar. So the assumption of homogeneity in the two way ANOVA test is fulfilled

c. Hipotesis test

Table 15. Between-subject effects test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.663 ^a	11	0,060	0,917	0,554
Intercept	978,884	1	978,884	14894,258	0,000
Kepemilikan	0,103	1	0,103	1,563	0,235
Periode	0,218	5	0,044	0,665	0,657
Kepemilikan * Periode	0,101	5	0,020	0,308	0,899
Error	0,789	12	0,066		
Total	1293,292	24			
Corrected Total	1,452	23			

a. R Squared = .457 (Adjusted R Squared = -.041)

Source ; processed data

With R2 (R square) of 0.457, it shows that the relationship between ownership type variables and time period variables on bank profits is not strong enough, namely only 45.7%, and the remaining 54.3% is influenced by other factors or variables; Sig value. ownership type is 0.235 > 0.05, indicating there is no difference in profit achievement based on ownership type; Sig value. time period of 0.657 > 0.05, indicating there is no difference in profit achievement based on the research time period; Sig value indicator. amounting to 0.899 > 0.05, indicating an interaction based on the type of bank ownership during the research time period, there is also no difference in the profit achievement of KBMI 4 bank. However, because there is no difference in the influence of ownership type or the research time period, the effect size cannot be measured .

RESULTS AND DISCUSSION

The hypothesis test above was carried out to determine the presence or absence of influence between the independent variables on the dependent variable, as follows:

Influence of Assets on Profit ;

The results of this research show a significant influence between assets on KBMI 4 bank profits. The reasons for the growth in assets of the KBMI 4 bank group have a significant effect on profits, because, among other things: a. The KBMI 4 bank group achieved consistent and healthy or quality asset growth. In it there is a very healthy growth in lending with NPL (table 5) far from the maximum limit of the parameters set by the authorities, so that it is able to produce bank yields that are not burdened by the existence of credit costs. On the other hand, the growth in lending was also accompanied by consistent (simultaneous) growth in funding in the relevant period. Funding growth is dominated by savings and current account products (table 2.) which contain low cost funds (low COF). On the other hand, there was no significant write-off which wiped out the outstanding lending portfolio (table 3) so that credit costs and interest on customer arrears could be saved as seen from the relatively flat NPL (table 5), which led to an increase in the quality of bank profitability; b. Having a "unique" market segment as stated by Dionisio's competitive advantage strategy (owned resources) (bisnis.com, 2022). The uniqueness of the 3 largest state-owned banks in the KBMI 4 bank group is that they focus on different business segments, namely: BRI bank in the mass market, Mandiri bank in corporations, and BNI bank focuses on overseas business, as stated by the BUMN minister in GoogleNews (2021). For BCA, as the largest BUSN in Indonesia, it is known to focus on developing digitalization (bank transactions), InfobankNews (2022). This is in accordance with one of the benefits of market segmentation according to Fawzi et al (2022), namely the importance of mastering a superior and competitive position for the company;





c. The success of utilizing momentum as a bank with the largest core capital or CAR during the 2020 crisis (table 5), both growing through lending portfolios (such as credit relaxation and MSME credit distribution) and funding was significantly visible, even though it occurred during the Covid pandemic crisis (table 1). Infobanknews (2022) states that the presence of a high bank CAR attracts more public trust; d. The capabilities and advantages of operational technology, such as the completeness of digital banking product features (technology), also meet customer expectations for ease of bank transactions, thus supporting efforts to further grow bank assets; e. The ability to maintain bank operational efficiency (BOPO) even amidst consistent asset growth during the relevant period so as to produce better profitability

Total assets is an indicator that determines a bank's contribution to national banking and is a quantitative indication of the size of the bank (Geby et al, 2023). According to DemirgunesK (2016), size is one of the causes of profitability. This statement is also strengthened by the results of research on the company's opportunities to generate profits, if it is followed by the company's ability to manage its assets. Riyanto (2008) in Agusti (2016), as well as Perwitaningtyas and Pangestuti (2015), who share the same opinion that companies with a larger size have better access to funding sources from various sources because apart from large companies they have the attractiveness of itself also has a greater possibility of winning competition in the industry.

According to Ilnatov (2015), bank size is the amount of assets owned by the bank. This is relevant to the KBMI 4 bank group which has core capital above Rp. 70 trillion which is the largest bank group in Indonesia currently. Nurmayanti et al (2014), found that bank size has a significant influence on NIM because the size of a bank with large assets will be able to increase its NIM.

Research by Putri et al (2022), with a research sample of all banks listed on the BEI in 2016-2020, states that bank size has no effect on ROA in commercial banks for reasons based on legitimacy theory that bank size is only interpreted as public recognition of the company's existence where recognition This is a company's need for its survival. There are even research results that have the opposite (negative) effect, namely research by Sari and Annisa (2023), research on Islamic commercial banks in Indonesia in 2015-2020, which states that total assets have a negative and significant effect on profitability. Because larger banks may not necessarily be able to work more efficiently than smaller banks. Research by Erlangga and Mawardi (2017) and Agustin (2019) shows that total assets have a negative and significant effect on bank profitability because the higher the total assets, the lower the profitability. This shows that if the condition of a company's total assets is high, costs will increase, thereby potentially increasing the company's losses.

Effect of CAR on Profit ;

The results of this research show that there is no influence between CAR on the profits of the KBMI 4 bank group for 2017-2022. The reasons why CAR has no effect include: a. The CAR of banks in the KBMI 4 group has far exceeded the minimum limit (table 5), so that the CAR of banks in this group is very capable of absorbing or buffering potential losses that arise when business risks occur, especially risks related to a decrease in the value of collateralized assets (under value). of collateral) (PBI No. 3/21/PBI/2001); b. Consistently optimal LDR with relatively flat NPL fluctuations with very good NPL achievements far from the maximum limit stipulated by the authorities (table 5), encourages the formation of high bank yields so that they are able to cover or cover credit costs from bank interest income. In short, the credit costs that arise can be covered by the NIM (Yield-COF), so they will not impact the CAR burden. On the other hand, if the NPL is high and the NIM is unable to cover the credit costs it incurs, this can directly affect bank profits which will impact the bank's CAR burden.

However, KBMI 4 bank CAR actually has a relevant indirect influence on profits. Because a large CAR will encourage public trust in banks, and ultimately have an impact on both funding (DPK) growth and lending (credit) expansion which can create new income in the components that form NIM (Yield-COF). Banks that have large capital but if they are unable to use their capital effectively to generate profits, then the capital will not have a significant effect on the bank's profitability. The problem in the KBMI 4 Bank group is not whether it is effective or not, but rather because of factors that have the potential to burden CAR, such as NPL fluctuations which have not experienced significant spikes (table 5). Besides that, bank interest income (yield) has been able to cover costs or credit risks that arise in the relevant period.





A bank's CAR can be increased, among other things, by: increasing capital, reducing risky assets, diversifying the business and increasing income and operational efficiency which leads to the ability to have accumulated retained earnings to increase bank capital (CAR). In PBI No. 3/21/PBI/2001 and POJK No.11/POJK.03/2016, substantially stipulate that bank CAR functions as a buffer against the risk of the bank's productive assets (business risk). This is useful for overcoming the possible risk of loss with your own capital. Hery (2021), states that CAR is a ratio that shows how much of all bank assets contain elements of risk (such as: credit, investments, securities, claims on other banks) which are financed from the bank's own capital, in addition to obtaining funds from other sources. outside the bank. Capital is the main determining factor because the capital aims to create balance, absorb losses, and maintain public trust.

According to Suhardjono and Kuncoro (2016), CAR is capital adequacy which shows the bank's ability to maintain capital, identify, measure, monitor and control the emergence of risks that can affect the size of the bank's capital. Menicucci and Paolucci (2016), Pakravan (2014), stated that CAR is an indicator of a bank's ability to cover the decline in productive assets (assets) as a result of bank losses on risky assets with its capital adequacy.

So the relevance of referring to the theory and research results above is that the size of bank capital adequacy (CAR) does not necessarily cause the size of bank profits. Capital that is too large will affect the bank's profit, while capital that is too small will not only limit the bank's ability to expand, but also affect the special assessment of depositors, debtors and shareholders (signaling and stakeholder's theory). In other words, the size of a bank's capital can influence the level of public confidence in the financial capabilities of the bank concerned.

Research results that are in line with CAR's findings which have no significant effect on profits are Harun (2016), Aprilia (2017), Suryani (2017) in Priandini (2019), who found that CAR has no effect on ROA because the funds owned by banks do not only come from own capital, but also from other parties.

Research that is not in line includes Rosandy and Shaa (2020), who found that CAR has a positive and insignificant effect on banking ROA. Likewise, Susanto and Kholis (2016), Yunika (2018), argue that CAR is a ratio that is related to banking capital and shows the adequacy of capital owned by the bank which can be used to overcome the risk of credit failure that usually occurs.

In another study, Halim et al (2014), comparing the performance of all banks listed on the IDX during the 2017-2018 crisis, found that the role of CAR was different in achieving performance before and after the crisis. This was caused by the massive withdrawal of bank funds by customers (rush) as well as the depression of the rupiah exchange rate, which put huge pressure on bank balance sheets, thus having an impact on the overall performance of national banking.

However, research by Surifah (2002), in Halim et al (2014), actually shows different findings in banking CAR performance before and after the crisis. Where this is possible because in banks that have a good level of health, when a crisis occurs, not all people experience a decline in trust in the bank and even have the opportunity to obtain an abundance of fresh funds transferred from new customers from other banks.

Effect of NPL on Profit ;

The results of this research also show that there is no significant influence between NPL on the profits of the KBMI 4 bank group. The formation or derivative of the influence of NPL on bank profitability can be formulated as follows: Profitability = NIM (yield-COF) + Recovery (principal reversal of CKPN and/or interest on credit settlement) - new CKPN.

Thus, the non-influence of NPLs on the profits of the KBMI 4 bank group can be caused by several things, namely: a. There was no significant fluctuation in bank credit quality (flat NPL) (table 5) and the average NPL value was very far (small) from the maximum threshold set by the authority (OJK), making credit costs relatively fixed or stable. Even if there is an increase in collectibility (migration of credit collectibility), it can be covered by growth in assets that generate new income (Yield). This means that the existence of credit costs can be covered by the pricing or yield established by the bank. Unless there is a significant spike (fluctuation) in the NPL indicator during this period, it will have an impact, apart from uncollectible interest income, and also give rise to new credit costs (CKPN) due to deterioration (migration) of credit collectibility; b. This indicates that there has not been significant asset recovery success (successful collection of customers who have lost or written off their books), as table 3 shows a relatively increasing trend in CKPN in the last 5 years,





although there is a decline in 2022 (the decline in CKPN is not significant). This shows that the flow of uncollectible debtors (write off) has not been maximized in credit recovery efforts.

For example, when there is a spike in NPL which of course creates a new CKPN and outstanding interest income, even if it is accompanied by successful recovery of credit quality (bad debt collection) with a relatively equal portion (linear) then it will still not have a significant effect on profits (same worsening result) with recovery results). On the other hand, when there is a decrease or improvement in NPL (credit quality) through settlement or repayment of bad debts, there is a decrease in NPL which has an effect on increasing income from interest collected and from the reverse flow of credit costs that have been set aside (CKPN). In this way, reducing NPLs will increase bank income. However, if the decrease in NPL is due to a write off (write off) which is not accompanied by asset recovery either through asset sales, cash settlement or collateral auctions, then it will not have a positive impact but instead will bring losses due to the incurrence of additional credit costs or the use of loss reserves (CKPN). ultimately eating into profits and even bank capital.

The NPL level is used as a proxy for the quality of credit management or bank financing. A high NPL level reflects low quality credit management, whereas a low NPL level reflects good credit management quality. Syakhrun et al. (2019) and Arwin and Sutrisno (2022), say that the NPL ratio is a proxy or represents the asset quality ratio. The greater the NPL, the greater the risk of credit failure being disbursed, which has the potential to reduce interest income and subsequently reduce bank profits. This ratio shows the amount of financing or problem loans, so the ratio is inversely proportional to profitability. Another relevant opinion is Kasmir (2016), who said that NPL is a ratio used to measure a bank's ability to cover the risk of failure to repay credit by debtors, so banks must be more careful in distributing credit so as not to cause high NPLs.

In line with this opinion is research by Harun (2016), Sholihah (2021), Rohimah (2021), Wulansari and Chandra (2022), who found substantially that NPLs have no effect on ROA. Nurmayanti et al (2014), found similar and relevant findings that NPLs do not have a significant influence on NIM, because the NPLs of the relevant go public banks have relatively small NPL ratios, indicating small bad loans. Meanwhile, research with different results includes research by Cahyaningtyas (2021), Istinfarani (2020), Sobariah et al (2021), Shabri et al. (2017), Fatmawati (2018), Sienatra (2020), who substantially say that the NPL variable has a significant effect on ROA. This is because apart from the capital factor being much smaller, the NPL factor of the bank which was the object of this research experienced sharp fluctuations which were not accompanied by an increase in bank interest income or credit recovery. Menicucci and Paolucci (2016), found a significant negative influence on the banking sector in Europe and also research by Bertin et al. (2014) who researched Latin America. Ideally an increase in exposure to credit risk will usually be associated with a decrease in a company's profitability.

Effect of BOPO on Profit ;

The results of this research show that there is a significant influence between BOPO on the profits of the KBMI 4 bank group. BOPO efficiency has a significant effect on profits due to several things, including: a. Economies of scale, amidst assets that continue to grow with good quality (NPL), while operational costs can be controlled, resulting in ideal BOPO efficiency parameters (table 5), as in accordance with the bank health parameters set by the authority (OJK). This means that the rate of income growth far exceeds the existence of bank operating costs; b. Optimal LDR, containing a healthy lending component with an average NPL far from the limit set by the authority (OJK), is able to create high yields, on the other hand the quality of funding is supported by an ideal composition with the dominance of accumulation of savings and current account products (table 2) resulting in interest costs (COF) is low, resulting in significant net interest income (NIM); c. Finally, because an ideal NIM is formed (table 5), flexible pricing can be formed which in turn encourages sustainable productive asset growth.

Efficient management of operational activities by minimizing bank operational costs will greatly influence the level of bank profits. Bank Indonesia Circular Letter No. 6/23/DPNP of 2004 states that banks that are categorized as healthy have a BOPO ratio of between 94-96%. The smaller the operating expense ratio, the better, because the bank concerned can cover its operational expenses with its operating income.

According to Hanafi and Alamsyah (2014), Arwin and Sutrisno (2022), have a similar opinion that operational efficiency using the BOPO comparison has a negative effect on the profitability variable. Nurmayanti et al (2014), found that BOPO had a negative and significant effect on NIM because the bank was





more efficient with smaller operational expenses. The larger the BOPO will result in a decrease in profits and conversely, if the BOPO is smaller, the bank's profits will increase. According to Kasmir (2016), the BOPO ratio is a comparison between operational costs and operational income in measuring the level of efficiency and capability of the bank. So from the opinions of these experts it can be concluded that the impact of BOPO is inversely proportional to the level of bank profits.

Research results that are in line with this research include Kansil (2017), Purwoko and Sudiyatno (2013), Praskalin et al (2023), Cahyaningtyas & Retna (2019), showing the same view that efficiency as measured by BOPO has an effect on profitability. This means that the higher the operational costs incurred by the bank, the lower the operational income.

Research that is not in line includes Susanto and Kholis (2016), Rohimah (2021), who say that BOPO has no significant effect on ROA. It is more likely that in the relevant period the bank was more dependent on non-operating income, such as: asset sales income, foreign exchange transaction income and other income, in other words the existence of operating costs was not balanced with the increase in operating income.

Effect of NIM on Profit ;

This hypothesis testing research shows that there is no significant influence between NIM on profits of the KBMI 4 bank group. There is no effect of NIM on profits in the KBMI 4 bank group during this research period because: a. The quality of the credit portfolio (NPL) is good, on average it is far from the upper limit of the productive asset quality standards set by the authorities, but because there was no significant NPL fluctuation from time to time in that period (flat fluctuation) (table 5), then the NIM which forms profits becomes relatively static; b. Even though the LDR is relatively optimal and consistent or stable (there are no sharp fluctuations), it is a reflection of the quality of the lending and funding components simultaneously, which means that the amount of funding and lending is relatively static so that the final result in the form of NIM also does not fluctuate. In short, lending with consistently healthy quality (table 5), on the other hand, funding with the largest composition support remained consistent with low-cost funds during that period, so the consistency of LDR quality during the relevant period had no influence on the quality of NIM.

According to Hanafi and Alamsyah (2014), Arwin and Sutrisno (2022), NIM is a ratio used to measure bank management's ability to manage its productive assets to generate net interest income. Net interest income is obtained from interest income minus interest expense. Meanwhile, Kasmir (2017), states that NIM is a ratio used to measure the level of profitability, namely the level of bank effectiveness where net interest income is compared to the average productive assets. Nurfadillah (2023) and Wulandari (2019), stated that the higher the NIM of a bank shows that the bank is more effective in placing productive assets in the form of credit.

Several studies that are in line with the results of this research include Harun (2015), Maulidya (2016), who say that NIM does not have a significant effect on ROA because apart from the funding side not experiencing growth, there is also the burden of deteriorating bank credit quality. Widyastuti (2018), found that NIM had no effect on profits because interest costs rose due to the increase in the BI rate and inflationary pressures which caused banks to lose the opportunity to gain profits from productive assets.

Not in line with this research are Susanto and Kholis (2016), Cahyaningtyas & Retna, (2019), Wulansari and Chandra (2022), who found that the NIM variable has a significant effect on ROA, because there are fluctuations in interest income caused by the quality of the bank's productive assets.

Effect of LDR on Profit ;

This research also shows that there is a significant influence between LDR on the profits of the KBMI 4 bank group. LDR of the KBMI 4 bank group in 2017-2022 has an effect on the bank's profit achievement, due to, among other things: a. The size of the LDR in this 6 (six) year period was on average stable and maintained according to banking authority parameters (table 5), where lending (credit) and funding (DPK) experienced relatively linear growth, except during the 2020 pandemic due to "shock" withdrawal of funds for customer needs. However, after that the average size of the LDR for each bank remained consistently stable during the following period; b. This optimal LDR stability is due to the growth of lending with very good (small) NPL quality, thereby encouraging an increase in bank yields and simultaneously accompanied by growth in funding with a dominant composition in savings and current account products with low COF (table 2). As a result of the





simultaneous growth in bank funding and lending, of course, it has a direct impact on increasing total assets as reflected in the relatively consistent LDR size, ultimately encouraging an increase in the portion of bank net interest income (NIM); c. On the other hand, the operational efficiency described in the bank's BOPO (table 5) also contributes to the role of LDR in profits. Because if the LDR is optimal and healthy but there is no efficiency in bank operations, then profitability will not be significantly affected.

The KBMI 4 bank group in maintaining the quantity and quality of the credit portfolio (lending) as well as the ability to manage the quality of third party funds (funding) will be reflected in the ideal LDR ratio within the range according to the provisions of the authority (OJK). This means being able to utilize the funding pool used in lending distribution, namely optimizing the bank's intermediation function. Credit management reflects the risk of credit loans to the debtor, if the debtor is unable to repay the principal and interest installments when due, it will eventually become an unproductive asset (not producing interest income). So even though the LDR is good, there are portfolio components that make up the LDR whose interest income is still not recognized as effective (accrual). Credit portfolios that are still in a collectability position of "Substandard, Doubtful and Loss (KLDM)" have not yet been effective in their interest income (accrual) but on the other hand, they simultaneously give rise to new credit costs (Cost of Credit).

According to Rahman and Isywardhana (2019), LDR has a positive effect on profitability. If the LDR ratio is high, it indicates that a lot of credit distribution has been made, so the bank will have the potential to earn profits through credit interest. High profits can increase efficiency, as long as the bank can properly manage its credit distribution. According to Kasmir (2018), Hanafi and Alamsyah (2014) and Arwin and Sutrisno (2022), who have similar (substantial) views on LDR, namely the ratio used to measure the composition of the amount of credit (lending) given compared to the amount of public funds (funding). and own capital used. And Bank Indonesia Regulation no. 15/15/PBI/2013, states that LDR is a ratio that measures the composition of the amount of credit given compared to the amount of public funds and own capital.

This research is in line with the results of research by Rita et al. (2016) and Prayogo. (2014), which has described that LDR shows high levels of liquidity and ultimately triggers differences in the quality of bank profits. Praskalin and Wahyudi (2023), Dewi (2017), Hasbullah (2020), Putri et al (2022), state that LDR has a significant positive effect on ROA of commercial banks. For credit distribution reasons, there is a tolerance limit that must be taken into account, namely that the credit provided by the bank can be distributed more efficiently so that the bank makes more profit from credit interest. Nurmayanti et al (2014), found something relevant about the influence of LDR profitability, namely that it has a significant influence on NIM, on the grounds that the large amount of credit distributed to the public will also generate large interest income.

However, research results that have the opposite effect (negative influence) are research by Silaban (2018), Nugroho (2018), which found that the higher the LDR value indicates the lower the liquidity capacity of the bank concerned so that the possibility of a bank being in a problematic condition will be greater. This may indicate that liquidity does not contribute directly to achieving bank profits.

In contrast to the research results above are Cahyaningtyas (2024), Susanto and Kholis (2016), Frasisca (2005), who found that LDR did not have a significant effect on ROA. The reason is Priandini (2018), Rosandy and Shaa (2020), who found that LDR had no effect on profits due to the lower credit portion of third party funds, as well as due to bad credit.

The influence of bank ownership type and time period on profits ;

The research findings show that the type of ownership between state banks (State-Owned Enterprises) compared to private banks (National Private Enterprises) in the KBMI 4 bank group does not have a different influence on profit achievement. Based on the time period 2017 - 2022, there is also no difference in influence in achieving bank profits at that time.

The performance of the KBMI 4 bank group in efforts to achieve profits in the 2017 – 2022 period is not influenced by factors such as state ownership or private ownership. The financial performance of the KBMI 4 bank group is both in the relatively healthy category with a range of financial ratio parameters for each bank that matches or even far exceeds the parameters determined by the authority (OJK), so that they are able to survive during this period. The projected achievements in the financial parameters of the KBMI 4 bank group have relatively similar performance (quality) during the relevant period, due to, among other things: banks in





the KBMI 4 group are banks that have gone public (private) in the largest equivalent core capital category in Indonesia.

Proving the opinion of Ariyoto et al. (2000), Meitisari (2007), in Soejono (2010), who stated that by privatizing state-owned enterprises it is hoped that it will increase new financial sources for the company and increase operational efficiency (economies of scale). Apart from that, the digital banking product feature specifications available in the KBMI 4 bank group have technology and product features for different and specific market segments. Like a state-owned bank which has a segment focus ranging from the mass market (BRI), corporation (Mandiri) to foreign business (BNI) segments. Meanwhile, BCA has its own strengths as a transaction bank in Indonesia (Dionisio in *ibisnis.com*, 2022) and *Infobanknews* (2022). Then, the capital capacity (CAR) of each KBMI 4 bank both reached far beyond the minimum limit set by the authority (OJK). This means that it can demonstrate the ability to provide quality customer trust (Muhammad, 2002 in Andhika, 2017), so that it can have a comparative advantage in flexibility (freedom) in determining pricing and expanding investment in the bank's productive assets.

The explanation above has relevance to the opinion of the senior faculty of the Indonesian Banking Development Institute, namely Nurdin (2023), in *kompas.com* (November, 2023), who said that the previous increase in assets of top banks was more due to the strong trust of customers in banks. And the accumulation of a significant surge in third party funds was influenced by customer fund segmentation which focused on large banks which was also supported by digital banking product features. So that large banks that are ready are able to attract public funds and increase their assets organically. Of course, this can show relevance to bank entities in the KBMI 4 group which were the largest banks in Indonesia in terms of size of core capital and bank assets at that time.

Soejono (2010), researching the differences in the influence of company ownership type on financial performance, proves that state companies have better performance than private companies. Because state companies have more experience than private companies. State-owned companies can obtain several privileges (including ease of obtaining funding) from the government. However, it is different according to the findings of Bonin et al. (2005b), Fries and Taci (2005), in Soejono (2010), which states that on the contrary, privately owned banks are more efficient than state owned banks. For reasons of transparency (Berger et al., 2006), monitoring system (Marciano, 2008 and Husnan, 2001), productivity (Ngoc and Ramstetter, 2004), as well as profit and efficiency (Shleifer and Vishny, 1997).

Because this research's different tests do not show differences in the influence of "who" is better in achieving profitability between bank entities, whether government or private ownership, including no difference in the influence of the time period of the incident on profits, this research cannot show which bank entity is better. good in achieving profitability. So the impact of the effect size cannot be further measured.

CONCLUSION

The findings of the influence of research variables on the performance of the KBMI 4 bank group for the period 2017 – 2022 can be summarized as:

1. There is a significant impact of asset or size variables on bank profits. This is due to, among other things: having quality asset growth with the existence of NPL, LDR, NIM which meets bank health requirements as set by the regulator (OJK), the market segment of each bank which is specifically "unique", the momentum of the 2020 crisis as a bank with capital The largest core (CAR) increases public trust, technological excellence in bank transactions so that it meets customer expectations and the ability to maintain operational efficiency as reflected in BOPO by utilizing the bank's economies of scale.
2. There is a significant impact of the BOPO variable on bank profits. This is due to, among other things: total assets growing consistently by utilizing the efficiency of bank operations (economies of scale), while optimal and quality LDR encourages an increase in NIM which comes from the quality of NPLs so that it can increase yields and the composition of funding which is dominant in CASA products resulting in low COF .
3. There is a significant impact of the LDR variable on bank profits. This is because the quality of the LDR of each bank in the relevant period was optimal and consistent, there was simultaneous and consistent growth in lending and funding relevant to the existence of the LDR. Supported by consistent NPL quality, resulting in high





yields, while the funding composition produces a low COF, thereby creating a better NIM. As well as the managed efficiency of bank operations which is reflected in BOPO.

4. There is no significant impact of the CAR variable on bank profits. This is because the CAR of each bank in the relevant period consistently continues to grow, functioning more as a buffer against future bank business risks. Meanwhile, achieving ideal LDR and NPL resulting in high yields has been able to withstand calculated credit risks so that they do not burden the bank's CAR.

5. There is no significant impact of the NIM variable on bank profits. This is due to the consistent quality of NPL, LDR and NIM in each bank during the relevant period, and because there are no significant fluctuations, this does not result in fluctuations in the bank's net income.

6. There is no significant impact of the NPL variable on bank profits. This is because the NPL of each bank during this period did not experience significant fluctuations (relatively flat) and remained well managed, so that the pricing (yield) established by the bank was able to cover the credit costs that occurred.

7. Achievement of bank profits is not influenced by the type of ownership or the time period of the event. This is because each bank entity in the KBMI 4 group has similarities (characteristics) in the portion or magnitude of variables that influence bank profits. So in the end the effect size cannot be measured.

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