

Analysis the Impact of Credit Risk, Liquidity Risk, Management Efficiency on Profitability through Capital in KBMI 4 Banking

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Abstract

This research aims to analyze the influence or impact of credit risk (NPL), liquidity risk (LDR), management efficiency (BOPO) on profitability (ROA) through capital (CAR) as mediating variables in KBMI 4 banking, namely BRI, BCA, BNI and Mandiri Bank. The data collection method is bank annual report data from 2019 - 2023. The analysis method in this research is quantitative analysis, to determine the correlation between variables X1, X2, and X3 to Y and Z as mediating variables. using statistical path analysis techniques and to test the level of significance using the inner model test by looking at the p-value processed with the Smart PLS program. The research results concluded that LDR and BOPO had a negative and significant impact on CAR, BOPO had a negative and significant impact on ROA, NPL had a negative and insignificant impact on ROA. However, NPL has a positive and significant impact on CAR, LDR and CAR have a positive and significant impact on ROA. Apart from that, in testing the indirect effect, the results showed that CAR was able to mediate the influence of the BOPO variable on ROA which had a negative and significant impact. However, the CAR variable is unable to mediate the effect of NPL and LDR on ROA.

Keywords: non Performing Loans (NPL), Loan To Deposit Ratio (LDR), Operating Costs Operating Income (BOPO), Capital Adequacy Ratio (CAR), Return On Assets (ROA).

1. Introduction

Banking performance is an important indicator of a country's economy. This statement is in line with the statement (Siswanto et al., 2019) which states that the banking sector and other financial institutions have an important role in the economy, because these institutions provide financial services to support all economic sectors. Therefore, it can be concluded that higher the economy in society, the greater the role of banking. According to Bank Indonesia's economic report in 2022, the global economy is again facing challenges. In 2017-2018 the challenges were triggered by the United States (US)-China trade war which then caused global financial market turmoil and caused world trade volume to decline.

In 2020, new challenges emerged related to the impact of the Covid-19 pandemic which hit the world and caused a multidimensional crisis, namely the threat of a monetary crisis and a social crisis which had an impact on decreasing economic performance. Global economic challenges will increase in 2022, triggered by world geopolitical tensions which will worsen fragmentation and the global economic outlook. Russia-Ukraine geopolitical tensions have resulted in

weakening trade transactions, rising commodity prices and uncertainty in global financial markets, even though the spread of Covid-19 is starting to decline.

In general, the global economy that will impact Indonesia in 2022 faces five serious challenges. First, economic growth is decreasing (*slow growth*). Second, very high inflation was triggered by increases in energy and food prices. Third, the policy of high interest rates for a long time. Fourth, the US dollar is very strong which puts pressure on the exchange rates of many countries. Fifth, withdraw global investor funds and divert them to liquid assets (*cash is the king*). These various global economic challenges ultimately require strengthening international cooperation on both regional and multilateral scales (Margareth, 2017) .

The Covid-19 pandemic has an impact on all industrial sectors, especially the banking sector. The Financial Services Authority (OJK) SPI 2022, noted that banking profitability in February 2022 experienced a decline. *Return on Assets* is a ratio used to measure a company's ability to generate net profits based on a certain level of assets. The greater the ROA of a bank, the greater the level of profit achieved by the bank and the better the bank's financial position in terms of the use of its assets so that ROA is more representative in measuring the level of banking profitability (Ishak *et al* ., 2022). Profitability is a determining factor in the sustainability of a bank, therefore profitability is important and is one of several indices in measuring the financial capability of a bank (Fitriyani, 2022) .

Capital is an intermediary because capital is the foundation for the continuity of operational activities and the main buffer used by banks to absorb various risks faced in their activities so that changes in capital up or down will have a big role in the sustainability of the bank. According to Putri & Wahyudi, (2023) CAR is a ratio that shows the extent to which all bank assets that contain risk are financed from its own capital funds in addition to obtaining funds from sources outside the bank.

Based on agency theory which explains that in banking companies, agency theory refers to customers (*principals*) and banks (agents). Where the bank will collect and distribute funds as determined to customers. Efficient contracts can be reviewed through the harmony of information obtained by the bank and the customer so that there is no hidden information that causes one party to suffer a loss. Apart from that, it can also be reviewed with the level of credit risk borne by the bank. The higher the credit requested by the customer, the higher the bank's credit risk, therefore there needs to be a balance between the bank and the customer which is assessed by the level of soundness and banking performance.

Based on the various facts and problems that have been described in the background of this research problem, the objectives of this research can be described as follows: Test and analyze the direct influence of credit risk, liquidity risk, management efficiency on capital; Test and analyze the direct influence of credit risk, liquidity risk, management efficiency on profitability; Test and analyze the direct effect of capital impact on profitability; Test and analyze the indirect influence of credit risk, liquidity risk, management efficiency on profitability through capital.

2. Literature Review

Every party who has a relationship with the company is very interested in the company's performance. The importance of measuring company performance can be explained by three theories, namely agency theory, signal theory, and anticipated income theory. To achieve business goals, banks need to find an optimal balance between business, operations and risk management. Banks need to have a risk-oriented business unit and have a business-oriented risk management unit. Risk management is important so that banks are not trapped in various businesses that theoretically or historically can provide high profits or margins, but the associated risks are also high. Banks often do not realize that large profits obtained in the past have high risks, but coincidentally the conditions that occur in the market are in line with what the bank expected so that this risk does not become a reality (Eko Sudarmanto, 2021).

According to signal theory, to view banking performance information from financial reports by looking at the level of profitability and level of banking risk such as credit risk (NPL), liquidity (LDR), management efficiency (BOPO), and capital (CAR). So it is necessary to carry out a bankruptcy analysis to get an early warning (*signal*) to predict financial difficulties that will cause bankruptcy. The banking industry has an important role in the economy as an intermediary institution that channels public funds into investment in productive assets which will encourage real sector productivity, *capital accumulation* and *aggregate output growth* according to Bancivenga and Smith, 1991 in (Listri, 2021). Empirically, banks are one of the business entities that play an important role in developing the economy in a country. One of the bank's goals is to obtain maximum profitability to optimize its operational activities. Risks that may occur will cause losses for the bank if they are not detected and not managed properly, (Herawati & Irradha Fauzia, 2018) states that if risks are not detected and not managed properly, it will cause a contraction in bank activities, a decrease in output, and the imposition of large costs for the smooth running of the economy in a country.

Credit risk is the risk resulting from the failure of other parties to fulfill their obligations to the bank. Included are credit risk due to debtor failure, credit concentration risk, *counterparty credit risk*, and *settlement risk*. Banks as intermediary institutions provide credit and securities with the hope of repayment and earning interest income from these activities, however when a *default occurs* on credit and securities it will reduce bank capital where the owner of bank capital provides 10% or less to cover losses originating from credit default. this problem (Achmad & Kristijadi, 2021). High credit risk can have a negative impact on bank capital, when there is a default or delay in payment by the debtor, the bank must bear the loss. If the loss is significant, the bank must allocate part of its capital to cover the loss. There are several ratios used to measure bank capital, such as the capital adequacy ratio (CAR), which measures how much bank capital is compared to the risks it faces. High credit risk will cause an increase in capital requirements to cover potential losses. As a result, a bank's capital adequacy ratio may decrease if credit risk increases significantly.

H1: Credit Risk has a negative and significant impact on Capital

The liquidity ratio is one of the ratios to measure company performance Cahyani and Wirawati (2019). The liquidity ratio reflects a company's ability to pay off its short-term obligations or how quickly the company converts its assets into cash (Sukamulja, 2019). The higher the level of liquidity of a company, the higher the level of the company's ability to fulfill its short-term obligations properly. High liquidity risk can cause a decrease in bank capital because the bank must use part of its capital to cover urgent liquidity needs. So it can be concluded that the higher the LDR indicates the riskier the bank's liquidity conditions, conversely the lower the LDR indicates the bank's less effectiveness in distributing credit. Because the higher the LDR, the more CAR decreases (liquidity conditions are threatened), so LDR has a significant negative effect on CAR. Research results from Fira (2023), confirm that the LDR variable has a significant and negative influence on CAR, this means that banks must look at the *safety aspect* of the credit side. And Septiani and Lestari (2016) show that LDR has an insignificant positive effect on CAR.

H2: Liquidity risk has a negative and significant impact on capital

Operational risk is a risk that arises due to non-functioning and/or inadequacy of internal processes, system failure, human error, and external events that affect bank operations (POJK No. 18/POJK.03/2016). Duho *et al* . (2020) stated that operational risk is a risk that causes losses due to weaknesses in internal processes, systems, human resources and external processes. Yanuardi , *et al* (2014), the proxy used to measure bank management efficiency is the BOPO ratio, namely the ratio of operational costs to operating income (BOPO). The relationship between management efficiency and bank capital can be seen from two sides, namely: increasing capital and optimizing the use of capital. Good management efficiency can lead to an increase in bank net profit. Increased net profit can be used to strengthen bank capital, either through accumulated retained earnings or through offering new shares. By managing resources efficiently, banks can minimize capital waste and allocate it appropriately according to business needs. So management efficiency is negatively related to bank performance so it is predicted to also have a negative effect on CAR.

H3: Management efficiency has a significant negative impact on capital

The relationship between credit risk and profitability is a crucial aspect in the banking and financial industry. Credit risk explains the potential for bad credit to arise from any funds that have been channeled through loans or credits (Akbar *et al* ., 2018) *Non Performing Loans* (NPL) is a comparison of non-performing loans with total credit. In general, high NPL levels tend to reduce bank profitability. This is because the existence of NPLs causes banks to have to allocate resources to handle problem loans, including setting aside reserves for credit losses, collection costs and settlement costs. All of this can cause a decrease in net income and reduce *Return on Assets* (ROA). So the smaller the NPL, the better the bank's performance. On the other hand, if the NPL is high, it can indicate that there are a lot of problem loans occurring, resulting in decreased profitability. Masdupi's research results, Erni (2014), stated that the negative relationship between NPL and ROA indicates that the higher the NPL, the ROA will decrease, which means that the higher the bad credit, the lower the profitability.

H4: Credit risk has a significant negative impact on profitability

According to Adalsteinsson (2014), liquidity risk may be more important than other bank risks, because this risk can trigger *insolvency risk* or " *bank run* ", especially when the bank is unable to meet depositors' requests for withdrawals at certain times. Yuksel *et al* . (2018) stated that the *loan to deposit ratio* (LDR) shows the *liquid level* of a bank in using the funds it has collected and channeling them back in the form of credit to obtain *income* . This risk can have a negative effect on bank performance. Therefore, the main priority for company management is to ensure that the bank has sufficient funds to meet requests from *depositors* and *borrowers* . Banks must pay attention to their liquidity position, because this can help the bank in expanding *customer loans* when the market offers attractive opportunities. This statement is supported by research by Fira (2023) and Yanuardi , *et al* , (2014);) which explains liquidity with *the ratio of Loan to Deposit Ratio* (LDR), showing that there is a significant influence on profitability.

H5: Liquidity risk has a significant impact on profitability

Duho *et al* . (2020) stated that operational risk is a risk that causes losses due to weaknesses or shortcomings in internal processes, systems, human resources and external processes. One important aspect of management efficiency is the ability to reduce unnecessary operational costs. By managing resources efficiently a company can reduce overall production and operational costs, increase profit margins, and ultimately increase profitability. Companies that are inefficient in using the assets they own can affect ROA, ROA will decrease as a result of this inefficiency, which results in investors' lack of interest in investing their capital in the company. Buchory (2015) states that BOPO has a significant effect and has a negative relationship with profitability. The negative relationship between BOPO and ROA shows that the higher the BOPO, the lower the ROA will be , which means that the more efficient a bank's operational performance is, the greater the profits obtained by the bank.

H6: Management efficiency has a significant negative impact on profitability

CAR or often called capital ratio is the basic capital that must be met by banks. Capital also functions to maintain public confidence in the bank's ability to carry out its function as an intermediation institution (Latumerisa: 2014). If the CAR value is high, then the bank is able to finance losses from any risky credit/productive assets resulting from operational activities and make a large contribution to profitability. The higher the Capital Adequacy Ratio level, the higher the bank's opportunity to generate profits. With a high level of capital adequacy, banks will have more freedom in placing their funds into profitable investment activities so as to increase profitability.

H7: Capital has a positive and significant impact on profitability

Adequate capital enables financial institutions to implement better risk management practices. This includes careful credit monitoring, appropriate risk assessment, and prudent credit portfolio management. In this way, credit risk can be managed more effectively, which in turn can positively influence profitability. CAR can also be said to be a ratio that shows a bank's ability to provide funds for business development purposes and accommodate possible risks of

loss resulting from non-performing loans (NPL). So the greater the NPL owned by a bank can cause its capital adequacy ratio (CAR) to decrease, which will have an impact on reducing the bank's ability to generate profits or profitability.

H8: Credit risk has a significant impact on profitability through capital

High liquidity risk can put pressure on financial institutions' capital. This especially happens if financial institutions have to spend additional funds or take on new obligations to meet their liquidity obligations (Santoso, 2018). In this case, sufficient capital allows financial institutions to overcome liquidity risks without compromising financial stability and profitability. CAR or often called capital ratio is the basic capital that must be met by the bank. Every bank in Indonesia is required to provide minimum capital of 8% of ATMR. The higher the CAR of a bank reflects the better the bank's performance. So banks must have more capital to channel through credit (LDR). The higher the LDR indicates the riskier the bank's liquidity conditions, conversely the lower the LDR indicates the bank's lack of effectiveness in distributing credit. Because the higher the LDR, the CAR decreases, so LDR has a negative effect on CAR. So it can be concluded that the greater the LDR owned by a bank can cause its capital adequacy ratio to decrease, so that increasing the LDR will impact the bank's ability to generate profits.

H9: Liquidity Risk has a significant impact on profitability through Capital

The efficiency of a bank's management can directly affect its profitability. Banks that manage their resources and operations efficiently tend to have lower operating costs, which can increase profit margins and in turn increase profitability. Management efficiency can also help banks to better allocate resources, identify profitable business opportunities, and improve the quality of service to customers, all of which can contribute to profitability. Adim (2018) believes that banks must prepare funds, or in this case capital costs, to prevent the effects caused by operational risks. Good management efficiency can produce higher profitability, thereby increasing bank capital, because high profits can be used to strengthen capital.

H10: Management efficiency has a significant negative impact on profitability through capital.

3. Research Method

This type of research is quantitative research using secondary data obtained by accessing the internet and literature studies, in the form of *time series data*. This data includes total *NPL*, *LDR*, *BOPO*, *ROA* and *CAR* in the banks included in KBMI 4, namely Bank BNI, Bank Mandiri, Bank BCA and Bank BRI.

The data source for this research is secondary data obtained from literature studies and documents obtained from the Central Statistics Agency, Bank Indonesia and the Financial Services Authority. The secondary data collected is secondary data in the form of annual financial reports published during the 2019-2023 period.

Table 1. Operational Definitions of Variables

Variables	Definitions	Items
Credit Risk (X1)	Credit risk is the risk resulting from the failure of debtors and/or other parties to fulfill their obligations to the bank . The proxy used is the NPL (<i>Non Performing Loan</i>) ratio, this ratio describes the ability of bank management to manage problem loans provided by the bank. The higher this ratio, the worse the quality of bank credit, which causes the number of problem loans to increase (Almilia and Herdiningtyas, 2005 in Masdupi, Erni: 2014)	$NPL = \frac{\text{Kredit Bermasalah}}{\text{Total Kredit}} \times 100\%$
Liquidity Risk (X2)	Liquidity risk is a risk that arises because a bank is unable to fulfill its liquidity obligations (Latumerissa : 2014). The proxy used is the LDR ratio (<i>Loan to Deposit Ratio</i>). This ratio describes the ability of bank management to fulfill obligations to depositors. This ratio value is obtained from analysis of financial reports, especially balance reports from each bank listed on <i>Commercial Bank KBMI 4</i>	$LDR = \frac{\text{Total Kredit}}{\text{Dana Pihak Ketiga}} \times 100\%$
Management Efficiency (X3)	Management Efficiency is an assessment carried out on the performance of bank management in carrying out cost efficiency (Yanuardi, et al: 2014). Achieving bank management efficiency using the Operational Costs and Operating Income (BOPO) ratio measurement PBI /No 14/26/2012 . The BOPO ratio describes the amount of operational costs that can reduce a bank's operational income, thus reflecting the bank's ability to carry out cost efficiency.	$BOPO = \frac{\text{Operation Cost}}{\text{Operation Revenue}} \times 100\%$
Profitability (Y)	Profitability is the ability to earn profits or a measure in percentage used to assess the extent to which a company is able to generate profits. The proxy used to measure profitability is ROA (<i>Return of Assets</i>) . RO A describes the use of every rupiah of bank assets to gain profits or shows management's	$ROA = \frac{\text{Laba Bersih setelah Pajak}}{\text{Total Aktiva}} \times 100\%$

Variables	Definitions	Items
	effectiveness in using assets to obtain profitability.	
Capital (Z)	Capital is the basic capital that must be met by the bank and as a buffer in the event of losses. One of the assessments of bank capital is <i>the Capital Adequacy Ratio</i> . CAR describes the amount of own capital that a bank has to cover every rupiah of assets that experience a decline in value. This can indicate the stability of a bank.	$Capital Adequacy Ratio = \frac{Modal}{ATMR} \times 100\%$

Analysis Methods. The analytical technique used to answer the problem/hypothesis in this research is to use the SEM (*Structural Equation Modeling*) analysis technique through the Smart *Partial Least Square* (PLS) program. to test the ten hypotheses proposed in this research. Each hypothesis will be analyzed using smartPLS 3 *software* to test the relationship between variables. SEM-PLS has three activities simultaneously, namely checking the validity and reliability of the instrument (*Confirmatory factor analysis*), Testing the relationship model between variables (*Path analysis*), and Modeling that is suitable for prediction (*Measurement model & Structural model*). The measurement model is carried out to produce an assessment regarding validity and discriminant validity, while the structural model, namely modeling that describes hypothesized relationships (Harahap, 2019) .

4. Finding and Discussion

4.1 General description of the research object

The objects used in this research are banks that are included in the core capital bank group (KBMI) 4 or groups of banks that have core capital of more than 70 trillion rupiah, namely: Bank Mandiri (Persero) Tbk, Bank Rakyat Indonesia (BRI) (Persero) Tbk , Bank Negara Indonesia (BNI) (Persero) Tbk, and Bank Central Asia (BCA) Tbk. In accordance with POJK/12/.03/2021, previously the grouping of commercial banks was based on business activities known as Commercial Banks based on Business Activities (BUKU). So OJK redefined or changed the grouping of commercial banks which previously used the term BUKU to become Bank Groups based on Core Capital (KBMI).

Table 2. List of Bank Groups Based on Core Capital

Bank Group	Core Capital
KBMI 1	6 Trillion Rupiah
KBMI 2	6 – 14 Trillion Rupiah
KBMI 3	14 – 70 Trillion Rupiah
KBMI 4	>70 Trillion Rupiah

The subjects of this research are commercial banks that are included in KBMI 4 and that meet

the criteria for grouping banks based on core capital above 70 trillion rupiah. The following is a list of general bank categories included in KBMI 4:

Table 3. List of KBMI 4 banks with the largest core capital in 2021

Bank name	Number of Banks (Units)	Core Capital
PT. Bank Rakyat Indonesia (Persero), Tbk	7980	Rp. 173.15 Trillion
PT. Bank Central Asia, Tbk	1248	Rp. 168.61 Trillion
PT. Bank Mandiri (Persero), Tbk	2312	Rp. 153.53 Trillion
PT. Bank Negara Indonesia (Persero), Tbk	2047	Rp. 98.53 Trillion

Core capital according to POJK number 31 /POJK.03/2019 concerning the obligation to fulfill the leverage ratio for commercial banks. Core capital is the core capital as regulated in the Financial Services Authority Regulation regarding the obligation to provide minimum capital for commercial banks. Provision of adequate core capital as referred to in paragraph (1) is calculated using the Leverage Ratio, *hereinafter* referred to as the Leverage Ratio, which is the comparison between core capital and total exposure.

Test the validity and reliability of the instrument

Tabel 4. Test the validity and reliability of the instrument

N O	Variable	Indica tor Code	Validity test			Reliability Test			Discriminant Validity	
			<i>Loadi ng Facto r (>0.7)</i>	AV E (>0.5)	Informa tion	<i>Compo site Reliabi lity (>0.7)</i>	<i>Cronba ch's Alpha (>0.7)</i>	Informa tion	<i>Forn ell & Larck er ($\sqrt{AVE}$)</i>	Informa tion
1	Credit Risk	NPLs	1,000	1,000	VALID	1,000	1,000	RELIA BLE	1,000	VALID
2	Liquidity Risk	LDR	1,000	1,000	VALID	1,000	1,000	RELIA BLE	1,000	VALID
3	Management Efficiency	BOP O	1,000	1,000	VALID	1,000	1,000	RELIA BLE	1,000	VALID
4	Capital	CAR	1,000	1,000	VALID	1,000	1,000	RELIA BLE	1,000	VALID
5	Profitability	ROA	1,000	1,000	VALID	1,000	1,000	RELIA BLE	1,000	VALID

Path Coefficient test and significance of direct influence

Table 5. Path Coefficient Test & Significance of Direct Effect (Result of Direct Effect)

<i>Direct Effects</i>	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation</i>	<i>T Statistics (O/STDV)</i>	<i>P Value</i>
Management Efficiency (X3) → Capital (Z)	-0.654	-0.662	0.170	3,840	0,000
Management Efficiency (X3) → Profitability (Y)	-0.857	-0.877	0.154	5,554	0,000
Capital (Z) → Profitability (Y)	0.333	0.331	0.170	1,955	0.026
Liquidity Risk (X2) → Capital (Z)	-0.328	-0.312	0.138	2,373	0.009
Liquidity Risk (X2) → Profitability (Y)	0.541	0.548	0.161	3,366	0,000
Credit Risk (X1) → Capital (Z)	0.353	0.377	0.188	1,881	0.030
Credit Risk (X1) → Profitability (Y)	-0.025	0.005	0.132	0.189	0.425

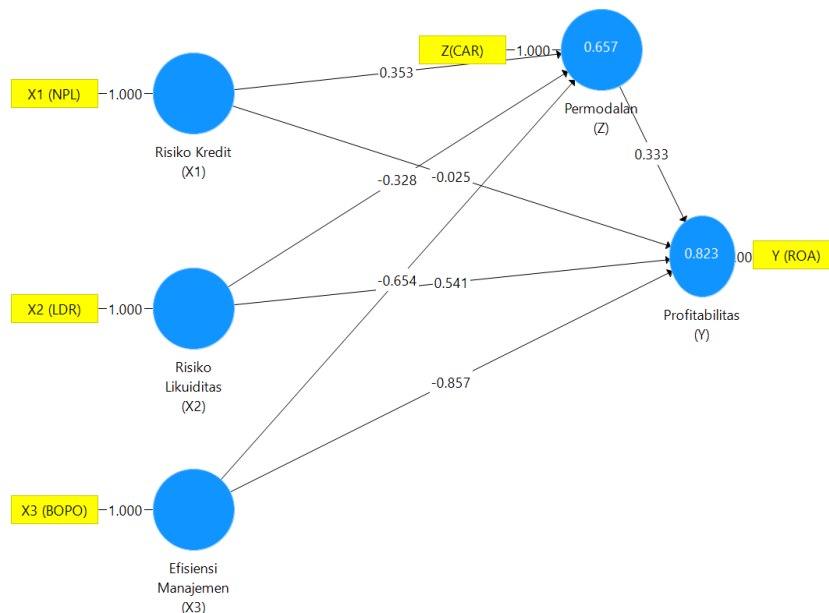


Figure 1. Results of direct influence testing

Based on table 5, direct influence hypothesis testing shows that:

1. Management efficiency as measured by BOPO to capital (CAR) obtained results with a coefficient or *Original sample value* of -0.654, with T Statistics = 3,840 > 1.64 and P Values = 0.000 < 0.05. so it is concluded that there is a significant negative influence between management efficiency (BOPO) on capital (CAR/KPMM), (**Hypothesis accepted**). In this

study, the results of descriptive statistics on the management efficiency variable (BOPO) obtained an average value of 66.49% with a standard deviation of 12.04%. According to Bank Indonesia regulations, a healthy bank shows a BOPO value of $\leq 83\%$, while at KBMI 4 banking, an average BOPO value of 66.49% is obtained, which means that KBMI 4 banking is still very good at managing operational cost efficiency.

2. On the direct influence of management efficiency (BOPO) on profitability (ROA), results were obtained with a coefficient value of -0.857, with T Statistics = 5.554 > 1.64 and P Values = 0.000 < 0.05. so it can be concluded that there is a significant negative direct influence between management efficiency (BOPO) on profitability (ROA), (**Hypothesis accepted**). The research results show that management efficiency has a negative and significant effect on profitability. Supported by descriptive statistical values during 2019-2023 of which tends to decrease over the five years of observation with an average of 66.50%, even though it is in accordance with bank regulations, namely $\leq 85\%$, indicating that the bank is in the good category, and seen from the standard deviation value of 12% which is below the mean, it indicates that the bank can manage its use. resources in operational activities effectively and reduce operational costs so that it has an impact on increasing profitability.

3. On the direct influence of capital (CAR) on profitability (ROA), results obtained with a coefficient value of 0.333 with T statistics = 1.955 > 1.64 and P Values = 0.026 < 0.05. so it can be concluded that there is a significant positive direct influence between Capital (CAR/KPMM) on Profitability (ROA), (**Hypothesis accepted**). Supported by the descriptive statistical value of capital value (CAR) in KBMI 4 banking during the 2019-2023 research period with an average value of 22.34%, it tends to increase and a standard deviation value of 3.04% which is below the mean value indicates that the bank has a level of good capital, the better the capital condition of a bank will provide better protection for customers and ultimately public trust will increase which will have a good impact. Apart from that, the higher the bank capital will give the bank the opportunity to diversify its products and services, so that the bank becomes more competitive and this will reduce the risk of losses which will ultimately have an impact on increasing profitability. From the data obtained, KBMI 4's banking performance looks very good, supported by adequate capital conditions, especially in 2023 reaching 24.52%. This is followed by an increase in the ROA value in 2023 reaching 3.54%. This certainly indicates that the banks included in KBMI 4, namely BRI, BCA, BNI and Bank Mandiri, are the strongest banks capable of maintaining performance and will certainly have an impact on the recovery of the Indonesian economy.

4. On the direct influence of liquidity risk as measured by LDR on capital (CAR), results obtained with a coefficient or *Original sample value* of -0.328, with T Statistics = 2.273 > 1.64 and P Values = 0.009 < 0.05. so it is concluded that there is a significant negative influence between liquidity risk (LDR) on capital (CAR/KPMM), (**Hypothesis accepted**). In accordance with descriptive statistical data, the mean of liquidity risk is 80.79%. If you look at this figure, it still looks quite high, but this figure is still within the range according to PBI No. 17/11/PBI/2015 Article 10 which validates that the LDR limit target is within the range of 78%-92%. where LDR Target is the LDR ratio range which is limited by the lower and upper limits

set by Bank Indonesia in the context of calculating the LDR GWM. So it can be concluded that the liquidity risk (LDR) figure in KBMI 4 banking in the five years of observation is still relatively healthy.

5. On the direct influence of liquidity risk as measured by LDR on profitability (ROA), results obtained with a coefficient or *Original sample value* of 0.541, with T Statistics = $3.366 > 1.64$ and P Values = $0.000 < 0.05$. So it can be concluded that there is a significant positive influence between liquidity risk (LDR) on profitability (ROA), (**Hypothesis accepted**). The influence of liquidity risk on profitability in KBMI 4 banking is very significant and complex. Liquidity risk refers to the ability of these banks to meet their financial obligations and finance their daily activities without experiencing significant difficulties or additional costs. In this research, the average LDR was found to be 80.79%, this shows that the banks included in KBMI 4 are still included in the good category, where BI regulations require the LDR limit for banking targets to be between 78%-92%. This means that the loan figure to Deposit Ratio (LDR) with an average of 80.79% indicates that the bank is very stable in managing liquidity so that it does not have an impact on increasing NPLs. KBMI 4 Banking uses around 80.79% of its total customer deposits to provide loans to borrowers.

6. On the direct influence of credit risk as measured by NPL on capital (CAR/KPMM), results were obtained with a coefficient or *original sample value* of 0.353, with T statistics = $1.881 > 1.64$ and P values = $0.030 < 0.05$. so it can be concluded that there is a significant positive influence between credit risk (NPL) on capital (CAR/KPMM), (**Hypothesis accepted**). Based on the results of this research, it shows that credit risk has a significant effect on capital. This is proven by the significance value in the *direct effect test* which produces a *p-value* of $0.03 < 0.05$ with an *original sample* of (0.353). This indicates that the decreasing level of credit risk or lower NPL causes capital (CAR) to increase. The results of this research are in accordance with theory which shows that banks try to minimize risks due to problem loans in order to optimize increased profitability so that they can increase bank capital.

7. On the direct influence of credit risk as measured by NPL on profitability (ROA). Results were obtained with a coefficient or *original sample value* of -0.025, with T statistics = $0.189 < 1.64$ and P values = $0.421 > 0.05$. so it is concluded that there is no significant effect between credit risk (NPL) on profitability (ROA), (**Hypothesis rejected**). In this research, the results showed that there was no significant influence between credit risk (NPL) on profitability (ROA). If we look at the credit risk fluctuation data as measured by the KBMI 4 banking NPL, it is said to be very healthy, as shown by the average (mean) NPL over the last five years of 0.67%, far below the threshold determined by BI, 5%. This means that KBMI 4 banking is very good at managing banking credit risk. In this case, when NPLs do not have a significant influence on bank profitability, this is due to several factors and dynamics that occur in the banking industry, such as good credit risk diversification. KBMI 4 banking is considered to be very good so that having a well-diversified credit portfolio can reduce the negative impact of NPLs on profitability. This is because the risk of non-performing loans can be spread across the entire portfolio, so that a single failed credit does not significantly affect the overall financial performance.

Testing the Mediation Effect of Indirect Effects

Table 6. Indirect Effect Hypothesis Testing

The calculation results of testing the indirect influence hypothesis through testing the *indirect effect of mediation*, Table 6, shows that:

1. indirect effect of credit risk (NPL) on profitability (ROA) through capital (CAR) is that

<i>Indirect Effects</i>	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics (O/STD V)	P Value
Management Efficiency (X3) → Capital (Z) → Profitability (Y)	-0.218	-0.215	0.123	1,762	0.039
Liquidity Risk (X2) → Capital (Z) → Profitability (Y)	-0.109	-0.105	0.073	1,459	0.068
Credit Risk (X1) → Capital (Z) → Profitability (Y)	0.118	0.114	0.076	1,553	0.060

the *T-Statistic* value is $1.553 < 1.64$ as the threshold, and the *P value* is 0.060, more than the significance level of 0.05. so it can be concluded that credit risk indirectly has no significant effect on profitability through capital as a mediating variable. This means that capital (CAR) does not mediate the relationship between credit risk (NPL) and profitability (ROA). **(Hypothesis rejected).**

2. In the indirect effect of liquidity risk (LDR) on profitability (ROA) through capital (CAR), the *T-statistic* value of $1.459 < 1.64$ as the threshold, and the *P value* of 0.068 is more than the significance level of 0.05. so it can be concluded that liquidity risk (LDR) indirectly has no significant effect on profitability through capital as a mediating variable. what this means is that capital (CAR) does not mediate the relationship between liquidity risk (LDR) and profitability (ROA) **(Hypothesis rejected).**

3. The next test of mediation on the indirect effect shows that capital (CAR) has a significant role in mediating the relationship between management efficiency (BOPO) and profitability (ROA). What is indicated by a *T-Statistics* value of 1.762 and a *P-Values* of 0.039 shows that this relationship is statistically significant, with a T-Statistics value that exceeds the critical threshold of 1.64 and a P-Values of less than 0.05. Therefore, these results provide a strong indication that capital (CAR) plays an important role as a mediator between management efficiency (BOPO) and profitability (ROA), thus validating the mediation hypothesis in the context of this research. **(Hypothesis accepted).**

The Inner Model evaluation process using R square involves analyzing changes in the R square value as an indicator to evaluate the extent to which an independent latent variable influences the dependent latent variable in the context of the research model.

The R-Square value is a measure used in statistical analysis, especially in regression models, to evaluate how well predictor variables can explain variations in the response variable. In this case, researchers use R-Square to understand the extent to which certain factors, such as credit risk, liquidity risk, management efficiency, influence capital and profitability in banking. The results of inner model testing using R-Square can be seen in Table 7 below:

Table 7. R Square

	R Square (R^2)
Capital (CAR)	0.657
Profitability (ROA)	0.823

Based on table 7, it shows that the *R-Square value* of Capital (CAR) is 0.657, which means that credit risk (NPL), liquidity risk (LDR), and management efficiency (BOPO) are able to influence capital by 65.7%. This shows that these independent variable factors have a significant influence on banking performance when viewed from the quality of capital as measured by CAR. Meanwhile, variable Y, namely profitability (ROA), shows an *R-Square value* of 0.823, which means that credit risk (NPL), liquidity risk (LDR) and management efficiency (BOPO) are able to influence profitability by 82.3%.

Theoretical Implications. This research aims to analyze the influence of the financial performance variables of large banks contained in KBMI 4 originating from internal factors on bank profitability in the 2019-2023 period, namely credit risk, liquidity risk, management efficiency and capital. Apart from that, the results of this research also provide a contribution that can support the implementation of financial report analysis. Because financial report analysis can function to evaluate the performance of banking companies and obtain data that can be used to determine various company policies and goals in the future. This research builds an integrated model to look at the impact of credit risk, liquidity risk, management efficiency on the profitability of banking companies through the capital applied by banking companies.

Managerial Implications. It is hoped that the managerial implications of the discussion and analysis in research regarding the influence of credit risk, liquidity risk and management efficiency on profitability through capital can be used to evaluate the development of the financial sector, especially the level of banking health and performance which is classified as strong. For investors, can consider the variables credit risk, liquidity risk, management efficiency, capital because these variables contribute to achieving bank profitability, these are used as a basis for assessing company performance so that it can make it easier for investors to make investment decisions.

5. Conclusion

Credit risk, liquidity risk, and management efficiency each have a significant influence on KBMI 4 banking capital and profitability, with management efficiency and high capital increasing profitability, while lower credit risk and efficient management increase capital.

However, credit risk does not significantly affect profitability, either directly or through capital, and liquidity risk does not affect profitability through capital even though capital functions as a buffer against this risk.

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