The Moderating Role of Foreign Ownership on the Influence of Digital Finance, Capital Adequacy, Efficiency and Asset Quality on Profitability (Study at KBMI 3 & 4 Commercial Banks on the IDX 2015-2022)

Yunanto Wahyu Widyatmoko
Magister of Management
Mercu Buana University
Jakarta, Indonesia

Asep Risman
Lecturer at the Faculty of Economics and Business
Mercu Buana University
Jakarta, Indonesia

Abstract:- This research aims to determine the influence of Digital Finance, Capital Adequacy, Efficiency and Asset Quality on Profitability in Foreign Ownership Moderation. The financial ratios studied are: Mobile Banking (MB), Capital Adequacy Ratio (CAR), Operating Costs Operating Income (OCOI), and Non-Performing Loans (NPL) and Foreign Ownership. The population in this research is KBMI 3 & 4 Commercial Banks which are registered on the IDX in the 2015-2022 period. The research sample consisted of 7 commercial banks taken using purposive sampling technique. The data collection technique used is documentation. Data analysis was carried out using panel data analysis techniques using the fixed effect model method. The research results show that the MB and OCOI variables partially influence ROA, while CAR and NPL have no effect. Furthermore, foreign ownership is able to moderate the influence of MB on ROA, while the influence of CAR, OCOI and NPL cannot be moderated by foreign ownership.

Keywords:- Digital Finance, Foreign Ownership, Capital Adequacy, Efficiency, Asset Qualit, Profitability.

I. INTRODUCTION

Banking has a very crucial role for an economy, because banks function as financial intermediaries between parties who need funds and parties who have surplus funds. The role of banking in the economy is determined by the performance of each bank itself. Like a business entity, banking performance is of course influenced by many factors, both external and internal.

One external factor that is currently the focus of attention is the presence of peer to peer lending and fintech lending. That the threats and challenges of banking are currently getting bigger along with the increasingly widespread use of the internet and the growth of financial technology which has given birth to a mechanism that brings together lenders and borrowers directly (peer to peer lending) and fintech lending, these two new facilities have taken over the function intermediation and the main business of banking.

However, the increase in internet users and mobile phone ownership in Indonesia is an opportunity for banks to improve their performance by providing digital financial services. One of the digital financial services currently developing is mobile banking, this facility helps bank customers carry out financial transactions using mobile devices. Research on the influence of digital finance on banking performance is still very limited and the findings are still inconsistent, several studies have found that mobile banking transactions have a positive influence on performance (Alfatihah & Sundari, 2021; Imamah & Safira, 2021; Mayasari et al., 2021), but several other studies show that mobile banking transactions have no effect on banking performance (Sudaryanti et al, 2018; Yusniar & Thio 2021; Syahputra & Suparno, 2022).

Apart from being influenced by external factors, banking performance is also influenced by internal factors of banking itself, including the level of bank health (TKS). The TKS value is a qualitative assessment of various aspects that influence the condition or performance of a bank through quantitative and/or qualitative assessment components of a number of factors, including capital (CAR), asset quality (NPL) and efficiency (OCOI).

Banking performance is often also linked to the composition of the bank's ownership, especially the presence of foreign ownership. Foreign ownership tends to be considered a positive thing, because foreign ownership can act as a catalyst for improving performance from external and internal factors (Hapsari & Rokhim, 2017; Rosalina & Nugraha, 2019; Sijabat et al., 2020; Ambarwati, 2021). Foreign ownership will encourage companies to be more competitive because companies will have advantages in the fields of technology, managerial capabilities and wider networks and marketing. In this regard, this research is not the same as previous research, apart from the

existence of digital finance variables and factors which are components of the bank's health level, this research also tests foreign ownership as a moderating variable.

II. THEORETICAL REVIEW

A. Profitability

Profitability is a performance parameter of a business entity in generating company profits (Risman et al., 2020). Based on various literature, there are various benchmarks that can be proposed in assessing profitability, including: Return on Assets (ROA), Return on Equity (ROE), Tobin-Q, Profit Margin (PM), Earnings per Share (EPS), Price-Earnings Ratio (PE), and so on (Al-Matari et al., 2014. Risman et al., 2020). In this research, Return on Assets (ROA) will be used as a proxy for company profitability.

Concurring to Hery (2015), Return on Assets (ROA) is a ratio that speaks to the benefit from employing a company's assets for the company to create net benefit. In other words, this ratio is used to measure the net benefit that will be created by each rupiah of funds included in total assets. The calculation formula is: ROA=(profit before tax: total assets) x 100%.

B. Digital Finance

Digital finance is defined as financial services that use mobile phone facilities (smart phones), personal computers, internet, mobile banking, e-wallets, mobile wallets, credit cards and other digital facilities Risman et al. (2021). Furthermore, according to Risman et al., (2021), digital payment is the main element of digital finance, one form of digital payment is using mobile banking.

Mobile banking is a service that allows customers to carry out banking transactions using mobile phones or smartphones (OJK, 2015). Turban et al (2015) define mobile banking (m-banking) as a system that allows users to view financial transactions from a smart phone or other wireless mobile device.

Based on the definition of digital finance, digital payments and mobile banking, the measurement and proxy for digital finance in this research is the number of transactions using mobile banking.

Transactions using mobile banking (m-banking) are one source of banking fee-based income, therefore the higher the number of m-banking transactions will encourage increased profitability. This is in line with the results of previous research conducted by Alfatihah & Sundari (2021), Imamah & Safira (2021) and Mayasari, et al (2021), Indrianti, et al (2022). In connection with this matter, the first hypothesis is formulated as follows:
H1: Digital Finance has a positive effect on banking profitability.

C. Capital Adequacy

According to Fitrianto and Mawardi (2006) capital adequacy is a measure of assessing the level of capital adequacy of a bank according to international standards to guarantee the bank's ability to maintain its exixtence. The bank's ability to organize its activities with adequate capital is very important for the existence of the institution (Rembet & Baramuli, 2020).

To measure a bank's ability to provide funds to minimize the threat of loss, you can use the Capital Adequacy Ratio (CAR) (Nugroho et al., 2019; Kurniawan et al., 2021). The Capital Adequacy Ratio is a ratio that reflects a bank's ability to meet its capital adequacy. The ability of bank management to identify, measure, monitor and control risks that arise and can influence the size of bank capital (Kuncoro & Suhardjono, 2011; Kurniawan et al., 2021).

The greater the CAR value reflects the bank's capital capabilities, the more freedom there is for the bank to finance operations in order to increase profitability. This is in line with the results of research conducted by Margaretha & Letty (2017), Sari & Endri (2019) and Arifian & Noor (2022) which found that CAR has an effect on ROA. Therefore we propose the second hypothesis is:
H2: Capital adequacy has a positive effect on banking profitability.

D. Efficiency

According to Othman et al., (2016) the ratio of output to input is known as efficiency, and while maximum output per unit of input represents optimal efficiency, more output per unit of input shows greater efficiency. Furthermore, according to Elsa & Utami (2015) efficiency is the comparison between output and input or the quantity produced from an input produced. To be called efficient, a company uses fewer units of input to get the same output compared to other companies.

The level of Bank efficiency is measured through the ratio of Operational Costs to Operational Income (OCOI) (PBI No. 14/26/PBI/2012). The higher the OCOI, the higher the value of the bank's operational expenses compared to income. This shows that the bank's business operations are ineffective.

An increasing OCOI ratio wil cause banking profitability to decrease, where the cost to income ratio increases (Christaria & Kurnia, 2016). This is in line with the findings of previous research conducted by Maudhita & Thamrin (2018), Sari & Endri (2019), and Akbar & Lanjarsih (2019), then we propose the third hypothesis:
H3: Efficiency (OCOI) has a negative effect on banking profitability.

E. Asset Quality

Asset quality or productive asset quality is earnings asset quality which is a benchmark for assessing the level of possibility of receiving back funds that will be invested in productive assets (principal including interest) based on certain criteria (Bukian & Sudhiarta, 2016). Meanwhile, based on Bank Indonesia Regulation Number 14/15/PBI/2012 concerning Assessment of commercial bank assets quality, commercial banks have assets in the form of productive assets and non-productive assets.

Asset quality is measured by Non-Performing Loans (NPL), which shows the bank's ability to handle bad loans provided by the bank. Non-Performing Loans (NPL) are one of the key parameters for evaluating functional performance in the world of banking and other financial institutions (Permana et al., 2022).

The Non-Performing Loan (NPL) ratio shows the bank's ability to manage non-Performing Loan. The higher the non-Performing Loan (NPL) ratio of a bank, the worse the credit quality, resulting in lower profitability. This is in line with previous research conducted by Sabrina & Muharam (2015) which was confirmed by Maudhita & Thamrin (2018), Sari & Endri (2019) and Dianitasari & Hersugondo (2020) which stated that NPLs had a significant negative effect on bank ROA.

The higher a bank's NPL will result in a decrease in ROA, which means that the bank's financial performance will decrease. On the other hand, if a bank's NPL decreases, the ROA ratio will increase so that the bank's financial performance can improve. Furthermore, based on theory and previous research, it is hypothesized as follows:
H4: Asset quality has a negative effect on banking profitability.

F. Foreign Ownership

Banks with foreign capital are banks where the majority of their capital comes from foreign investors (Dianitasari & Hersugondo, 2020). The foreign ownership variable is calculated by comparing the number of shares owned by foreign investors divided by the number of shares outstanding.

Foreign ownership will encourage companies to be more competitive, especially from technological advantages. The application of technology in banking that is currently the focus of banking is digital finance. Increasing digital financial services is expected to increase bank profitability. Therefore, foreign ownership will strengthen the influence of digital finance on banking profitability. Based on this reasoning, the fifth hypothesis is:
H5: Foreign ownership moderates the influence of digital finance on banking profitability.

Apart from that, foreign ownership can act as a catalyst for improving performance from internal factors, because foreign ownership can improve managerial and better company management. Foreign shareholders will of course control the bank's capital adequacy, so that it will tend to strengthen the influence of capital adequacy (CAR) on the profitability of the bank concerned. Next, the sixth hypothesis is:
H6: Foreign ownership moderates the effect of capital adequacy on banking profitability.

It is also believed that foreign shareholders will be able to carry out better supervision in terms of efficiency and also the quality of the bank's assets in question. Foreign ownership is expected to moderate the influence of efficiency and asset quality on bank profitability. Next, the seventh hypothesis is:
H7: Foreign ownership moderates the effect of efficiency on banking profitability.

Credit risk is the risk that arises due to the inability of debtors and/or other parties to fulfill their obligations to creditors. NPL is used as a proxy in assessing credit risk, namely the comparison between bad debts and total credit of a bank. Non-Performing Loans are credit that no longer generates interest income for the bank or credit that must be restructured to suit changes in debtor conditions (Rose and Hudgins, 2013).

The presence of foreign ownership in domestic banking can improve banking performance, this is in accordance with research by Kobeissi (2010) which states that banks with foreign ownership have better performance than other types of banks.

Previous research conducted by Sabrina & Muharam (2015), Maudhita & Thamrin (2018), Akbar & Lanjarsih (2019), Sari & Endri (2019) and Dianitasari & Hersugondo (2020) proves that NPL has a significant effect on ROA, so it is hypothesized as follows:
H8: Foreign ownership moderates the effect of asset quality on banking profitability.

III. RESEARCH METHODOLOGY

A. Population and Sample

The population in the research are companies in the commercial banking subsector on the Indonesia Stock Exchange (IDX) which are included in the KBMI 3 & 4 (Core Capital Bank Group) and have mobile banking services in the period 2015 - 2022. Meanwhile, the sample was determined through purposive sampling so that resulting in a total sample of 7 (seven) commercial bank data.

B. Research Model

This research uses multiple linier regression analysis.

The research model used is:
$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + Z + \beta_5 X_1{*}Z + \beta_6 X_2{*}Z + \beta_7 X_3{*}Z + \beta_8 X_4{*}Z + e$$

Note:
Y: Return on Assets (ROA)
X_1: Mobile Banking (MB)
X_2: Capital Adequacy Ratio (CAR)
X_3: Operational Costs and Operational Income (OCOI)
X_4: Non Performing Loan (NPL)
Z: Foreign Ownership
α: Konstanta
$\beta_1 - \beta_8$: Koefisien Regresi
e: Standar error

C. Data Analysis

This research uses a multiple linear regression method for analyzing the data using Eviews-12 software. The researchers tested the hypothesis partially or t-test and simultaneous or F-test. The hypothesis is accepted if the ρ-value is <0,05 (Ghozali, 2016).

IV. RESULT AND DISCUSSION

A. Selection of Panel Data Regression Methods

➢ *Chow Test*

Which panel data regression model, the fixed effect model or the common effect model, should be employed is determined by the Chow test. These are the hypotheses that were developed.

Ho : Common Effect Model
Ha : Fixed Effect Model

Table 1. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.309539	(6,44)	0.0000
Cross-section Chi-square	52.249889	6	0.0000

Source: Data Processing using E-views version 12, 2023

Based on the Chow Test results in the table above, it can be concluded that the probability significance value (F) = 0.0000 is smaller than Alpha (< 0.05). With a Probability (F-statistic) value of F <0.05, Ho is rejected and Ha is accepted, then the panel data regression model chosen is the Fixed Effect Model approach, then the Hausman test will be carried out.

➢ *Hausman test*

Which panel data regression model, the Fixed Effect Model or the Random Effect Model should be employed is determined by the Hausman test. The statistical distribution of Chi-Squares is followed by the Hausman test statistic, whose degrees of freedom (df) are equivalent to the number of independent variables. The following is the hypothesis for the Hausman test.

Ho : Random Effect Model
Ha : Fixed Effect Model

Table 2. Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	67.128383	5	0.0000

Source: Data Processing using E-views version 12, 2023

Based on the results of the Hausman test, it can be seen that the Random Cross-Section probability value is 0.0000, which means the probability value is less than 5%, namely

0.0000 < 0.05 so that Ho is rejected and Ha is accepted, meaning that the fixed effect model is the right model to use compared to the random effect model.

Based on the Chow test and Hausman test, the most appropriate model to use is the fixed effect model, so in this research the fixed effect model was used.

B. Moderation Regression Analysis (MRA)

Results of MRA in this research is moderation regression analysis which is used to test whether or not the relationship between variables is significant through regression. The MRA results are as shown in the table below.

Table 3. Moderation Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.933858	1.741262	4.556384	0.0000
X1	-0.001631	0.000651	-2.505703	0.0164
X2	0.045790	0.048626	0.941680	0.3520
X3	-0.087857	0.011598	-7.575509	0.0000
X4	0.045394	0.166214	0.273105	0.7862
Z	0.036870	0.046009	0.801378	0.4276
X1Z	4.17E-05	1.83E-05	2.282309	0.0279
X2Z	-0.001921	0.001456	-1.319093	0.1946
X3Z	6.43E-05	0.000280	0.229488	0.8197
X4Z	0.002299	0.003907	0.588356	0.5596

Source: Data Processing using E-views version 12, 2023

The explanation of the results of the Moderation Regression Analysis is as follows:

Y = 7.933858 − 0.001631*MB + 0.045790*CAR − 0.087857*OCOI + 0.045394*NPL + 0.036870*ASING + 4.17*MB_ASING − 0.001921*CAR_ASING + 6.43*OCOI_ASING + 0.002299*NPL_ASING

From this test, the following results were obtained:

➢ The constant value is 7.933858 with a significance value of 0.0000<0.05, which means the constant value is significant (has significance). So the constant value if all independent variables have a value of 0 (zero) then the amount of Return on Assets (ROA) is 7.933858 or it can be interpreted that KBMI 3 & 4 Commercial Banks operating on the IDX have good ROA.

➢ The regression coefficient value of Mobile Banking/MB (X1) is -0.001631 with a significance value of 0.0164<0.05, thus MB has an effect on the Bank's ROA. The regression coefficient figures show that if MB increases by 1%, the ROA of KBMI 3 & 4 Commercial Banks will decrease by 0.001631%, assuming the other variables are the same.

- The CAR regression coefficient value (X2) is 0.045790 with a significance value of 0.3520>0.05. Thus, CAR has no effect on ROA.
- The OCOI regression coefficient value (X3) is -0.087857 with a significance value of 0.0000 < 0.05, thus OCOI has an effect on the Bank's ROA. The regression coefficient figures show that if OCOI increases by 1%, the ROA of KBMI 3 & 4 Commercial Banks will decrease by 0.087857%, assuming all other variables or factors are the same.
- The NPL regression coefficient value (X4) is 0.045394 with a significance value of 0.7862 > 0.05. The regression coefficient figure shows that if the NPL increases by 1%, the ROA of Commercial Bank KBMI 3 & 4 will increase by 0.7862%, assuming all other variables or factors are the same.
- The regression coefficient value of Foreign Ownership (Z) is 0.036870 with a significance value of 0.4276>0.05. The regression coefficient figures show that if foreign ownership increases by 1%, the ROA of KBMI 3 & 4 Commercial Banks will increase by 0.036870% assuming all other variables or factors are the same.
- The interaction coefficient value of MB (X1) with Foreign Ownership (Z) is positive at 4.17 with a significance value of 0.0279. This shows that foreign ownership moderates MB with a positive and significant influence. The regression coefficient figures show that if the interaction between MB (X1) and Foreign Ownership (Z) increases by 1%, the ROA of KBMI 3 & 4 Commercial Banks will increase by 4.17%, assuming all other variables or factors are the same.

- The interaction coefficient value of CAR (X2) with Foreign Ownership (Z) is negative at 0.001921 with a significance value of 0.1946. This shows that there is no significant influence. The regression coefficient figures show that if the interaction between CAR and Foreign Ownership (Z) increases by 1%, the ROA of KBMI Commercial Bank 3 & 4 will decrease by 0.1946%, assuming all other variables or factors are the same.
- The interaction coefficient value of OCOI (X3) with Foreign Ownership (Z) is positive at 6.43 with a significance value of 0.8197. This shows that there is no significant influence. The regression coefficient figures show that if the interaction between OCOI and Foreign Ownership (Z) increases by 1%, the ROA of KBMI 3 & 4 Commercial Banks will increase by 6.43%, assuming all other variables or factors are the same.
- The interaction coefficient value of NPL (X4) with Foreign Ownership (Z) is positive at 0.002299 with a significance value of 0.5596. This shows that there is no significant influence. The regression coefficient figures show that if the interaction between NPL and Foreign Ownership (Z) increases by 1%, the ROA of KBMI 3 & 4 Commercial Banks will increase by 0.002299%, assuming all other variables or factors are the same.

C. F Test (Simultaneous)

The simultaneous test aims to determine the joint influence of the independent variables on the dependent variable. This test is intended to carry out simultaneous hypothesis testing. Determining the significance level (α), namely 5% or 0.05, is done based on probability. If the probability value is > 0.05 then Ho is accepted and If the probability value <0.05 then Ho is rejected.

Table 4. F Test

Root MSE	0.187408	R-squared	0.967456
Mean dependent var	2.470536	Adjusted R-squared	0.955252
S.D. dependent var	1.048251	S.E. of regression	0.221745
Akaike info criterion	0.060376	Sum squared resid	1.966827
Schwarz criterion	0.639047	Log likelihood	14.30949
Hannan-Quinn criter.	0.284725	F-statistic	79.27335
Durbin-Watson stat	1.446221	Prob(F-statistic)	0.000000

Source: Data Processing using E-views version 12, 2023

In the table above Probability (F-statistic) with a value of 0.000000 shows a significant effect of less than 0.05. Based on the results of the F calculation, F is obtained with a significance of 0.000000. So MB, CAR, OCOI and NPL together influence the ROA of KBMI 3 & 4 commercial banks listed on the IDX in the 2015-2022 period.

D. Coefficient of Determination (R2)

How much of the variance in the dependent variable can be explained by the independent variable is determined by using the Coefficient of Determination (R2).

Based on the table 4 above, it shows the R Square (R2) value of 0.967456 or which means the variability of the dependent variable which can be explained by the

independent variable is 96.74%. This shows that MB, CAR, OCOI, NPL and FOREIGN Moderation simultaneously (together) have an effect on the Bank's ROA of 96.74%. Meanwhile, the remaining 3.26% was influenced by other variables not studied.

E. Hypothesis Test

In this research, hypothesis testing uses the t test. The t test was carried out to determine the individual influence of the independent variable on the dependent variable. Based on the results of the t test on the fixed effect model show the following conclusions:

- *Influence of Digital Finance on ROA of KBMI 3 & 4 Commercial Banks.*

The coefficient value of the Mobile Banking (MB) variable is -0.001631 with a probability value of 0.0164, thus MB has a significant effect on ROA. As concluded, based on the results of the research hypothesis (H1) MB (X1) has a significant positive effect on the ROA of KBMI 3 & 4 Commercial Banks, then hypothesis H1 is declared accepted.

➢ *The effect of capital adequacy on the ROA of KBMI 3 & 4 Commercial Banks.*

The coefficient value of the CAR variable (X2) is 0.045790 with a probability value of 0.3520, thus CAR has no effect on ROA. As it is concluded that based on the results of the research hypothesis (H2) CAR has a positive effect on the ROA of KBMI 3 & 4 Commercial Banks, the hypothesis H2 is declared rejected.

➢ *Effect of efficiency on ROA of KBMI 3 & 4 Commercial Banks.*

The coefficient value of the OCOI variable (X3) is -0.087857 with a probability value of 0.0000, thus OCOI has a significant effect. As concluded, based on the results of the research hypothesis (H3) OCOIg has a positive influence on the ROA of KBMI 3 & 4 Commercial Banks, then hypothesis H3 is declared accepted.

➢ *The influence of asset quality on ROA of KBMI 3 & 4 Commercial Banks.*

The coefficient value of the NPL variable (X4) is 0.045394 with a probability value of 0.7862, thus NPL has no effect on ROA. As it is concluded that based on the research results of the hypothesis (H4) that NPL has a positive effect on the ROA of KBMI 3 & 4 Commercial Banks, the hypothesis H1 is declared rejected.

➢ *The influence of foreign ownership (foreign) in moderating the digital finance relationship on the ROA of KBMI 3 & 4 Commercial Banks.*

Based on the moderating variable test, it is known that the probability of MB on ROA is 0.0164 which has a significant effect, while the probability of the interaction of MB with Foreign Ownership (ASING) on ROA is 0.0279 with a significant effect (0.0164<0.05). So it can be concluded that the Foreign Ownership Variable (ASING) is a type of Quasi Moderator (Pseudo Moderator), which is a variable that moderates the relationship between the independent variable and the dependent variable where the pseudo moderating variable interacts with the independent variable while also IDXng an independent variable. This means that Hypothesis H5 is accepted.

➢ *The influence of foreign ownership in moderating the relationship between capital adequacy and ROA of KBMI 3 & 4 Commercial Banks.*

Based on the moderating variable test, it is known that the probability of CAR on ROA is 0.3520 which has no significant effect, while the probability of the interaction of CAR with Foreign Ownership (ASING) on ROA is 0.1946 with an insignificant effect (0.3520>0.05). So it can be concluded that the Foreign Ownership Variable (ASING) is a type of Moderator Homologizer (Potential Moderation),

this variable does not interact with the independent variable and does not have a significant relationship with the dependent variable. This means that Hypothesis H6 is rejected.

➢ *The influence of foreign ownership in moderating the relationship between efficiency and ROA of KBMI 3 & 4 Commercial Banks.*

Based on the moderating variable test, it is known that the probability of OCOI on ROA is 0.0000 which has a significant effect, while the probability of the interaction of OCOI with Foreign Ownership (ASING) on ROA is 0.8197 with an insignificant effect. So it can be concluded that the Foreign Ownership Variable (ASING) is a type of independent or predictor variable. This means that Hypothesis H6 is rejected.

➢ *The influence of foreign ownership in moderating the relationship between asset quality and ROA of KBMI 3 & 4 Commercial Banks.*

Based on the moderating variable test, it is known that the probability of NPL on ROA is 0.7862 which has no significant effect, while the probability of the interaction of NPL with Foreign Ownership (Foreign Ownership) on ROA is 0.5596 with an insignificant effect (0.7862>0.05). So it can be concluded that the Foreign Ownership Variable (ASING) is a type of Moderator Homologizer (Potential Moderation), this variable does not interact with the independent variable and does not have a significant relationship with the dependent variable. This means that Hypothesis H8 is rejected.

V. CONCLUSIONS

Banking in Indonesia has an important role in economic development. For this reason, the factors that influence banking performance need to continue to be researched. The development of information technology has encouraged the development of digital banking services, this is what has encouraged the development of digital banking transactions with the emergence of mobile banking services.

An increase in investment costs for developing infrastructure for mobile banking services will increase operational costs and ultimately reduce the profitability of commercial banks. To be able to increase profitability, increasing the number of mobile banking transactions must be able to generate fee-based income that is greater than the costs of developing mobile banking services.

Banks with bigger center capital and more complex trade exercises are not fundamentally more productive than banks with lower and more productive center capital. Bank profitability is not only influenced by large core capital but is also influenced by many other factors that must be considered.

The more inefficient a bank is in its operations, the lower the bank's profitability will be. Therefore, banks must always strive to reduce operational costs and continue to increase their operational income.

The condition of bank asset quality greatly determines its influence on bank profitability. In conditions where asset quality is categorized as good, increases and decreases in non-performing loans do not significantly affect bank profitability because the NPL ratio of commercial banks is well maintained, generally around 0-2%, which is considered very good.

Foreign shareholders tend to continue to push for improvements in technology-based services and digitalization, although this still has a negative impact on bank profitability due to the large allocation of capital and costs for digital financial services compared to the income obtained from these digital finance services.

Although foreign shareholders are believed to be able to improve management and supervision. However, this is not necessarily effective enough, so that foreign shareholders cannot always strengthen the influence of internal factors such as capital adequacy, efficiency and asset quality on commercial bank profitability.

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