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Analisis Pengaruh Diversifikasi Laba Terhadap Kinerja Bank dan Risiko Bank dengan Struktur Kepemilikan sebagai Variabel Moderating pada Bank Digital di Indonesia

ANALYSIS OF THE EFFECT OF INCOME DIVERSIFICATION ON BANK PERFORMANCE AND BANK RISK WITH OWNERSHIP STRUCTURE AS MODERATING VARIABLE IN DIGITAL BANKS IN INDONESIA

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh diversifikasi pendapatan terhadap kinerja dan risiko di bank digital, dan mengkaji peran moderating variabel struktur kepemilikan yang diproksikan oleh kepemilikan terkonsentrasi terhadap pengaruh diversifikasi pendapatan terhadap kinerja bank yang diukur dengan ROA dan QTobins dan risiko bank yang diukur dengan Z-Score pada bank digital di Indonesia. Data penelitian diambil dari laporan keuangan bank-bank yang terdaftar di BEI periode 2020-2021 dengan jumlah sampel sebanyak 70 orang menggunakan teknik purposive sampling. Metode analisis yang digunakan adalah Multiple Linear Regression dan Moderated Regression Analysis. Hasil penelitian ini menyatakan bahwa diversifikasi pendapatan memiliki pengaruh positif dan signifikan terhadap kinerja bank yang diukur dengan ROA dan Q Tobin. Selain itu, memiliki efek positif dan signifikan terhadap risiko bank yang diukur dengan Z-Score. Selain itu, penelitian ini menunjukkan bahwa bank dengan kepemilikan terkonsentrasi memiliki efek negatif dan signifikan dalam memoderasi pengaruh diversifikasi pendapatan terhadap ROA. Sementara itu, bank dengan kepemilikan terkonsentrasi tidak dapat memoderasi pengaruh diversifikasi pendapatan terhadap Q dan Z-Score Tobin.

Kata kunci: Bank Digital, Diversifikasi Pendapatan, Kinerja Bank, Risiko Bank, Kepemilikan Terkonsentrasi

ABSTRACT

This study aims to analyze the effect of income diversification on performance and risk in digital banks, and examine the moderating role of the ownership structure variable as proxied by concentrated ownership of the effect of income diversification on bank performance as measured by ROA and Tobins's Q and bank risk as measured by Z. -Score on digital banks in Indonesia. The research data is taken from the financial statements of banks listed on the IDX for the period 2020-2021. The number of samples used was 70 using purposive sampling technique. The analytical method used is Multiple Linear Regression and Moderated Regression Analysis. The results of this study state that income diversification has a positive and significant effect on bank performance as measured by ROA and Tobin's Q. Also, it has a positive and significant effect on bank risk as measured by Z-Score. In addition, this study shows that banks with concentrated ownership have a negative and significant effect in moderating the effect of income diversification on ROA. Meanwhile, banks with concentrated ownership are unable to moderate the effect of income diversification on Tobin's Q and Z-Score.

Keywords: *Digital Bank,Income Diversification, Bank Performance, Bank Risk, Concentrated Ownership*

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INTRODUCTION

The majority of human life has altered as a result of technological advancement. Business to Business (B2B) and Business to Customer (B2C) interactions can function smoothly, just like the use of cellphones, computers, laptops, the internet, and applications that are connected to one another. One of a number of disruptions is enormous technical change, and period disruption is a massive change brought on by innovation across several industries.

The banking industry is adapting its services in response to the challenge of disruption by creating business strategies that result in digital banking services that are convenient for customers. As a result, some banks have become digital banks. The financial products and services industry's increasingly rapid development. Digital banking transactions therefore increase the developing financial services business, undermining the practice of traditional intermediaries, especially traditional banks (Rodrigues et al., 2020). Although the growth of digital banks is anticipated, this growth has not been accompanied by improved performance.

Table 1. Summary of Return On Assets (ROA) Performance of Digital Bank Indonesia in 2020-2021 (%)

Company name	Banking Performance						
	QI-20	QII-20	QIII-20	QIV-20	QI-21	QII-21	QIII-21
PT Bank MNC Internasional Tbk (Motion Banking)	-0.008%	0.112%	0.143%	0.334%	-0.291%	-0.118%	-0.037%
PT Bank BTPN Tbk (Genius)	0.415%	0.664%	0.914%	1.108%	0.602%	1.065%	1.309%
PT Bank Bukopin Tbk (Wokee)	0.165%	0.250%	-1.087%	-3.805%	-0.223%	0.187%	-0.421%
PT Bank Jago Tbk (Jago)	-2.092%	-2.983%	-6.140%	-8.701%	-0.430%	-0.471%	-0.300%
PT Bank Digital BCA (blu)	0.441%	1.352%	2.296%	2.886%	0.437%	1.189%	2.043%
PT Bank Neo Commerce Tbk (Neobank)	0.201%	0.531%	0.223%	-0.009%	-1.026%	-1.937%	-3.248%
PT Bank Mandiri Tbk (New Livin)	0.612%	0.776%	1.026%	1.235%	0.412%	0.866%	1.285%

PT Bank DBS Indonesia (Digibank)*	-	-	-	-	-	-	-
PT Bank KEB Hana Indonesia (Line Bank)*	-	-	-	-	-	-	-
PT Bank OCBC NISP Tbk (On)*	-	-	-	-	-	-	-
PT Bank Seabank Indonesia (SeaBank)*	-	-	-	-	-	-	-
PT Bank UOB Indonesia (TMRW)*	-	-	-	-	-	-	-

Source : www.idx.co.id(data processed)
** Does not issue financial statements to the public*

Table 1.1 shows that the average ROA percentage tends to cause a downward trend during a two-year period. Additionally, there are variations in earnings that raise the possibility of banking insecurity in generating profits, which will determine if digital banks will live to see the next year whether they are making net profits or not. Additionally, digital banks must contend with established institutions that already control the banking industry.

One of the decisions the business might make in the midst of fierce competition and rapid market expansion is to look. (Clark & Siems, 2002) claim that there have been significant regulatory and competitive developments in the banking sector. Because of this, the range of bank activities has radically changed, moving away from traditional intermediation products and toward new enterprises. As a result, banks now tend to diversify their commercial operations in order to raise non-interest income. As a result, enhancing the services offered by digital banks will bring in additional revenue in addition to credit interest, which is one of the management techniques and initiatives used to boost and maintain an increase in bank income.

It's possible that management will have to deal with the formation of agency conflicts when adopting the income diversification approach to maximize bank performance (Moudud-Ul-Huq et al., 2018). Because it is challenging to balance the interests of shareholders in a firm where each party just thinks about his personal life and can have a detrimental effect on company performance, agency problems will worsen. Ownership is one strategy used to lessen the effects of this agency conflict. Share ownership, according to Cornett et al. (2011), has an impact on a company's performance and decision-making since the ownership structure has power over management's ability to define policies and develop a company's strategic plan. It is also projected that a company's performance will improve as share ownership becomes more concentrated. As share ownership becomes more concentrated, the owner's oversight of management will become more effective, enabling management to act in the owner's best interests, which include enhancing performance and lowering risk.

Based on the description above, the researcher is interested in examining the relationship between opinions and bank performance and risk in Indonesian digital banks, with ownership structure serving as a moderating element.

Hypothesis Development

The Effect of Income Diversification on Bank Performance

According to portfolio theory, corporations and investors pick a diversification strategy because it can optimize earnings and boost performance. Income diversification is often a strategy used by banks to give their clients a variety of financial services. By doing this, the bank will be able to offer a variety of financial services while also relying less on interest-based revenue sources and more on non-interest income.

According to studies (Baele et al., 2007), diversity has a favorable impact on bank performance as assessed by Tobin's Q and lowers non-systematic risk. Nisar et al. (2018), who came to the same conclusion, added that non-interest income has a favorable effect on profitability as assessed by ROA/ROE. Research findings (Uddin et al., 2021) that demonstrate a substantial positive relationship between income diversification and asset diversification on bank profitability support the findings of this study. The study's findings therefore show that banks can profit from asset and income diversification, and that by putting income diversification ideas into practice, banks can get both financial advantages and benefits while also increasing their profitability. The first hypothesis can be derived as follows based on prior research:

H1: Income diversification has a positive effect on bank performance

The Effect of Income Diversification on Bank Risk

According to portfolio theory, using a diversity approach can help lower risk and increase returns (Uniamikogbo et al., 2021). In other words, the ability to invest using a variety of instruments, or what is known as diversification, will have the advantage of lowering the company's risk (Markowitz, 1952). This is supported by studies that shows banks with higher levels of income diversification typically have lower risk (Wang & Lin, 2021). By (Li et al., 2021), who came to the conclusion that banks are more profitable and less hazardous when they are most involved with non-interest income streams. The findings of another study (Hamdi et al., 2017), which discovered that banks are more varied in their activities and do not simply focus on conventional businesses, support the findings of this study. Risk will decrease when non-interest income increases. The second hypothesis can be derived as follows based on prior research:

H2: Income diversification has a negative effect on bank risk

The Role of Ownership Structure in Moderating the Effect of Income Diversification on Bank Performance

According to agency theory, concentrated ownership can aid in resolving agency disputes and putting diversification measures into practice in digital banks. A concentrated ownership structure is an efficient technique to save agency expenses and properly execute the monitoring process, claim Yu & Shao (2007). This is supported by research (Alouane et al., 2021) showing that concentrated ownership has a positive and significant effect in moderating income diversification on the performance of Tunisian banks, suggesting that banks with concentrated ownership are able to successfully diversify and perform better. According to a study (Saghi-Zedek, 2016) that makes use of in-depth data on the chain of command from 710 European commercial banks, banks with higher concentration values tend to have a higher possibility of all owners cooperating to transfer their expertise to the bank and increase performance. The interaction of income diversification characteristics and ownership structure was investigated in the same area of research by (Luu et al., 2020). According to the findings, the influence of income diversification on bank performance is moderated by ownership structure. This demonstrates that banks that switch to non-interest income can give banks more advantages. The third hypothesis can be derived as follows based on prior research:

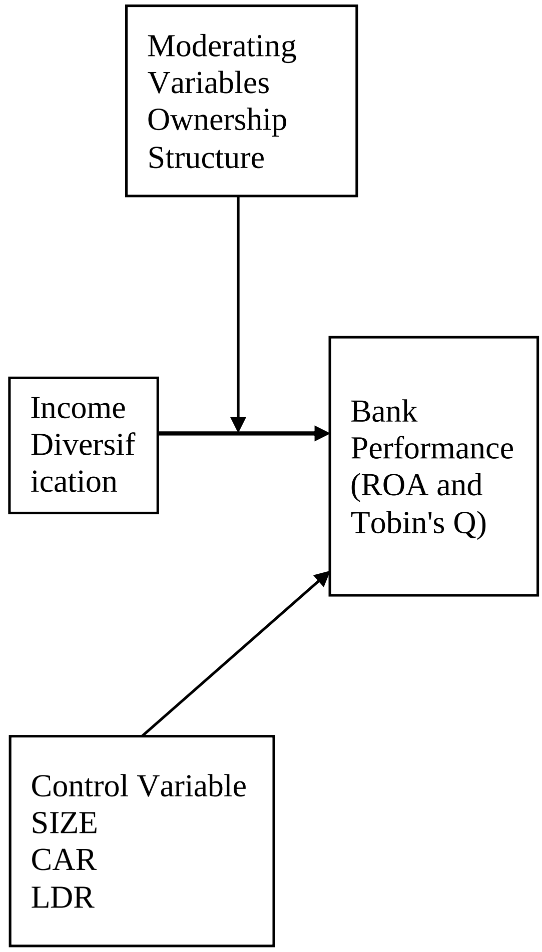
H3 : Ownership structure moderates the effect of income diversification on bank performance

The Role of Ownership Structure in Moderating the Effect of Income Diversification on Bank Risk

According to agency theory, concentrated ownership can assist in resolving agency disputes. As share ownership becomes more concentrated, the owner's oversight of management will become more effective, enabling management to act in the owner's best interests, which include enhancing performance and lowering risk. According to study (Alouane et al., 2021), ownership has a significant impact on how the effect of income diversity on bank risk is moderated. The study's findings demonstrate how risk might be decreased by a diversified bank with a concentrated ownership. Ownership structure greatly reduces the impact of product diversification on bank risk, according to research on the same subject conducted by Abugri et al. in 2016. Banks with local and foreign private ownership reduce risk by stepping up non-traditional banking activities after maintaining control over the ownership structure. According to the study's findings (Pennathur et al., 2012), the interaction of ownership and income diversification has a negative and significant impact on bank risk as evaluated by SDROA and SDROE. The fourth hypothesis can be derived as follows based on prior research:

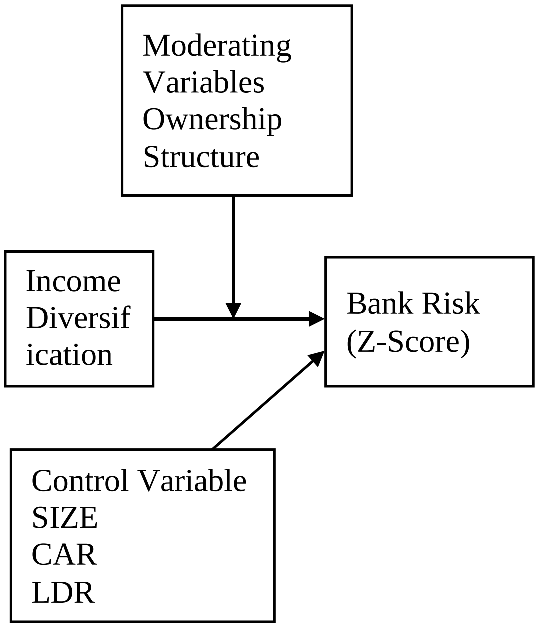
H4: Ownership structure moderates the effect of income diversification on bank risk

The theoretical framework can be expressed as follows based on the study's goals, theoretical underpinnings, prior research, and relationships between the variables:



Source: (Alouane et al., 2021) and (Raz, 2018)

Figure 1. Theoretical Framework for the Effect of Income Diversification on Bank Performance with Ownership Structure as a Moderating Variable



Source: (Alouane et al., 2021) and (Raz, 2018)

Figure 2. Theoretical Framework for the Effect of Income Diversification on Bank Risk with Ownership Structure as a Moderating Variable

RESEARCH METHODS

Research variable

The dependent and independent variables in this study are bank performance and bank risk, growing income is the moderating variable, ownership structure is the controlling variable, and SIZE, CAR, and LDR are the control factors. For the 2020–2021 timeframe, this analysis analyzes information from banking financial reports on the Indonesia Stock Exchange (IDX). 12 Digital Banks among the 44 banks listed on the Indonesia Stock Exchange were sampled using the purposive sampling method (IDX). The authors employed IBM SPSS version 20.0's Multiple Linear Regression Test and Moderated Regression Analysis (MRA) to examine the data.

Operational Definition of Variable

Bank performance

The tasks and responsibilities of managers in asset and resource management have a direct impact on a bank's success. Tobin's Q and ROA were the two variables employed in this study to gauge the performance of the business.

Bank Risk

Risk is the potential for results (return) to differ from what is anticipated by a corporation. The Z-Score, one variable, is utilized in this study to assess bank risk.

Income Diversification

The ability to generate earnings other than just interest income is provided by income diversification (net interest income). The Herfindahl Hirschman Index (HHI) method is the only variable used in this study to assess income diversity.

Ownership Structure

In this study, concentrated ownership serves as a proxy for the ownership structure. A legal person, individual, or business group that owns 25% (twenty five percent) or more of the issued shares of a bank and has voting rights is considered to have concentrated ownership, as defined by Financial Services Authority Regulation Number 39/POJK.03/2017.

Tabel 2. Variabel Measurement

Variable	Definition	Measurement	Reference
Dependent Variable			
ROA	Profitability ratio which measures the ability and efficiency of the company on the capital invested in the overall assets owned to generate profits.	$(ROA)_{i,t} = \frac{Net\ Profit}{\text{Total Assets}}$	(Saghi-Zedek, 2016)
Tobin's Q	The financial ratios used as a measure of performance appraisal in the company's financial data are seen from the aspect of the company's stock market price.	$\text{Tobin's Q}_{i,t} = \frac{(MVCS + DA)}{\text{Total Assets}}$	(Lindenberg & Ross, 1981)
Z-Score	The financial ratios used as the main measure of the bank's overall risk andmeasures the probability of default of the banking system reflecting stability.	$\text{Z} - \text{Score}_{i,t} = \frac{(ROA + E/A)}{\text{S. D of ROA}}$	(Alouane et al., 2021)
Independent Variable			
Income Diversification	The ratio is calculated using the Herfindahl	$\text{HHI}_{i,t} = (\frac{Interest}{\text{Total Income}})^2 + (\frac{\text{Non-interest}}{\text{Total Income}})^2$ $\text{DIV}_{i,t} = 1 - \text{HHI}_{i,t}$	(Shim, 2013)

	Hirschman Index (HHI) approach with the DIV value obtained from one minus the HHI value.		
	Moderating Variables		
Concentrated Ownership Structure	The ratio is calculated by the proportion of the number of majority shares to the total shares of the company.	$\text{KT}_{i,t} = \frac{\textit{Majority share}}{\text{Total company share}}$	(Geoge S Dallas, 2004)
	Control Variable		
SIZE	A ratio that measures the size of a company.	$\text{SIZE}_{i,t} = LN(\text{Total Aset})$	(Raz, 2018)
CAR	A ratio that measures a bank's ability to face risk.	$\text{CAR}_{i,t} = \frac{\textit{Equity Capital} + \textit{Reserve for Loan Losses}}{\textit{ATMR}} \times 100\%$	(Raz, 2018)
LDR	A ratio that measures the liquidity capacity of a bank.	$LDR_{i,t} = \frac{\textit{Total Loan}}{\textit{Total Deposit} + \textit{Equity}} \times 100\%$	(Raz, 2018)

Source: Processed data, 2022

Analysis Method

This study has two basic models, first multiple linear regression analysis is used to determine the effect of the independent variable, namely income diversification on the dependent variable, namely ROA and Tobin-Q for bank performance and Z-Score for bank risk using the following model:

Model 1 Multiple Linear Regression Test

$$Y_{i,t} = \alpha_0 + \beta_1\, \text{DIV}_{i,t} + \beta_2\, SIZE_{i,t} + \beta_3\, \text{CAR}_{i,t} + \beta_4\, LDR_{i,t} + \varepsilon_{i,}$$

Moderated Regression Analysis (MRA) model is used to examine the moderating role of ownership structure variable as proxied by concentrated ownership of the effect of income diversification on bank performance as measured by ROA and Tobins's Q and bank risk as measured by Z-Score, the following research model:

Model 2 MRA Test (Moderated Regression Analysis)

$$Y_{i,t} = \alpha_0 + \beta_1\, \mathrm{DIV}_{i,t} + \beta_2\, \mathrm{DIV}_{i,t} \times \mathrm{KT}_{i,t} + \beta_3\, SIZE_{i,t} + \beta_4\, CAR_{i,t} + \beta_5\, LDR_{i,t} + \varepsilon$$

RESULTS AND DISCUSSION

Based on the criteria that have been previously proposed, the number of samples used for the study amounted to 12 digital banks. To analyze the data of this study using the multiple linear regression method and Moderated Regression Analysis(MRA).

Normality test

The ROA model of one value Asymp test findings. Model 2 is 0.293, while the 2-tailed sig. is 0.101. The first model's Asymp. Sig. (2-tailed) value on Tobin-Q is 0.153, and the second model is 0.166. And lastly, the Asymp single value model's Z-Score. Model 2 is 0.292, while the 2-tailed sig. is 0.305. The p-value being greater than 0.05 allows it to be concluded that all data are regularly distributed.

Autocorrelation Test

The results of the autocorrelation test revealed that none of the variables in the examined data had an issue with autocorrelation because the Asymp.Sig (2-tailed) value was higher than 0.05. The data used is therefore fairly random.

Heteroscedasticity Test

The heteroscedasticity test findings demonstrate that the points are dispersed at random and are dispersed both above and below the value 0 on the Y axis. It may be said that the regression model used in this study does not exhibit heteroscedasticity.

Table 3. Regression Test Results

	ROA		TOBIN-Q		Z-SCORE	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Constant	-0.074	-0.105	1,731	1,826	-229,215	-225,602
DIV	0.026 (0.017*)	0.060 (0.000*)	1.514 (0.000*)	1,408 (0.003*)	190,211 (0.018*)	186.209 (0.084)
DIV x KT	-	-0.073 (0.000)*	-	0.222 (0.729)	-	8,448 (0.955)
SIZE	0.002 (0.005*)	0.003 (0.000)*	-0.038 (0.057)	-0.040 (0.058)	-9,735 (0.035)*	9.642 (0.050)*
CAR	0.039 (0.029*)	0.044 (0.006)*	0.579 (0.303)	0.563 (0.321)	-112.439 (0.389)	-113,043 (0.392)

LDR	0.009 (0.129)	0.006 (0.319)	0.159 (0.415)	0.171 (0.392)	-10,811 (0.811)	-10,373 (0.822)
Fcount	9,324	12,579	6,185	4,906	5,220	4,113
Sig.	0.000	0.000	0.000	0.001	0.001	0.003
Adjusted R2	0.325	0.456	0.231	0.221	0.197	0.184

Source: Processed data, 2022

The Effect of Income Diversification on Bank Performance

According to Table 4.1, the effect of income diversification on return on assets (ROA) is significant at 0.017 with a B value of 0.026. The significant value is less than 0.05 (0.017 0.05), as can be seen from the findings. Additionally, the significance value found for the size of Tobin's Q is 0.000 with a B value of 1.514. Based on the results, it can be stated that the variable income diversification partially affects bank performance as assessed by ROA and Tobin's Q and has a positive tendency (significant value less than 0.05, 0.000 0.05). These findings support Hypothesis 1, which contends that income diversification has a positive impact on bank performance is accepted.

Therefore, ROA will improve along with an increase in non-interest income sources. A digital bank that is effective in increasing both its interest and non-interest income streams by offering a variety of financial services to customers will also see a rise in profit. The study's findings are consistent with the portfolio theory, which holds that diversity can maximize gains and boost performance.

According to research (Uddin et al., 2021), asset and income diversification have a good and significant impact on bank profitability as assessed by ROA. The findings of this study corroborate these findings. The findings of this study are also consistent with those of (Alouane et al., 2021), who found that increased revenue diversification enhances bank performance and that bankers must recognize the value of investing in channels other than their core businesses. This result for a stock-based measure is consistent with findings from an investigation into European banks by Baele et al. (2007), which showed that diversified European banks have provided adequate operational and managerial resources for all activities and explain the belief in generating adequate profits both now and in the future.

The Effect of Income Diversification on Bank Risk

According to Table 4.1, the Z-Score produced from income diversification has a significance value of 0.018 and a B value of 190.211. The significant value is less than 0.05 (0.018 0.05), as can be seen from the findings. This demonstrates that the variable income diversification has some impact on the Z-Score and that this impact is beneficial. These findings indicate that hypothesis 2, which contends that income diversification decreases bank risk, is accepted.

When the Z-Score is high, this suggests an increase in bank stability. Therefore, stability increases and risk decreases when banks diversify their sources of income by engaging in non-interest income activities. The study's findings are consistent with the portfolio theory, which contends that employing a diversification approach will enable one to lower risk while maximizing returns.

The findings (Li et al., 2021) suggesting dependency on non-interest income sources is more profitable and less dangerous are consistent with the results of the hypothesis testing in this study. The same result was also achieved (Hamdi et al., 2017), which further supports the idea that banks choose to put off investing in different revenue streams when those sources are unreliable and performing poorly. The results of the hypothesis testing in this study disagree with research by Lee et al. (Lee et al., 2014), which claims that non-interest activities increase risk for savings banks and banks in high-income countries and contends that non-interest income interest not only generates high returns but also creates risks, such as market risk, liquidity risk, or operational risk other than credit risk, due to the uncertainty. According to study findings by Batten & Vo (2016), banks that transition to non-interest businesses actually run a higher risk of failure. Due to their volatility, non-interest activities are frequently linked to higher income volatility and risk.

The Effect of Income Diversification on Bank Performance with Ownership Structure as Moderating Variable

Based on Table 4.1, it can be seen that the interaction of concentrated ownership and diversified variable income has a considerable impact on bank performance as indicated by ROA. Tobin's Q, however, is not much impacted. According to the summary of the results of hypothesis testing, the significance value obtained for the interaction factors of diversification and concentrated ownership of ROA is 0.000 with a B value of -0.073. The significant value is less than 0.05 (0.000 0.05), as can be seen from the findings. Additionally, the significance value for the size of Tobin's Q was determined to be 0.729 with a B value of 0.222. It is clear from the results that the significance value is greater than 0.05 (0.222>0.05). So that hypothesis 3 which states that an ownership structure has a positive and significant influence in moderating the effect on bank performance is rejected.

The impact of income diversity on ROA can be diminished by concentrated ownership. However, the impact of revenue diversity on bank performance as indicated by Tobin's Q cannot be mitigated by banks with concentrated ownership. The agency concept in agency theory is not strengthened by the study's findings. As a result, the agency doesn't have a big role.

According to research by Saghi-Zadek (2016), concentrated ownership modifies the impact of income diversity on bank performance, which is contrary to the findings of this study. According to studies (Alouane et al., 2021), banks with concentrated ownership can successfully diversify and be in a better position to succeed.

To further guarantee that this model is the one ultimately chosen, discussions about the impact of control variables on bank performance are placed after moderation. According to the test results in Table 4.1, the first control variable, SIZE, partially affects bank performance in a substantial way. This indicates that a bank's company size has a bigger impact on the performance of the bank. Second, there is some evidence that the CAR variable significantly affects bank performance. The high CAR shows that the bank's capital is growing, giving it greater freedom and the chance to diversify its sources of income by creating new services and products that will boost the bank's revenue. Third, the LDR variable has a negligible impact on bank performance. This could be as a result of the credit amount not being backed by strong credit quality.

The Effect of Income Diversification on Bank Risk with Ownership Structure as Moderating Variable

Based on Table 4.1, it can be seen that the Z-measurement Score's of bank risk is not significantly impacted by the combination of income diversification variables and concentrated ownership. Based on the summary of the results of hypothesis testing, it can be understood that since the interaction variables of ownership and diversification are concentrated on the Z-Score, the significance value achieved is 0.955 and the B value is 8.448. The significance value is greater than 0.05 (0.955 > 0.05), as can be seen from the findings. So that hypothesis 4 which states that ownership structure has a negative and significant effect in moderating income diversification on bank risk is rejected.

This is due to the fact that the controlling shareholder has little influence over management's attitude toward risk-taking in digital banks and instead completely leaves this up to management, whose attitude and choices will always aim to maximize the welfare of owners and shareholders who anticipate the company making a profit. high while posing little risk. Therefore, the controlling shareholder need not step in to enforce interests in the diversification of the digital bank. The agency concept in agency theory is not strengthened by the study's findings. As a result, the agency doesn't have a big role. The findings of this study conflict with research by Alouane et al. (2021), which demonstrated that ownership is crucial in modifying the impact of income diversity on bank risk.

To further guarantee that this model is the one ultimately utilized, discussions about the impact of control variables on bank risk are placed after moderation. According to the test results in Table 4.1, the first control variable, SIZE, partially affects bank risk in a substantial way. This demonstrates that the bank is better equipped to spread the existing risks the larger the company (SIZE), allowing the bank to have a more steady revenue to reduce risk. Second, the CAR variable only slightly affects bank risk in a notable way. Due to the fact that digital banks do not give cash to offset asset declines brought on by bank losses from lending, but rather to optimize income sources based on an online system. Third, the LDR variable only partially influences bank risk. Because the degree of credit that has been extended affects the high and low value of the LDR, the level of profit that the bank will eventually realize is unknown. However, there are digital banks with revenue streams that are not solely centered on lending fees. The amount of credit extended has an impact on the high and low value of the LDR, which affects how certain the bank can be about how much profit it will make. Digital banks, on the other hand, have income streams that are not solely centered on loan revenue. The amount of credit that has been extended has an impact on the high and low value of the LDR, which will affect the bank's profit margin's unpredictability. Digital banks, on the other hand, have income streams that are not solely centered on loan revenue. The amount of credit that has been extended has an impact on the high and low value of the LDR, which will affect the bank's profit margin's unpredictability. However, with online banks that have several sources of funding are not only focused on income from loans.

CONCLUSSION AND RECOMMENDATION

The following conclusions can be drawn from the research findings using the IBM SPSS version 20.0 analysis program:

1 The first hypothesis, which argues that revenue diversification significantly improves bank performance as assessed by ROA and Tobin's Q, is accepted. As a result, portfolio theory is supported, and bankers should understand the value of investing in avenues other than their core businesses. Higher income diversity increases bank performance. As a result, businesses that create non-interest income make more money.

2 It is agreed upon that income diversification significantly improves the Z-score, according to Hypothesis 2. Banks can invest in novel, non-traditional activities and incorporate them into business plans in order to provide reduced risk and higher stability, supporting portfolio theory, which researches the factors that determine non-interest income activities.

3 The impact of income diversification on ROA can be moderated by ownership structure, as indicated by concentrated ownership. The analysis's findings indicate that this effect is moderated in a negative and significant way. This suggests that the impact of income diversification on bank performance might be diminished by concentrated ownership. The impact of income diversification on Tobin's Q is not mitigated by this, though.

4 The relationship between income diversity and bank risk, as determined by the Z-Score, cannot be moderated by the ownership structure as represented by concentrated ownership.

RECOMMENDATION

1. Recommendation for business management

   The company management is urged to keep using income diversification tactics to boost non-traditional activities, which will help to raise profitability and lower bank risk. As a measure of bank performance, it can pay close attention to the market value of the company. This is also consistent with the research mentioned above, which shows that income diversification significantly affects bank performance as indicated by the company's market value.

   The digitalization service is accelerating more quickly because of the COVID-19 epidemic. Along with the rise in online shopping, the spread and ease of digital payment systems, and the potential to undermine the viability of conventional banking procedures, digital economic and financial transactions continue to grow.

Therefore, traditional banks must make improvements to their banking services to ensure that they do not fall behind digital banks that have changed their banking products in terms of performance.

2. Recommendation for investors

It is advised for investors and potential investors to pay close attention to the firm's profitability as shown in the financial statements released by the company when making investments. Because the price of the company's stock represents how investors as a whole perceive each equity that the firm has, you should pay close attention to the market value of the company in particular.

3. For the next research

Conduct study using internal elements such as internal risk governance and external capital regulation that may have an impact on bank performance and bank risk, similar to the research done (Zhang et al., 2021).

Similar to the study done by (Dang and Huynh in 2022), which focused on monetary policy and used four indicators—the main monetary policy, the refinancing rate, the discount rate, open market operations, and foreign exchange reserves—conduct research using additional external factors that may have an impact on bank performance and bank risk.

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