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Banking Risk In Measuring Financial Performance

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Abstract: This study determines the impact of market risk, credit risk and liquidity risk on the financial performance of conventional banking Companies listed on the Indonesian Stock Exchange 2017-2021 period. The approach used is a quantitative approach. The data analysis technique used is panel data regression and with the help of Eviews 12. Panel data regression tests include: Chow test, Hausman test, Lagrange Multiplier test and Adjusted R-squared coefficient of determination. Sampling was performed using a targeted sampling technique. The results show that partially market risk has a positive effect on financial performance, credit risk has a negative effect on financial performance, while liquidity risk has no partial effect on financial performance. An increase in interest income indicates an increase in financial performance because one of the biggest incomes from banks is interest on loans, whereas if the level of credit risk is low, it indicates a decrease in non-performing loans.

Keywords: Market risk, credit risk, liquidity risk and financial performance

INTRODUCTION

World conditions continue to change, external changes that occur, namely changes in the current order of society which is marked by the industrial revolution 4.0. This era has had a huge impact on many industries, including the financial industry such as banking. This era has changed the way people work and relate to each other, including the banking sector which has experienced many challenges, especially with the presence of financial technology in recent years. Banking is required to transform towards digitalization in order to create competitive advantages in the market, and to meet consumer needs, banks need to create new innovations such as providing online services such as mobile banking. Digitalization is accelerating amid the global economic turmoil that has not subsided due to the spread of the Covid-19 outbreak since late 2019 which has caused the national economy to experience a decline which requires the government to take action to anticipate the spread of Covid-19. Since the beginning of 2022, stock trading conditions on the Indonesia Stock Exchange have experienced significant pressure as indicated by the decline in the Jakarta Composite Index (IHSG) (Hafidzi et al., 2023). However, in the midst of economic recovery efforts, the issue of an economic recession that will occur in 2023 has become a hot issue among the people. Several economic sectors will experience an impact if a recession occurs, one of which is the banking sector, particularly due to the deteriorating quality of customer credit. In the midst of the threat of a global recession, it is predicted that this will have an impact on bank lending, which is slightly depressed. In addition, the non-performing loan ratio (NPL) has the potential to increase to 3% from 2.78% as of September 2022 (Infobanknews.com). Given that banking operational activities originate from disbursed credit activities, the large number of default cases committed by customers can cause bank income to decrease, which will consequently affect the banking financial performance.

Good banking financial performance is needed for the survival of banking and also to maintain public confidence so that they continue to invest their funds in banks. The financial performance itself describes the results of all banking economic activities in a certain period obtained from operational activities carried out by the bank (Korompis et al., 2020). The higher the level of profit obtained by banks in a certain period indicates that the banking financial performance is in a healthy condition, but conversely, if the level of profit obtained by banks in a certain period decreases, can show the financial ability of banks in bad condition.

The decline in financial performance can be affected by market risk. This happened due to the weakening of the composition of the productive assets of banks, the margins received by banks have decreased due to the influence of lower interest rates. Factors that can affect the composition of banking earning assets include changes in exchange rates, interest rates, stock prices, and commodity prices (Korompis et al., 2020). Interest rates that have decreased will cause customers to be reluctant to invest their funds in the bank, as a result the income that will be obtained by the company will decrease. (Korompis et al., 2020) and (Mosey et al., 2018) explain that NIM has a significant effect and has a positive relationship to ROA. In contrast (Dayana & Untu, 2019) show that NIM has a significant impact and is negatively related to ROA

Banking companies earn income from disbursed credit activities, so the higher the total credit distributed by banks, the higher the credit risk that will be experienced by banks (Silitonga & Manda, 2022), this is because there will be many possibilities for customers who do not pay their obligations in the short term, while the bank is still obliged to pay interest on customer deposits, the bank's income will automatically decrease. (Silitonga & Manda, 2022) and (Adhim, 2019) explain that NPL negatively impacts profitability (ROA). In contrast (Tampi et al., 2021) show that NPL has no effect on ROA.

The high credit risk causes a reduction in bank revenues because there are customers who are unable to repay their loans. This causes banks to lack funds so that if there are customers who want to withdraw their funds, the bank will experience difficulties and be unable to fulfill these obligations in a timely manner. If the value of liquidity risk, namely the LDR is too high the bank's profitability will also decrease, meaning that banks are deemed unable to channel credit effectively and efficiently. (Mambu et al., 2022) and (Korri & Baskara, 2019) explain that LDR has an effect and has a positive relationship to ROA. In contrast (Silitonga & Manda, 2022) show that LDR has no positive impact on ROA.

LITERATURE REVIEW

Signaling Theory

Spence (1973) suggests that signal theory is used to explain behavior in the labor market. According to Ghozali & Ratmono, (2020: 166) signaling theory is used in accounting, auditing and financial management studies which explains that management gives signals Learn about a company through various aspects of financial disclosures that investors may receive as signals.

Signals theory explains that companies communicate signals or signals to investors in the form of information. It's about how much profit you get from the assets you use. Therefore, when returns are high, it bodes well for investors (Dewi & Wartana, 2021). This is because investors are interested in investing their funds in the form of securities or donating shares to the company when high earnings indicate that the company is doing well Investors will react positively to this signal as high profitability is a good prospect.

VUCA Theory (Volatility, Uncertainty, Complexity and Ambiguity)

The current business challenge that must be faced by companies is VUCA world. In VUCA conditions (Volatility, Urgentity, Complexity, and Ambiguity) many changes occur which are accompanied by uncertainty, coupled with the Covid-19 outbreak, this is a new challenge and threat for companies, therefore companies must be able to respond to the VUCA phenomenon. the. VUCA is a state where change occurs with uncertainty (Aurora et al., 2022). The existence of banking risks such as credit problems, market risk and idle funds is also a protection that can be experienced by companies. Where there is credit risk, it indicates that there are debtors who cannot fulfill their obligations according to the agreement. The VUCA components can be described as follows: 1) Volatility, referring to changes that are happening at this time can be said to be at an unpredictable speed. 2) Uncertainty, namely the existence of uncertainty in achieving goals, uncertainty will always be found at every stage. 3) Complexity, namely complexity that arises along with ongoing developments. 4) Ambiguity is a situation without a clear causal relationship. Its nature is new and unprecedented so it cannot be predicted. At this time, it is difficult to find a clear decision that leads to one point. There will always be two sides to anything.

Financial performance

According to Harjito & Martono, (2018: 52) financial performance is a description of a real Circumstances regarding the business performance and achievements achieved by the enterprise over a period of time. According to Hutabarat, (2020: 2) Financial performance is the analysis performed to determine the ability of a company applies financial performance rules appropriately and accurately. So financial capability is a description of the results of all banking economic activities in a certain period which are obtained from operational activities carried out by the bank.

Market Risk

According to Idroes, (2020:22) states that market risk is the risk that occurs when there is a visible loss in the balance sheet position and the recording of bills and liabilities outside the balance sheet. market risk can occur if the interest income on productive assets that are managed decreases, which can change the balance sheet position so that the profits that banking companies get decrease.

Credit risk

According to Idroes (2020: 22) credit risk is a problem that may occur in banking, and this loss is related to the debtor who is unable to fulfill his obligations to the banking system for loans that have been given in a timely manner. which means this risk can occur if the debtor or borrower is unable to pay off his short-term obligations according to the time agreed with the bank before or after maturity.

Liquidity risk

According to the Indonesian bankers' association, (2018: 136) liquidity risk is the risk due to bad credit, due to a bank's deteriorating reputation so that banks do not have enough funds to do their duty. In other words, the condition of decreased liquidity is when a bank experiencing a shortage of funds so that banks cannot extend credit to debtors or banks cannot fulfill financial obligations on savings from customers which can be withdrawn at any time.

HYPOTHESIS DEVELOPMENT

Effect of market risk on financial performance

The high market risk will have a good impact on the financial performance generated by the company because of the large amount of net interest income that is obtained by banks. In accordance with research (Korompis et al., 2020) and (Mosey et al., 2018) explain that NIM has a significant effect and has a positive relationship to ROA.

H_1: Market risk has a positive Impact on financial performance

Effect of credit risk on financial performance

High credit risk means that a bank is experiencing high non-performing credit cases, causing the income received by the bank to be low, low income at the bank can allow for low profitability. In accordance with research (Silitonga & Manda, 2022) and (Adhim, 2019) explain that NPL negatively impacts financial performance.

H_2: Credit risk negatively impacts financial performance

Effect of liquidity risk on financial performance

The higher the liquidity risk, the bank's financial capacity will also increase, because it is considered that banks are able to distribute credit to customers optimally, where maximum credit disbursement will indicate high income obtained from loan interest. according to research (Mambu et al., 2022) and (Korri & Baskara, 2019) explain that LDR has a positive effect on ROA.

H_3: Liquidity risk have a positive impacts financial performance.

The influence of market risk, credit risk and liquidity risk on financial performance

Market risk illustrates the amount of net interest income the bank earns, the higher the interest income the bank earns, this illustrates that the bank does not have high problem loans so that the income earned also increases. The high interest income earned by banks also illustrates that a bank has channeled loans effectively and efficiently. In accordance with research (Korompis et al., 2020) and (Caesarani & Manda, 2022) explain that NIM, NPL, and LDR simultaneously have a significant effect on ROA.

H_4 : Market risk, credit risk and liquidity risk simultaneously impact financial performance

METHOD

This study uses a quantitative research method. The approach in this study uses a causality approach (cause and effect). This approach explores how the independent variable influences the dependent variable. The data The study covers annual reports of traditional banking companies listed on the Indonesian Stock Exchange from 2017 to 2021, obtained from the official website of the Indonesia Stock Exchange www.idx.co.id. The secondary data from the publications are used using the analytical method panel. Using a targeted sampling technique, we obtain 24 samples from a total population of 43 traditional banking firms. The criteria for obtaining samples are: Traditional Bank Companies listed on the Indonesian Stock Exchange (IDX), traditional Bank Companies Listed on the Indonesian Stock Exchange (IDX) in 2017-2021, experienced profits in the 2017-2017 period 2021, Conventional banking companies that have complete data regarding variables used in the 2017-2021 period.

VARIABLE MEASUREMENT

In this study the independent variables consist of: Market risk, credit risk, liquidity risk and the dependent variable is financial performance.
Market risk is proxied by net interest margin (NIM)

Net Interest Margin = $\frac{Net\ interest\ income}{Average\ total\ earning\ assets} \times 100\%$……………………………………………..(1)

Credit Risk is measured using the non performing loan formula

Non Performing Loan = $\frac{Total\ non\text{-}performing\ loans}{Total\ credit\ disbursed} \times 100\%$ ……………………………………………(2)

Liquidity risk is measured using the loan to deposit ratio formula

Loan to Deposito Ratio = $\frac{Total\ funds\ disbursed}{Total\ third\ party\ funds} \times 100\%$ …………………………….………………….(3)

The dependent variable of financial performance uses profitability ratios (ROA)

Return On Asset = $\frac{Profit\ before\ tax}{Total\ assets} \times 100\%$ ……………………………………………………........(4)

RESULTS AND DISCUSSION

Results

Descriptive Statistical Analysis

Table 1. Descriptive statistical test results

	ROA	NIM	NPL	LDR
Mean	1.713500	5.096167	2.762833	85.06283
Median	1.605000	4.820000	2.680000	84.21000
Maximum	4.310000	11.60000	7.830000	163.0000
Minimum	0.070000	0.470000	0.050000	29.67000
Std. Dev.	1.102104	1.647751	1.296269	21.25343
Skewness	0.413725	0.951851	0.654568	0.938743
Kurtosis	2.220227	6.095044	3.903298	5.958732
Jarque-Bera	6.463604	66.01690	12.64894	61.39524
Probability	0.039486	0.000000	0.001792	0.000000
Sum	205.6200	611.5400	331.5400	10207.54
Sum Sq. Dev.	144.5413	323.0948	199.9574	53753.31
Observations	120	120	120	120

Source: Results of data processing eviews 12 (2023)

Descriptive statistical analysis was performed to compare minimum, maximum and sample means. a clear factual examination was performed to induce an diagram of the factors utilized in this think about. Descriptive analyzes of this study included research variables shown in the explanation. the following:

Financial performance (Y)

Money related execution which is proxied by Return On Resources (ROA) has a maximum value of 4.31% and this value was obtained by PT Bank Mestika Dharma Tbk in 2021, and the minimum value is 0.07% which was achieved by PT Bank Mayapada Internasional Tbk. In 2021.

Market risk (X1)

Net Interest Margin (NIM) based on the table above has a maximum value of 11.60% which was obtained by PT Bank BTPN in 2017 and a minimum Net Interest Margin (NIM) of 0.47% which was obtained by PT Bank Mayapada Internasional Tbk in 2020.

Credit risk (X2)

Non Performing Loan (NPL) based on the table above has a maximum value of 7.83% which was obtained by PT Bank Sinarmas Tbk in 2019 and a minimum Non Performing Loan of 0.05% which was obtained by PT Bank Nationalnobu in 2017

Liquidity risk (X3)

Loan To Deposit Ratio (LDR) based on the table above has a maximum value of 163% which was obtained by PT Bank BTPN in 2019 and the minimum value of 29.67% which was obtained by PT Bank Ina Perdana in 2021.

Hypothesis test

Table 2. Summary of hypothesis testing results

Hipotesis	Value (t-statistic)	Significant	Note
Constan	1.454857	0.1484	-
Market risk	5.989423	0.0000	Accepted
Credit risk	-5.107064	0.0000	Accepted
Liquidity risk	1.570398	0.1190	Rejected
Adjusted R-Squared	0.381402		
F Statistic	25.45679		
Prob F statistic	0.000000		

Source: Data processed by the author (2023)

The value of the F-statistic is 25.45679, On the other hand, the level of the F-table is α = 51 (k-1) where (k is the number of factors) and df2 (n-k) where (n is the sum of information). At that point df1 (4-1) = 3 and df2 (120-4) = 116, at that point we get an F table esteem of 2.68. Here is the F statistic 25.45679 > F table 2.68, and the prob esteem (F-statistic) is 0.000000 < 0.05, which implies that and the probability value (F-statistic) is 0.000000 < 0.05, which implies that the free factors in this consider comprise of Net Intrigued Edge (NIM), Non performing advances (NPL), Credit to store proportion (LDR) together. have the same influence on financial performance (ROA).

Level t tabel is α = 5%, df (120-4) = 116, then the value of t table is 1.98063. so that the following conclusions are obtained:

Market risk (X1) results obtained t Statistics Net Interest Margin (NIM) 5.989423 > t table 1.98063. It can be concluded that the probability value is 0.0000 <0.05. Then H_1 is accepted and Ho is rejected, thus the conclusion from the t test on the market risk variable (NIM) partially has a positive affects financial performance (ROA).

Credit risk (X2) results obtained t Statistical Non Performing Loan (NPL) (-5.107964) > t table 1.98063. And prob value. 0.0005 < 0.05, it can be concluded that H_2 is accepted and Ho is rejected, thus the conclusion from the t test on the credit risk variable (NPL) partially has a negative affects financial performance (ROA).

Liquidity risk (X3) results obtained t Statistics Loan To Deposit Ratio (LDR) 1.570398 < t table 1.98063. And the prob value is 0.1190 > 0.05. then it can be concluded that H_3 is rejected and Ho is accepted, thus the conclusion from the t test on the liquidity hazard variable (LDR) partially has no positive effect on financial performance (ROA).

Level F table is α = 5%, df1 (4-1) = 3 and df2 (120-4) = 116, then then the result is 2.68, so the Probability value (F-statistics) is 0.000000 where this value is less than 0.05 This means that H_0 is rejected and Ha is accepted. This shows that NIM, NPL and LDR simultaneously have a significant impact on ROA.

Based on the calculation comes about of the irregular impact demonstrate In this think about, the coefficient of assurance (R^2) utilized is balanced R-squared, since this think about employments more than two free factors. And based on the results of the calculation of the random effect model, the value of the coefficient of determination (adjusted R squared) is generated which shows a number of 0.381402, which implies that 38.14% of productivity measures (ROA) are impacted by autonomous factors, to be specific Net

Interest Edge (NIM), Non Performing Advances (NPL) , conjointly the Credit To Store Proportion (LDR). Whereas the remaining 61.86% is affected by other factors exterior the autonomous factors utilized in this think about.

Disscusion

Effect of market risk on financial performance

Research results show that the floating market ratio (NIM) has a positive and significant impact on the return on investment (ROA) of traditional banking companies listed on the Indonesian Stock Exchange in 2017-2021. a high net interest margin (NIM) in conventional banking companies indicates that the net interest income received by banks has increased, where this net interest income is obtained from loans provided to customers on productive assets. Earning assets that are calculated are assets that generate interest such as loans provided, income at other banks and so on, where interest on productive assets obtained from depositors will increase income, therefore the ability of conventional banking companies to generate profits will also increase. Conversely, if the net interest margin value is (NIM) in conventional banking is low, it indicates that the net interest income earned by the company has decreased, so that the lack of conventional banking ability to generate income will affect the ability of conventional banking to generate profits.

This study is consistent with theory put forward by Sudarmanto et al (2021: 19) which states that market risk is the risk that occurs when market conditions and stability are unable to influence the level of profitability which can result in both financial and non-financial problems. This research is also supported by research results (Korompis et al., 2020) and (Mosey et al., 2018) explain that NIM has a significant effect and has a positive relationship to ROA.

Effect of credit risk on financial performance

Research results show that Non-performing advances (NPL) have a negative and noteworthy affect on the return on resources (ROA) of traditional banking firms in 2017-2021. The high level of credit risk in conventional banking indicates that the number of non-performing loans that occur in conventional banks is also high, the higher the non-performing loan (NPL) value indicates that the credit quality in conventional banking is poor. the high number of non-performing loans causes interest income to be received by conventional banking companies to decrease. Decreased income can cause the company's ability to earn profits to decrease. Conversely, if the level of credit risk in conventional banking is low, it indicates that non-performing loans at a bank are also low. This causes the income received by conventional banking also increases. So that if the income received by conventional banking increases, the ability of conventional banking companies to generate profits will also increase.

This study is consistent with theory put forward by Sudarmanto et al (2021: 18) which states that credit risk is the risk that occurs as a result of debtors who are unable to pay off their obligations in a timely manner after maturity, so that bank income decreases. This research is also supported by research results (Silitonga & Manda, 2022) and (Adhim, 2019) explain that NPL has a negative and significant impact on ROA.

Effect of liquidity risk on financial performance

Research results show that the Loan to deposit ratio (LDR) has no impact on profitability (ROA) of conventional banking companies in 2017-2021, the lack of effect of the loan to deposit ratio (LDR) on return on assets (ROA) can be caused by the large number of idle funds in conventional banking, idle funds are idle funds that are not used by conventional banking companies, because these funds are not used in credit activities so you can't generate income. Therefore, the loan-to-deposit ratio (LDR) does not affect bank profitability. The second reason why the loan to deposit ratio (LDR) has no effect on profitability is that currently conventional banking companies do not only earn income from interest rates received from lending activities, but also obtain fee-based income. This is due to the low interest rates provided by conventional banks so that interest income earned from credit activities has not been able to generate maximum income, especially if conventional banks experience many cases of problem loans, of course this cannot increase banking income even though conventional banking has disbursed large amounts of credit.

This study is consistent with theory put forward by (Anugrah & Yatna, 2020) which states that the cause of the non-effect of LDR on ROA is due to the precautionary principle in which banks are very selective in providing funds to customers. This research is also supported by research (Silitonga & Manda, 2022) and (Anisa et al., 2021) explains that LDR has no positive effect on ROA.

The influence of market risk, credit risk, and liquidity risk simultaneously affect financial performance

From this, we can conclude that advertise hazard, credit chance and liquidity chance variables simultaneously affect financial performance. This proves that the independent variables used in this study can that determine good or bad corporate performance and are reflected in financial performance. Good financial standing can be determined when market, credit and even liquidity risks are properly managed. Banks fail to pay attention to market, credit and liquidity risk levels, it can cause a decline in the financial performance of conventional banking companies. When a banking company earns interest on large loans, it means that the market risk ratio (NIM) has increased, an increase in interest income also means that the condition of non-performing loans experienced by banks has also decreased, a decrease in the value of non-performing loans (NPL) means that the borrower can pay it back obligations to banks so that it can increase banking income, a high loan to deposit ratio (LDR) value reflects the large number of loans channeled by conventional banking companies, so that large interest income on loans also means that banking companies are able to channel their loans properly which will then increase conventional banking income. Increased income indicates that the ability of banking companies to generate profits will also increase, so that the banking financial performance will also be good. Thus good financial performance causes banking companies to be able to compete with competitors, because it is considered to have good performance. This study is in accordance with the results of the study (Korompis et al., 2020) and (Caesarani & Manda, 2022) explain that NIM, NPL, and LDR simultaneously have a significant effect on ROA.

CONCLUSION

In accordance on the comes about of the investigate the conclusion that is obtained is: it is concluded that advertise chance includes a positive impact on budgetary execution (ROA). This means that a high net interest margin (NIM) in conventional banking companies indicates that net interest income received by banks increases, so that the ability of conventional banking companies to generate profits will also increase. Credit risk negatively impacts financial performance, high credit ratio at conventional banks indicates that non-performing loans at conventional banks are also high so that interest income at conventional banking companies decreases. so that the profit earned will also decrease. Liquidity risk no affect on money related execution (ROA), this can be caused by the large amount of funds idle in conventional banking, and also caused by fee-based income, where this income is not from loan interest rates. Simultaneously the variables of advertise chance, credit hazard and liquidity hazard have a synchronous impact on monetary execution. This demonstrates that advertise hazard, credit hazard and liquidity hazard are variables that determine good or bad corporate performance, as reflected in financial performance.

LIMITATION AND SUGGESTIONS

Limitation

There are only three independent variables in this study, advertise chance, credit chance and liquidity hazard, but there are numerous other variables that can influence a bank's productivity. The study is limited to traditional banking companies listed on the Indonesian Stock Exchange. with a targeted sampling method so that only 24 companies were selected as objects in the study, where the sample did not describe all existing banking companies. in this research only used a period of 5 years, namely from 2017 to 2021.

Suggestions

According to the conclusions and limitations contained in this study, The following are suggestions that the author can give: 1) the company should be expected to pay more attention to market risk and credit risk in its operational activities so that the banking financial performance remains in good condition. 2) Investors in investing should pay attention to the level of market risk and also the credit risk found in conventional banking in order to get the expected return because these factors are considered capable of affecting the profitability of a bank. 3) Further researchers are expected to us independent variables that might influence the profitability of banking companies such as using operational risk variables and also the capital equacy ratio. Future researchers are also expected to be able to add company objects that will be sampled in research and increase the research time period in order to get better results.

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