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Vulnerability Analysis in Banking Islamic Countries

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Abstract

This study aims to identify the measurement of banking vulnerability, factors that are suspected of influencing banking conditions. This study uses six countries as research samples and tests internal and external banking factors that are suspected of influencing the possibility of a banking crisis. Banking vulnerability is measured by Zscore with a research period of 2016-2023. The results of the study indicate that NPL has a positive effect on bank vulnerability. In this case, it is possible that the increase in banking NPLs has increased throughout 2020 and was recorded at 3.11% at the end of June 2020. This increase occurred due to the declining ability of the real sector to pay so that credit growth was limited during the pandemic while profitability had a negative effect on bank vulnerability while Interest Rates, Inflation, and Economic Growth did not affect bank vulnerabilityKata Kunci: Riba, Gharar, Maysir.

Keywords: **Banking vulnerability, NPL, Interest rates, Economic growth**

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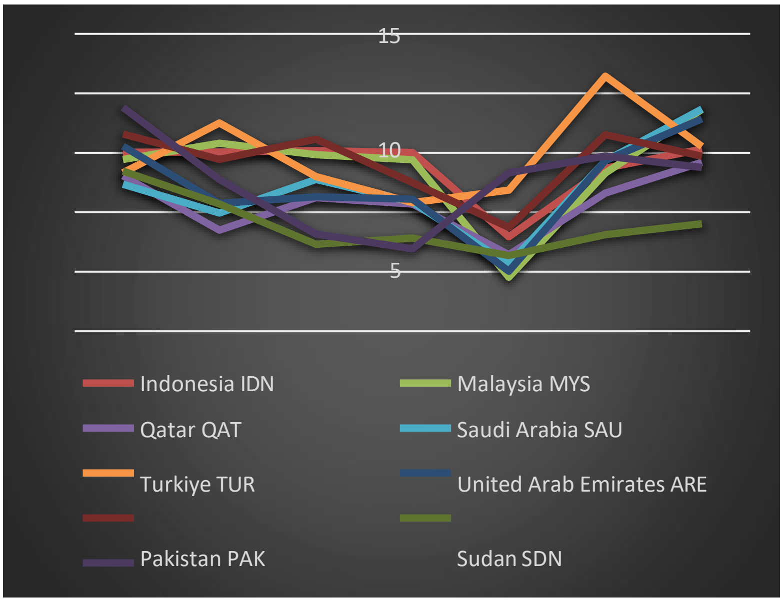
INTRODCTION

The existence of the beginning of Sharia banks is recommended to be able to provide solutions to financial crises that may occur and can be part of the development of the banking sector and economic development in a country. Economic growth is indeed very much needed by a country in increasing the wealth and income of the country. The study found that Islamic banks do not have significant differences with conventional banks in terms of the possibility of default during the financial crisis (Abedifar, Molyneux, & Tarazi, 2011).

Meanwhile (Hesse, 2010) found that the size of Islamic banks is very important. in resilience to the impact of the financial crisis. In addition, small Islamic banks are more stable than small conventional banks, conversely the larger the size of the Islamic bank, the more vulnerable it is to remaining stable from the crisis. However, Islamic banks as intermediary units like other financial institutions have the same risks in running their businesses.

Rashid Abdul, Saba Yousaf, (2017) tried to analyze the stability between Islamic and conventional banks in Pakistan. Using z-score analysis to calculate the stability of both for the period 2006-2012. The results of the study showed that the regression results showed that income diversity, profitability ratio, loan to asset ratio, asset size and bank market concentration ratio had a significant effect on bank stability. In addition, the results of the z-score analysis showed that Islamic banks performed better than conventional banks and contributed more effectively to the stability of the financial sector. Gamaginta and Rokhim (2009) tried to compare the stability of Islamic banks and conventional banks in Indonesia for the period 2004-2009, using Z-score and parametric t-test. The results showed that Islamic banks generally had a lower level of stability than conventional banks. Some exceptions include the tendency that small Islamic banks have the same level of stability as small conventional banks. During the financial crisis period of 2008-2009, Islamic banks and conventional banks tended to have relatively the same level of stability. Interestingly, the stability of Islamic banks is lower than that of Islamic business units.

Figure 1.
Economic Growth QISMUT+3 Years 2016-2022



Source: *World Development Index,* 2023, edited

Figure 1. above shows the economic fluctuations of the countries in QISMUT+3, namely Qatar, Indonesia, Saudi Arabia, Malaysia, UAE, Turkey, Pakistan, Sudan and Iran, based on economic growth during 2016-2022. Economic growth in several countries in the table above, namely Pakistan, Iran, Indonesia and Sudan, has experienced a significant decline in economic growth. Achieving economic growth in increasing GDP requires government encouragement and input in advancing the economy. The government as the party that has the authority to implement the obligation to maintain economic normality and has the authority to implement policies that can encourage the economy. Government policies in addition to maintaining the quality of the government itself are also inseparable from the quality of Islamic financial institutions in a country.

Banking is a major component of the financial system because it has a broad impact on overall financial stability and the economic strength of banks connecting economic units in the creation of financial markets. The banking sector as an intermediary institution has a very large role in driving the real sector. Unstable bank conditions certainly have a negative impact on the economic sector. The central bank of each QISMUT country continues to strive to supervise and update regulations to encourage the banking industry to remain stable. Vulnerability in the stability of the financial system is a concern for governments in every country. The stability of the financial system has a direct influence on macro stability. In this case, because the financial system has an important role in distributing and to parties who need funds. If the financial system is unstable, it will indirectly hinder economic growth in a country, especially developing countries.

Financial crises have occurred repeatedly since the era of the gold standard regime was collapsed in 1915, and the last crisis occurred a decade ago due to subprime mortgages in the United States which has caused dozens of financial institutions to have problems and some of them went bankrupt. This financial crisis is the worst financial crisis. The current global crisis has led to various weaknesses in the banking system, one of which is facing shocks and various risks. On the other hand, risk assessment is an important issue in the banking sector, both debtors and creditors care about the security and stability of the bank. When bankruptcy occurs in any bank, many parties are affected, savers lose their money and owners experience significant capital losses. Bank stability is the ability to work in a sustainable balance in different economic conditions and ensure that the system does not require external resource injections to maintain its operations. [1]In the banking sector, there is a complex and interrelated correlation with other economic sectors, thus instability in the banking sector will have an impact on other economic sectors.

The banking sector has an important role in economic growth. [2]When a country has a banking system that is profitable in the stability of the financial system, it will be easy to overcome difficulties. Thus it is important to determine all factors that affect bank performance. The factors that affect bank performance consist of two factors, namely external factors and internal factors. Factors that have been controlled by bank management are internal factors, while those outside the control of bank management are external factors. (Syed Ali Raza, 2013).

METTHOD

This research will use quantitative research in the future. Quantitative research is a scientific method where the data is in the form of numbers that will be processed and analyzed using statistics. Confirmatory research is a study that examines and explains whether there is an associative relationship between two or more variables based on the existence of a theory as a basis for submitting a hypothesis.The data that researchers will use is secondary data using panel data. This panel data is a combination of *time series data* with *cross-section* . Time-series data is data from one object with some specific time, different from data in cross-section, namely data obtained from one or more research objects at the same time. This research uses *a time series* for 8 years, namely from 2016 to 2023, while in the cross-section data in this study there are six Islamic countries, namely Qatar, Indonesia, Sudan, Malaysia, United Arab Emirates, Turkey. While researchers obtain data in this study from banking statistical reports that are available on the central bank database website in each country for its internal variables. In macroeconomic data, researchers obtain it from the *International Monetary Fund.*

RESULTS AND DISCUSSION

This study involves two types of variables, namely dependent and independent variables. The variable in this study is the Z score, which reflects the vulnerability of the bank. While the independent variables proposed by the researcher are six types, namely Credit Risk, Profitability, Interest Rates, Inflation, Economic Growth. The use of panel data involving time series and cross-section data is used for analysis. The eight-year research period starts from 2016 to 2023. This study was conducted with the aim of analyzing the determinants of Islamic banks in various countries during that period. Thus, researchers hope to provide a view that helps stakeholders in making good and targeted economic decisions.

The main objective of this study is to evaluate whether the independent variables have an influence on the dependent variable. T he following are the dependent and independent variables used in this study:

Y	:Z-Score
NPL	: Credit Risk (percent)
PROF	: Profitability (percent)
SB	: Interest Rate (percent)
INFLATION	: Inflation (percent)
PE	: Economic Growth
i	: Bank Sequence (i= 1,2.....n Sharia and Conventional Banks)
t	: Period 2016-2023

Discussion

The Influence of Bank Fundamentals and Macroeconomic Variables on Bank Vulnerability Partially

Fundamental analysis is a method of company analysis based on the fundamental economic factors of a company including the financial and business performance of the company. This factor is very directly related to the performance of the issuer or company. The fundamental factors used in this study are NPL, Return On Asset (ROA). While the macroeconomic variables are the science that traces the changes that affect many communities, companies and markets. This macroeconomics includes various concepts and variables that can be used to analyze the best way to influence stability and minimize the impact of vulnerability on a bank. This macroeconomic variable is something that is the object of research related to the economic field both from the regional and international environment. The variables used in this study are Interest Rates, Inflation and GDP.

The influence of NPL variables on bank vulnerability

The results of this study indicate that the t-statistic test shows that *Non- Performing Loans (NPL)* have a significant positive effect on bank vulnerability. In this case, it has been tested on Eviews 12 which shows that the t-statistic value is 2.3486 while the significance value is 0.0243 so that H0 is rejected and H1 is accepted. In this case, it is possible that the increase in banking NPLs has increased throughout 2020 and was recorded at 3.11% at the end of June 2020. This increase occurred due to the decreasing ability of the real sector to pay so that credit growth was limited during the pandemic. Thus, it has an impact on the increase in the level of bank vulnerability.The results of this study are also in line with the research of Poghosyan & Cihak (2009) which found that credit risk growth is positively related to the banking crisis. In this case, because the impact of the large credit allocation can increase the risk of credit default in the future **.**

The influence of ROA variables on bank vulnerability

The results of this study indicate that the t-statistic test shows that profitability has a significant positive effect on bank vulnerability. In this case, it has been tested on Eviews 12 which shows that the t-statistic value is -3.863247 while the significance value is 0.0004 so that H0 is rejected and H1 is accepted. The results of this study can be interpreted that a high level of profitability will be able to guarantee the fulfillment of all company burdens and obligations so that it can reduce the possibility of company financial difficulties, and vice versa if the level of profitability decreases, the company's ability to meet burdens and obligations also decreases and financial difficulties can be predicted in a company. High income illustrates the ability of management to manage assets owned by the bank to obtain income. In addition, high income shows that the bank is able to manage operational activities efficiently. High banking income can be allocated to increase banking capital so that it can be a barrier to the risks faced by banks and can improve banking performance (Baselga-pascual et al., 2015).

The Influence of Interest Rate Variables on Bank Vulnerability

The results of this study indicate that the t-statistic test can be The results of this study indicate that the t-statistic test can be seen that Interest Rates do not have a significant effect on bank vulnerability. In this case, it has been tested on Eviews 12 which shows that the t-statistic value is -1.073334 while the significance value is 0.2901 so that H0 is accepted and H1 is rejected. In this case, higher interest rates or an increase in interest rates from the current very low levels may not pose a threat to bank vulnerabilities . An increase in interest rates would of course also have broad implications for the balance sheets of other important financial institutions, such as insurance companies.

The influence of inflation variables on bank vulnerability

The results of this study indicate that the t-statistic test shows that inflation has no significant effect on bank vulnerability. In this case, it has been tested on Eviews 12 which shows that the t-statistic value is -0.288152 while the significance value is 0.7748 so that H0 is accepted and H1 is rejected. The results of this study prove that inflation does not have a significant impact on bank vulnerability. when inflation rises or falls, it does not have a significant impact on bank vulnerability. Because in the QISMUT country itself, the inflation rate still tends to be stable.

The influence of real GDP variables on bank vulnerability

The results of this study indicate that the t-statistic test shows that profitability does not have a significant negative effect on bank vulnerability. In this case, it has been tested on Eviews 12 which shows that the t-statistic value is -0.110364. While the significance value is 0.9127 so that H0 is accepted and H1 is rejected. The results of this study prove that economic growth does not have a significant effect on the probability of banking vulnerability. Some banks have mismanagement in distributing their credit so that in this case it does not have an effect on vulnerability in banking.

CONCLUSION

This study aims to analyze fundamental and macroeconomic variables on banking stability in QISMUT Countries in the period 2016-2023. From the results of hypothesis testing conducted in this study, several conclusions were produced, including:

The Influence of Bank Fundamental and Macroeconomic Variables on Bank Vulnerability

a. The results of the study indicate that the NPL variable has a significant effect on banking vulnerability. This means that the higher the NPL level, the more it can affect banking vulnerability . In this case, it is possible that the increase in banking NPLs will increase throughout 2020 and was recorded at 3.11% at the end of June 2020. This increase occurred due to the decreasing ability of the real sector to pay, resulting in limited credit growth during the pandemic .
b. The results of the study indicate that the profitability variable has a significant influence on banking vulnerability. In this case, it means that the higher the level of profitability, the lower the banking vulnerability.
c. The results of the study indicate that the Interest Rate variable does not have a significant effect on bank vulnerability . In this case, higher interest rates or an increase in interest rates from the current very low level may not pose a threat to bank vulnerability.
d. The results of the study show that the Inflation variable does not have a significant effect on bank vulnerability. When inflation rises or falls, it does not have a significant impact on bank vulnerability.
e. The results of the study show that the GDP variable does not have a significant effect on bank vulnerability. Some banks have *mismanagement* in distributing their credit so that in this case it does not have an effect on vulnerability in banking.

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