LIQUIDITY AND CREDIT RISK: A COMPARATIVE STUDY OF ISLAMIC AND CONVENTIONAL BANKS IN INDONESIA

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Abstract: Islamic banking is only a small choice for the majority of Indonesian Muslims numbering 229.62 million people or 87.2%. In contrast, the market share of Islamic banks is only 7.07%. Global banking conditions are rocked by the case of Silicon Valley Bank, which is one of the largest banks in the world, experiencing liquidity problems. This is inseparable from the fragility of the conventional banking system based on usury as an inherent obligation. This study analyzes the liquidity and credit risk comparison of Islamic and conventional banks in Indonesia. The sample in this study is 10 Islamic banks and the 10 largest conventional banks in terms of assets in the 2018-2022 period. Independent t-test is used to answer the problems in this study. Based on the results of independent t-test show that there is no difference between the liquidity of Islamic and conventional banks. Likewise, NPF / NPL shows no difference between Islamic and conventional banks.

Keywords: Liquidity; Credit Risk; Islamic And Conventional Bank


Kata Kunci: Likuiditas, Risiko Kredit; Bank Syariah Dan Konvensional

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Introduction

Today’s world banking industry is very vulnerable and easy to collapse. Economic turmoil that is still unstable, and wars in several regions increasingly destabilize the banking industry. The Global Financial Crisis that occurred also disrupted the stability of financial institutions.\(^1\) Large banks easily go bankrupt. Reflecting on the case of the collapse of Silicon Valley Bank (SVB) banks with one of the largest assets in the world are very easy to experience financial shocks in a short time. SVB failed to raise additional capital accompanied by a mass exodus of customer funds. SVB was unable to keep pace with the interest rate hikes implemented by the Fed. As a result, bonds issued by companies lost hundreds of billions of US dollars in price and created panic among investors. This resulted in many SVB customers consisting of Startup Companies who were unable to withdraw their funds. This polemic is feared to increase public distrust of the banking industry. This is inseparable from the fragility of the conventional interest-based banking system as an inherent obligation to conventional banks under any conditions.\(^2\)

Different things are owned by Islamic banks that apply sharia principles and are free from interest.\(^3\) Financing or disbursing funds, conventional banks prioritize the relationship between debtors and creditors; On the contrary, Islamic banks emphasize the idea of freedom in profit-sharing arrangements/profit margins based on mutual agreement.

After the global financial crisis in 2008, most financial institutions went bankrupt and the economies of several major countries in America and Europe were getting worse. Islamic banking has positioned itself as a reliable alternative because its resilience during crises is better than conventional financial institutions.\(^4\) After the crisis and experienced a lower decline in profits compared to conventional banks. Islamic banks showed less risky operations and were able to recover faster from the crisis compared to traditional banking institutions.\(^5\)

However, Islamic banks are currently not the main choice of the Indonesian Muslim community. This reality can be seen in the small market share of Islamic banks. Not comparable to the majority Muslim population of Indonesia. The picture is as follows:

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The picture shows that there is a large gap between Islamic banking and conventional banks. Islamic banking is only a small choice for the majority of Indonesian Muslims numbering 229.62 million people or 87.2% of Indonesia’s population. Indonesia’s Islamic banking has not yet managed to host it in its country. This is inseparable from the low public trust in the existence of Islamic bank business.

It is expected that banks can provide returns and fulfill short-term obligations to customers. The fulfillment of short-term obligations is known as liquidity. Liquidity is a picture of the ability of an institution to convert its assets into cash in a short time without losing/reducing the value of its assets. One of the liquidity ratios used is the Financing Deposit Ratio (FDR). FDR is a ratio that shows banking intermediaries and proxies to the liquidity of Islamic banks. When liquidity risk is too high, banks will face financial difficulties. The level of liquidity will reflect the performance of the bank, the more liquid a bank will show better performance, the company will get support from various parties including customers. Capital, liquidity, institutional soundness, good corporate governance, and other issues must be specifically regulated to gain stakeholder trust.

In addition, in the concept of Islamic banking, it is important to manage risk and return and implement these policies in order to get better results. For this reason, financing risk analysis is a matter that deserves to be considered in the operation of Islamic banks. The financing risk analysis that is often used is the Non-Performing Financing (NPF).

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Kiran Javaria And Omar Masood, Risk Management Implementation.
ratio.” This ratio describes the amount of financing that has problems with all financing provided by Islamic banks.\textsuperscript{12} If this financing risk is not managed properly, this increase can destabilize Islamic banks and cause losses.

In addition to the above phenomenon, there is a contradiction in the results of previous studies comparing the financial performance of Islamic banks and conventional banks in terms of liquidity and credit risk. Tlemsani and Suwaidi conducted research showing that conventional banking liquidity is better maintained than Islamic banking.\textsuperscript{13} A study found that Islamic banks are more stable and have lower failure rates than conventional banks.\textsuperscript{14} Likewise, research shows that Islamic banks are more solid in terms of short-term liabilities/liquidity.\textsuperscript{15} In addition, research shows that Islamic banks have a higher average liquidity risk than conventional banks. Meanwhile, research shows that Islamic banks have a higher liquidity risk compared to conventional banks.\textsuperscript{16}

Research shows that the financing risk of Islamic banks is lower than conventional banks.\textsuperscript{17} This shows that Islamic banks have lower credit risk than conventional banks.\textsuperscript{18} Similarly, research shows that Islamic banks are less exposed to liquidity risk.\textsuperscript{19} Similarly, research conducted in 283 conventional banks and 60 Islamic banks shows that Islamic banks have a lower risk than conventional banks. \textsuperscript{20} Meanwhile, research found no difference in credit risk between conventional banks and Islamic banks. The inconsistency of the results of this study requires further exploration of the comparison of Islamic and conventional banks as measured by liquidity ratios and credit/financing risk.

Based on contradictory research results related to credit risk and liquidity. Previous research findings from around the world have been mixed. With different measurement methods and indicators. The NPF ratio shows the comparison between the total financing provided and the problem financing faced by the bank. The quality of bank financing can be assessed using this ratio. The formulation of the relationship is as follows:

\begin{equation}
\text{NPF} = \frac{\text{Total Financing Provided}}{\text{Problem Financing}}
\end{equation}

\textsuperscript{12} Razali Haron, Maizaitulaidawati Md Husin, And Michael Murg, \textit{Banking And Finance}.

\textsuperscript{13} Issam Tlemsani And Huda Al Suwaidi, “Comparative Analysis Of Islamic And Conventional Banks In The UAE During The Financial Crisis,” \textit{Asian Economic And Financial Review} 6, no. 6 (2016): 298.


\textsuperscript{17} Imran Khan, Mehreen Khan, And Muhammad Tahir, “Performance Comparison Of Islamic And Conventional Banks: Empirical Evidence From Pakistan,” \textit{International Journal Of Islamic And Middle Eastern Finance And Management} 10, no. 3 (2017): 419.


\[ NPF = \frac{Total \ Problematic \ Financing}{Total \ Financing} \times 100\% \]

High NPF figures will hurt creditors, debtors, and the economy as a whole.\(^{21}\) High NPF indicates that financing management is not good, thus reducing the quality of financing.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Information</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Healthy</td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>2</td>
<td>Healthy</td>
<td>2% ≤ NPL/NPF &lt; 5%</td>
</tr>
<tr>
<td>3</td>
<td>Quite Healthy</td>
<td>5% ≤ NPL/NPF &lt; 8%</td>
</tr>
<tr>
<td>4</td>
<td>Unhealthy</td>
<td>8% ≤ NPL/NPF &lt; 12%</td>
</tr>
<tr>
<td>5</td>
<td>Unhealthy</td>
<td>NPL/NPF &gt; 8%</td>
</tr>
</tbody>
</table>

**Source:** SE Bank Indonesia No.6/23/DPNP year 2011

Bank liquidity is the ability of a bank to disburse sufficient assets and convert them into cash to meet short-term obligations. When banks cannot optimally channel financing with third party funds (DPK), banks will lose money if FDR is low. FDR is included in the liquidity ratio, which calculates the main activity of banking, namely the collection and disbursement of funds. Where fundraising activities are one of the main components of bank income, the size of this income also depends on how much funds the bank spends on deposits. If the funds collected are large, more funds will be distributed to the community.\(^{22}\) However, these figures show banks' inefficiencies in managing funds and revenues if FDR is too high.\(^{23}\) Here's the calculation of the FDR ratio:

\[ FDR = \frac{Financing \ Amount}{Amount \ of \ DPK} \times 100\% \]

If the FDR position of a bank is low, it means that there has been a hoarding of money by the institution officially and known to the state, even in large amounts. If that happens, the state should take strong action against commercial banks that are unable to achieve the minimum FDR ratio target. The state must have a policy that determines whether banks are forced to channel financing or whether banks work with the government to channel financing so that the economy can be helped by increased investment and the level of production of goods and services.\(^{24}\) Here's FDR's assessment score:

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Table 2. FDR Rating Assessment Criteria

<table>
<thead>
<tr>
<th>FDR Rating</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st place</td>
<td>&lt;50 ≤ 75</td>
</tr>
<tr>
<td>2nd place</td>
<td>&lt;75 ≤ 85</td>
</tr>
<tr>
<td>3rd place</td>
<td>&lt;85 ≤ 100</td>
</tr>
<tr>
<td>4th place</td>
<td>&lt;100 ≤ 120</td>
</tr>
<tr>
<td>5th place</td>
<td>&gt;120</td>
</tr>
</tbody>
</table>

Source: SE Bank Indonesia No.6/23/DPNP Year 2011

The loan-to-savings ratio is determined by BI in Bank Indonesia Circular Letter No. 26/5/BPPP dated May 29, 1993. If the FDR ratio is greater than 110% then the cost of credit becomes zero and the bank’s liquidity is considered unhealthy; if the FDR ratio is less than 110% then the bank’s liquidity is considered healthy. Liquidity at the bank in question is negatively correlated with the FDR ratio. This is due to the lack of funding needed in the next financial year.25

Methods

This study used a quantitative approach. The analysis used is descriptive analysis and independent t-test difference test using SPSS 26.0 software. The population in this study was 12 Islamic banks and 106 conventional banks, which were registered with the Financial Services Authority (OJK). Sampling using purposive sampling. The criteria in question include 10 Islamic banks and 10 conventional banks with the highest assets that regularly publish financial statements in the 2018-2022 period. Secondary data in this study consists of financial statements obtained from each bank’s website. The financial ratios used in this study are the FDR/LDR ratio and NPF/NPL ratio.

Result And Discussion

Descriptive Analysis Of NPF

Figure 2. NPF Of Sharia And Conventional Banks

Source: Processed by the Author 2024

The graph in Figure 2 shows that the NPF/NPL ratio of Islamic and conventional banks over the past five years has been relatively stable and relatively healthy. NPFs of Islamic banks in 2018-2022 with an average of 1.58% < 5% indicate that the financing that has been carried out is relatively healthy. The positive trend shown by Islamic banks over the last 4 years shows that financing management has been carried out well and there have been significant improvements from year to year. Similarly, NPLs of conventional banks with an average of 0.98% are classified as very healthy. A positive trend has also been shown over the past 3 years, with a significant decline in non-performing loans.

Descriptive Analysis Of FDR

![Figure 3. FDR of Sharia And Conventional Banks](image)

Based on the chart above, over the past five years, both conventional commercial banks and Islamic banks in general have been categorized as having healthy FDR/LDR ratios, because it is not greater than 100%. The average FDR of Islamic commercial banks in Indonesia of 84.98% is classified as healthy. Although there was a decrease in liquidity in 2020, due to the Covid-19 pandemic, it has again shown a positive trend in the last 2 years. Similarly, the LDR of conventional banks with an average of 86.17% is still quite healthy and has fluctuatingly in the last 5 years.

Data Normality Test (Kolmogorov Smirnov)

The Kolmogorov-Smirnov test on one sample is used in this normality test. This test is to determine whether the sample value used to test the hypothesis has a normal distribution. To compare the p-value obtained at the 5% significance threshold or α = 0.05, this test uses a two-sided test. If the data has an Asymp value, then it is considered normally distributed according to the significance level rule. A 2-sided significance level of less than 0.05 indicates that the data is less than normal. The table below displays the Kolmogorov-Smirnov test results:
Table 3. Kolmogorov Smirnov/Sharpio Wilk Test Results

<table>
<thead>
<tr>
<th>BANK</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>NPL/NPF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional Bank</td>
<td>172</td>
<td>50</td>
</tr>
<tr>
<td>Islamic Bank</td>
<td>176</td>
<td>50</td>
</tr>
<tr>
<td>LDR/FDR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional Bank</td>
<td>064</td>
<td>50</td>
</tr>
<tr>
<td>Islamic Bank</td>
<td>206</td>
<td>50</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Source: SPSS 2024 Processing Results

If the value is Asymp. Sig (2-tailed) greater than 0.05 (α = 5%, significant threshold) hence the data is normally distributed. If there are more than 50 research data points, the Kolmogorov-Smirnov column is displayed. As seen from the table above, if the LDR/FDR (0.200/0.000) and NPL/NPF (0.001/0.001) variables are significant <0.05 then the data is not normally distributed.

Homogeneity Test

Data must have the same variance for an independent t-test to be performed. The Levene Test can be used to test for data variance. Data is considered homogeneous (has the same variance) if the sig > 0.05. However, if the sig < 0.05, then the data is considered heterogeneous (has unequal variances). The table below displays the results of the Levene test:

Table 4. Levene Test Results

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variances</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPL/NPF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on Mean</td>
<td>63,871</td>
<td>1</td>
<td>98</td>
<td>.000</td>
</tr>
<tr>
<td>Based on Median</td>
<td>32,852</td>
<td>1</td>
<td>98</td>
<td>.000</td>
</tr>
<tr>
<td>Based on the Median and with</td>
<td>32,852</td>
<td>1</td>
<td>62,426</td>
<td>.000</td>
</tr>
<tr>
<td>adjusted df</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on trimmed mean</td>
<td>58,837</td>
<td>1</td>
<td>98</td>
<td>.000</td>
</tr>
<tr>
<td>LDR/FDR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on Mean</td>
<td>3,734</td>
<td>1</td>
<td>98</td>
<td>.056</td>
</tr>
<tr>
<td>Based on Median</td>
<td>3,595</td>
<td>1</td>
<td>98</td>
<td>.061</td>
</tr>
<tr>
<td>Based on the Median and with</td>
<td>3,595</td>
<td>1</td>
<td>63,760</td>
<td>.062</td>
</tr>
<tr>
<td>adjusted df</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on trimmed mean</td>
<td>3,793</td>
<td>1</td>
<td>98</td>
<td>.054</td>
</tr>
</tbody>
</table>

Source: SPSS Processing Results 2024

The table above can be concluded that only sig. variable NPL/NPF (0.000) < 0.05. So the data is not homogeneous. Meanwhile, for the LDR / FDR variable (0.056) > 0.05 so that the data is homogeneous. Based on the normality and homogeneity test above, both NPL / NPF and LDR / FDR variables do not meet the assumptions of the Normality and Homogeneity test. So it is necessary to test the Mann-Whitney alternative.
Test The hypothesis
Comparison Of Conventional And Sharia Banks Is Measured By NPL/NPF

Based on the calculation of the results of the Mann-Whitney U Test for NPL/NPF variables can be seen in the following table:

<table>
<thead>
<tr>
<th>Test Statistics</th>
<th>NPL/NPF</th>
<th>LDR/FDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>1162,000</td>
<td>1166,500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>2437,000</td>
<td>2441,500</td>
</tr>
<tr>
<td>Z</td>
<td>-0.607</td>
<td>-0.576</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.544</td>
<td>0.565</td>
</tr>
</tbody>
</table>

Source: SPSS Processing Results 2024

Based on Table 3 above, a significant value of 0.544 > 0.05 is obtained for the NPL/NPF variable. This shows that non-performing loans at Islamic banks and conventional banks in Indonesia are basically the same/no different. From the descriptive variables, it can be seen that the NPF/NPL of commercial banks, both sharia and conventional, is in the healthy category.

This shows how successful Indonesian banks are in managing their financing and lending. In recent years, the banking industry has been faced with various shocks such as global economic uncertainty, trade wars between Indonesia’s main partner countries, and exacerbated by the COVID-19 pandemic which paralyzed the economy in various sectors. However, the turmoil was able to be passed well by Islamic and conventional banks which were marked by problematic loans/financing which were still relatively healthy. In addition, this is inseparable due to the stable Impairment Loss Reserve (CKPN) of banks in Indonesia in the last 5 years. Where this CKPN is useful as a loss reserve for the possibility of increased NPF/NPL. The results are consistent with research conducted by Susamto and Wardani which found no difference in credit risk between conventional banks and Islamic banks.26

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Comparison Of Conventional And Sharia Banks Is Measured By The LDR/FDR

Referring to Table 3 above, it can be concluded that the LDR/FDR variable has a significance value (2-tailed) of 0.565 > 0.05. This shows that the LDR of Islamic and conventional banks in Indonesia is the same/no different. Based on its descriptive characteristics, the LDR/FDR of Islamic commercial banks and conventional commercial banks are in the healthy category. Although the Islamic financial system implemented in Islamic banks is stronger and more resilient to crises, Islamic banks are less vulnerable to withdrawal risks. In fact, in some cases, it tends to attract more deposits than conventional banks. This implies that religious imagery keeps customers afloat.

However, the economic shocks that have hit Indonesia in recent times have also not shaken the liquidity of conventional banks. This shows that banks in Indonesia, both Islamic and conventional commercial banks, are able to maintain their liquidity well. Good banking liquidity is inseparable from the stronger foundation of the Indonesian economy in recent years. Indonesia is one of the countries with the best economic growth in Southeast Asia. In addition, unstable financial market volatility, weakening economies such as China and America as well as the Covid-19 pandemic that shook the global economy were well overcome and the rapid recovery that has been carried out has been able to maintain banking liquidity in Indonesia. This is a signal that banks have the opportunity to channel more financing/credit.

Islamic banks can overcome liquidity problems through the issuance of bonds, sukuk against their long-term as well as through the development of musharakah groups that will be regulated by the central bank. Islamic banking in Indonesia is able to reduce liquidity risk if it always maintains credit/financing, profitability based on equity, and capital adequacy.

Tlemsani and Suwaidi’s research, which shows that conventional banks are more secure than Islamic banks, is not in line with the results of this study. Research conducted by Jameel and Siddiqui found that Islamic banks are more stable and have less chance of bankruptcy compared to conventional banks. Likewise, research conducted by Jaraa, et al shows that Islamic banks record a higher average Liquidity Risk (LR) compared to conventional banks.

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31 Issam Tlemsani And Huda Al Suwaidi, “Comparative Analysis Of Islamic…, 298.
32 Muhammad Anas Jameel And Danish Ahmed Siddiqui, “The Effect Of Credit, And Liquidity.
Conclusion

The findings of this study show that in Indonesia there is no difference between Islamic and conventional banks in terms of credit risk or liquidity. This shows that Indonesian banks are currently able to manage financing and credit well. The liquidity of Islamic and conventional banks in Indonesia has not been affected by recent economic instability, indicating that banks in Indonesia are able to maintain their liquidity stability well. Indonesia’s economy has become stronger in recent years, resulting in high levels of banking liquidity.

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Author Contributions Statement

The writing of this article is the result of collaboration between colleagues with their respective tasks, namely NA section Conception and writing research, F part Data interpretation and data processing using spss, IF section Design images and tables, RIR section Bibliography Preparation and research revision, ROR section Discussion of research content.

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