"Comparing the resilience of Sharia and conventional banking to the financial crisis in the Association of Southeast Asian Nations"

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## COMPARING THE RESILIENCE OF SHARIA AND CONVENTIONAL BANKING TO THE FINANCIAL CRISIS IN THE ASSOCIATION OF SOUTHEAST ASIAN NATIONS

### Abstract

This study aims to analyze the comparison of the resilience of Islamic and conventional banking in the Association of Southeast Asian Nations (ASEAN) during the COVID-19 pandemic. Comparison of banking resilience was proxied by the Capital Adequacy Ratio (CAR) and Loan-to-Deposit Ratio (LDR) factors, Return on Assets (ROA) and Non-Performing Loans (NPL) with the Multiple Discriminant Analysis test. In this case, the emphasis is placed on the patterns by which Islamic and conventional banking in ASEAN weathered the recent financial crisis during the COVID-19 pandemic. The explanatory and quantitative analysis also used a purposive sample strategy and SPSS to obtain and analyze data from 120-unit analyses of Islamic and conventional banks, respectively. From 2020 to 2021, traditional banks in the ASEAN region, especially in Indonesia, Malaysia, and Brunei Darussalam, were emphasized. Moreover, some data were prioritized regarding the Comparison of Resilience of Sharia and Conventional Banking in ASEAN after the COVID-19 pandemic. The results showed that conventional and Islamic banks had different resilience due to the influence of Capital Adequacy Ratio (CAR) and Loan-to-Deposit Ratio (LDR) factors, but there was no significant difference in the Return on Assets (ROA) and Non-Performing Loans (NPL). Based on the accuracy of the average prediction of 80%, conventional and Islamic bank groups had classification values of 48% and 88%, respectively. This indicated that Islamic financial institutions were more successful than conventional groups in implementing banking resilience.

#### **Keywords**

resilience, capital adequacy ratio, loan-to-deposit ratio, return on assets, non-performing loan, multiple discriminant analysis

JEL Classification C38, C33, G01, G21

## INTRODUCTION

The COVID-19 pandemic has had an impact on the economy and the financial sector. Economic activities are limited to tackle the transmission of the COVID-19 virus. Thus, there is an economic downturn that has an impact on reducing people's purchasing power. Many companies experienced financial difficulties and reduced workforce, sales decreased, and many companies even went bankrupt.

The banking sector as a financial sector whose function is to collect funds from the public and channel these funds back during a pandemic has experienced many obstacles. The decline in the level of people's income influences the level of bank savings or deposits. A reduction in the savings rate determines the quality of banking assets and the level of banking liquidity. Likewise, the decline in people's income has an impact on increasing bad loans in banks. Thus, the COVID pandemic greatly impacted the achievement of overall banking performance, which included a decrease in the quality of assets, a decrease in liquidity and an increase in credit risk.

There are two banking systems, namely profit-sharing-based Sharia banking using the *mudharobah* and *musyarakah* methods and interest-based conventional banking. These two systems are currently growing rapidly in ASEAN, where the majority of the population is Muslim. Many research results related to Islamic banking are limited in scope within a country and are very limited in involving a region. Thus, Islamic banking research is needed in a region to produce more valid findings. Likewise, comparing the two banking systems is very necessary, to find out which banking system is more capable of surviving the financial crisis during the pandemic.

## 1. LITERATURE REVIEW AND HYPOTHESES

The foundation of the signal concept emphasized the idea that the information obtained by using each party was distinct. This idea was linked to the concept of data asymmetry, which described the imbalance of information existing between the management of a company and any interested external parties. In this case, business leaders often published economic reports to share data with stakeholders (Ul-Haq et al., 2022; Chugunov et al., 2022; Xu & Lu, 2020; Cihak & Hesse, 2010). Conventional and Islamic banks also had various similarities, especially in the technical aspect of obtaining money, transfer mechanisms, computer technology, and general requirements for acquiring financing (Hashem & Abdeljawad, 2018). In this case, domestic banking conditions commonly experienced shocks during the emergence of crisis (Iacovone et al., 2019; Ibahimov et al., 2023; Buyl et al., 2019; Bresciani et al., 2002). However, several significant distinctions were observed between Conventional and Islamic banks, with differences observed in the organizational structure, administration, finances, and working conditions.

Banking is a business of trust that has a strategic role in a country's economy (Xu & Lu, 2020; Marshall et al., 2019; Wakatabe, 2017). One of the factors that influences the level of public trust in banking, includes banking resilience in facing financial problems or financial crises within a country or internationally (Bell, 2017). Thus, banking resilience in facing the financial crisis is very important to maintain the level of public trust. In this study, resilience level of banks in confronting crises is observed from their liquidity, solvency, and profitability, using CAR, ROA, LDR, and NPL indicators. Fundamental factors are also responsible for affecting resilience of a bank during numerous crises. This indicates that a bank will have trouble delivering the cash needed to cover consumer withdrawals when encountering financial issues. These conditions emphasize the storage of consumer funds in problematic assets, such as bad loans, due to losses, weak solvency, and low-quality earning properties. Furthermore, the conditions lead to banks having very few liquid assets, ensuring their extreme susceptibility to crises at any time. From this context, the liquidity ratio of a bank is a measure of an institution's short-term solvency. The solvency ratio is also a metric for gauging the ability to pay long-term debts, with profitability emphasizing the proportion used to evaluate the profit-making potential of financial institution.

The impact of the global crisis also possessed direct and indirect effects, where several corporations in Indonesia had directly suffered the physical losses invested in troubled US financial institutions, for example, the banks with investments in Lehman Brothers monetary instruments. Meanwhile, indirect impacts emphasized the lack of liquidity supply in the financial sector, due to the bankruptcy of various global institutions, especially investment banks. This impact affected the *cash flow sustainability of large* corporate companies in Indonesia, as funding to *the capital market* and global banking experienced pricing, interest rates, and availability problems (Wood, 2013; Butyrskyi et al., 2023). In the present study, bank fundamentals are used to measure the resilient levels of a bank in confronting crisis, through liquidity, solvency, and profitability (Haberly & Wójcik, 2020; Oseni et al., 2019; Ercanbrack, 2019; Sanghera & Satybaldieva, 2021). Thus, the banking resilience in this study was measured using the variables Capital Adequacy Ratio, Loan-to-Deposit Ratio, Return on Assets, and Non-Performing Loans,

According to several previous reports, Islamic banking in ASEAN demonstrated a higher level of obedience and stricter regulations than conventional banks during financial crises. This was attributed to the comprehensive and rigorous regulatory framework imposed on the religious banks, including adherence to Sharia principles, as well as transparent reporting practices (Taufik, 2022; Hutsaliuk et al., 2020; Suripto, 2022). Meanwhile, conventional banks were capable of encountering challenges in complying with the same regulations, due to their operation within a more flexible framework. Various studies also observed differences in the intermediate capital structure of Islamic and conventional banking in ASEAN. This indicated that Islamic banks exhibited lower tendencies against debt than conventional banks, depending on external sources of funding. In situation crisis finance, in this case, the religious financial institutions experienced profit generation during a monetary crisis, due to their stronger capital structure and great reliance on the fiscal market (Bukair, 2019; Moreira, 2013; Sofilda et al., 2022; Wahyuni et al., 2021). Thus, it could be concluded that Islamic banking was more resilient in facing financial crises.

Islamic banking in ASEAN also had several characteristics capable of providing advantages in handling financial crises, although most of them were generally different regarding a better level of asset quality, compared to conventional banks. This difference was caused by the principles of Sharia financing, which prioritized real asset-oriented investments and mitigate excessive risk-taking (Alqahtani & Mayes, 2018). Islamic banks also demonstrated a lower inclination towards speculative financing and complex financial instruments, leading to the reduction of credit risks. According to multiple reports, Islamic banking in ASEAN exhibited a stronger liquidity profile

compared to conventional banks during financial crises. This was attributed to the operational prudence and inherent inclination to maintain higher levels of liquidity backup (Polyzos et al., 2022). Besides this, the mechanism of asset-based Sharia financing, which aligned with Sharia principles and emphasized tangible activities, also contributed to the more effective management of liquidity risks. From these descriptions, Islamic banking in ASEAN had a more conservative approach in management risk, compared to conventional banks during the financial crisis. This was observed from principle-oriented Sharia approach fairness, transparency, and sharing risk between involved parties in a transaction (Louati et al., 2016). Islamic financial institutions also had stronger structure internal control, ensuring regulation obedience and more effective management risk. In this study, the assessment of bank resilience in confronting crises is observed from the liquidity, solvency, and profitability of various financial institutions, using CAR, ROA, LDR, and NPL indicators (Zulfikar et al., 2020; Khalifaturofi'ah, 2023; Rathnayake et al., 2022).

CAR (Capital Adequacy Ratio) is a significant indicator used to assess financial health and capital adequacy of banks in confronting risks. (Mateev et al., 2022). It describes the extent to which a bank has adequate capital to cover possible potential losses. It also plays a very important role in safeguarding banking stability and reducing systemic risk, especially during the COVID-19 pandemic (Yaacob et al., 2020). Furthermore, adequate CAR is capable of providing capital adequacy for banks to handle pandemic-based uncertainties and risks. In this case, the indicator holds significant implications for banking stability, as factors such as declining income, increased credit risk, and market volatility can impact the adequacy of bank capital (Hawaldar et al., 2022).

Return on Assets (ROA) is also an important indicator used to measure financial performance of various companies or institutions, including banks (Doyran, 2013; Favalli et al., 2020; Ryoo, 2013; Ghazali et al., 2017). It describes the use of asset efficiency and profitability for revenue generation (Serpeninova et al., 2022). Since the COVID-19 pandemic has significantly altered the global financial landscape, unprecedented challenges are presented to the banking sector. This emphasizes the importance of banks to comprehend the changes in their ROA, identify the influencing factors, and implement appropriate strategies to enhance financial performance.

Loan-to-Deposit Ratio (LDR) is an important indicator implemented to measure financial health of banks (Ali, 2020). It prioritizes the connection between the amount of loans and deposits provided by banks and obtained from customers, respectively. It also plays a significant role in measuring bank financial health, as well as managing credit risk and liquidity. In addressing the challenges encountered by banking sector, comprehensive understanding of the LDR and implementation of appropriate strategies are very imperative. By continuously monitoring and effectively managing the LDR, banks can mitigate risks and strike a balance between profitability and stability, subsequently safeguarding the health of their finances (Karamoy & Tulung, 2020).

Non-Performing Loans (NPL) is also a significant indicator in the banking sector, which describes asset quality and credit risk levels (Kumar et al., 2018). It emphasizes the loans that are not capable of being repaid by a borrower in a specified period. In addressing NPL management challenges, the banking sector needs to develop adaptive and effective strategies. A deep understanding of NPL, identification of influencing factors, and the implementation of appropriate management strategies also aid banks in reducing credit risk and maintaining high-quality assets (Ha, 2021). Therefore, banking can sustainably maintain financial stability and support growth economy (Gharaibeh & Farooq, 2022; Rohman et al., 2022). This indicator is also a reflection of the quality of credit management.

Based on these descriptions, the indicators are mutually related and interconnected, influencing the performance and stability of banking institutions. This indicates that the banks possessing sufficient CAR, good ROA, balanced LDR, and low NPL levels tend to exhibit strong financial performance and maintain a solid position when confronting challenges in a difficult economic and monetary environment. In this case, the importance of both banks and regulators are emphasized, to effectively monitor and manage the indicators. Therefore, this study aims to analyze comparison of resilience of Islamic and conventional Banking in confronting financial crisis in ASEAN after the COVID-19 pandemic.

Thus, the following hypotheses could be concluded from this study:

- H1: There is a significant difference in the Capital Adequacy Ratio between Islamic banking and conventional banking in the ASEAN countries.
- H2: There is a significant difference in the Return on Assets between Islamic banking and conventional banking in ASEAN countries.
- H3: There is a significant difference in the Loan of Deposits Ratio between the Islamic banking and conventional banking in ASEAN countries.
- H4: There is a significant difference in the Non-Performing Loans between Islamic banking and conventional banking in ASEAN countries.
- H5: There is simultaneously significant difference between Islamic banking and conventional banking in ASEAN countries.

## 2. METHODOLOGY

### 2.1. Study population

In this study, the population were Islamic and conventional banks in ASEAN region, including Indonesia, Malaysia, and Brunei Darussalam.

### 2.2. Sample

The sample included Islamic an d conventional banks in ASEAN countries affected by the COVID-19 pandemic, and the data analysis was performed using the Independent Variable t-test. Microsoft Excel program and SPSS application were also used to analyze the information obtained. Furthermore, data analysis was performed through the purposive sampling technique and different tests to analyze the election sample. This emphasized the ratings for several characteristics of the customized samples tailored to match the existing study in ASEAN.

### 3. **RESULTS AND DISCUSSION**

## 3.1. Descriptive analysis test results, CAR

The CAR variable was a measure of bank capacity equity, implemented to carry out banking resilience while analyzing financial health. Table 1 is a comparative representation of CAR, emphasizing the descriptive statistics between conventional and Islamic banks.

Based on Table 1, Islamic financial institutions had a higher CAR value than their conventional counterparts. At a mean CAR score of 24.13, Islamic financial institutions indicated marked improvement in overcoming shocks, and had a greater standard deviation (13.82) than conventional banks.

## 3.2. Descriptive statistics of ROA variable

The ROA variable was a financial ratio used to measure the effectiveness of a company in generating profits from each unit of its assets. The following is a comparative presentation of ROA, pri-

Table 1. Comparison of CAR

oritizing the descriptive statistics between conventional and Islamic banks.

According to Table 2, Islamic financial institutions had a higher ROA than their conventional counterparts. At a mean score of 7.56, Islamic banks showed a high level of resilience due to an increase in ROA, with conventional institutions having higher standard deviation (9.58).

# 3.3. Descriptive statistics of LDR variable

The LDR variable was used to measure the amount of loans provided by banks or other financial institutions, compared to the deposits obtained from customers. The following is a comparative representation of LDR, concerning the descriptive statistics between conventional and Islamic banks.

Based on Table 3, Islamic financial institutions had a higher mean LDR value of 101.79, indicating that the bank practices showed remarkable resilience. The institutions also had a higher standard deviation (23.97) than conventional banks.

## 3.4. Descriptive statistics of NPL variable

The NPL variable was a financial indicator used to measure the asset quality and credit risk levels of a bank. The following is a comparative presenta-

Source: SPSS Data Analysis (2023).

				5001	ce. 5F35 Data Analysis (2025).
Variable	BANK	N	Means	Std. deviation	Std. error means
CAR	Conventional Banks	60	20.4363	2.96874	.38326
	Islamic Bank	60	24.1337	13.82332	1.78458

#### Table 2. Comparison of ROA

Source: SPSS Data Analysis (2023).

Variable	BANK	N	Means	Std. deviation	Std. error means
ROA	Conventional Banks	60	6.7093	9.58587	1.23753
	Islamic Bank	60	7.5617	9.35515	1.20774

#### Table 3. Comparison of LDR

Source: SPSS Data Analysis (2023).

Variable	BANK	N	Means	Std. deviation	Std. error means
	Conventional Banks	60	92.5617	18.61695	2.40344
LDR	Islamic Bank	60	101.7925	23.97860	3.09562

### Table 4. Comparison of NPL

Sourco	CDCC	Data	Analy	icic I	20221	1
source:	2522	Dala	Analy	SIS	2023)	1.

Source: SPSS Data Analysis (2023).

Variable	BANK	N	Means	Std. deviation	Std. error means
NPLs	Conventional Banks	60	3.3490	2.23090	.28801
	Islamic Bank	60	2.8153	1.57153	.20288

Table 5. Kolmogorov-Smirnov one-sample normality test results

	Variable	CAR	ROA	LDR	NPLs	
N		120	120	120	120	
Normal Parameters	Means	22.2850	7.1355	97.1771	3.0822	
	std. Deviation	10.12695	9.44104	21.87215	1.94006	
Most Extreme Differences	absolute	.263	.314	.248	.102	
	Positive	.263	.314	.248	.102	
	Negative	253	241	112	075	
Kolmogorov-Smirnov	Z	2,880	3,437	2,716	1,114	
Asymp. Sig. (2-tailed)		.000	.000	.000	.167	

tion of NPL, regarding the descriptive statistics between conventional and Islamic banks.

In Table 4, conventional banks had an average NPL value higher than that of Islamic banks. This showed that the NPL increased by 3.34% points at conventional financial institutions, with a high average score often emphasizing an increase in the loans. Meanwhile, Islamic banks had a lower standard deviation of 2.13 than conventional banks at 2.23.

Based on the data normality test, the Kolmogorov-Smirnov approach was used on a single dataset to ascertain the normal distribution of the experimental information. From this context, non-normal and normal data distributions were considered when the probability values were less and greater than 0.05, respectively. Table 5 illustrates the Kolmogorov-Smirnov normality test.

Based on Table 5, all independent variables, except NPL, were statistically significant at the 0.000 level. This indicated that the assumptions for us-

ing independent variables in discriminant analysis were met due to the compliance with a normal distribution.

The Homogeneity test was carried out to analyze the variance of each variable, using Box's M test.

In Table 6, the F-value and a significance level of 13.455 and 0.000 were obtained, respectively. Since the p-value was less than 0.05, statistically significant differences were then found in the covariance matrices between the two sets of subjects. In the absence of outliers, analysis of discriminant function endured adequately, even during the violation of the variance homogeneity assumption.

Based on discriminant analysis, no symptoms of multicollinearity or correlation were assumed between variables, emphasizing the difficulty to provide individual influence. This indicated that an acceptable assumption should contain no correlation between the five independent variables, prioritizing the non-occurrence of multicollinearity symptoms.

### Table 6. Homogeneity test

		Source: SPSS Data Analysis (2023).
Box's M		139,661
F F Sig.	13,455	
	df1	10
	df2	66568924
	Sig.	.000

Table 7. Pooled within gr	oups matrices
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Source: SPSS Data Analysis (2023).

Varial	ole	CAR	ROA	LDR	NPLs
	CAR	99,949	45,871	-10,160	2,283
C	ROA	45,871	89,704	-43,350	1,497
Covariances	LDR	-10,160	-43,350	460,782	-5,173
	NPLs	2,283	1,497	-5,173	3,723
	CAR	1,000	.484	047	.118
Consolation	ROA	.484	1,000	213	082
Correlation	LDR	047	213	1,000	125
	NPLs	.118	082	125	1,000

According to Table 7, the four independent variables, namely CAR, ROA, LDR, and NPL, were analyzed, showing three correlations with a correlation value of >0.05. These correlations occurred between CAR-ROA, CAR-NPL, and ROA-NPL, indicating the presence of multicollinearity. Since only a small number of independent variables were correlated, multicollinearity was disregarded, allowing the continuation of discriminant analysis process. This explanation comprehensively confirmed that the previous test was conducted, with all discriminant assumptions satisfied. In addition, subsequent testing was performed, namely Multiple Discriminant Analysis (MDA).

In MDA, a summary of the processed analytical cases was initially developed to establish the reliability of the data obtained. This indicated that all information was included in discriminant analysis due to the non-occurrence of missing data, as shown in Table 8.

Based on Table 8, the sample was 100% valid with a size of 120, indicating that the data was complete without any missing parameters.

The next step emphasized the Test for Equality of Group Means, to determine the sources of the two groups distinction (Table 9).

### Table 9. Equality of group means

Source: SPSS Data Analysis (2023).

Variable	Wilks' Lambda	F	df1	df2	Sig.
CAR	.966	4.103	1	118	045
ROA	.998	.243	1	118	.623
LDR	.955	5,548	1	118	.020
NPLs	.981	2,295	1	118	.132

In Table 9, the Group Mean Equality was confirmed by a Wilks lambda and CAR of 0.966 and < 0.05, respectively. This was due to differences between the CAR of conventional and Islamic banks. In this case, banks were classified as either "conventional" or "Sharia" regarding their CAR policies. This proved that traditional financial institutions had worse or better CAR scores than Islamic banks. By using a Wilks lambda of 0.998, ROA was also very close to 1 at a significance level of > 0.05. This indicated that conventional and Islamic banks had a similar ROA variable, with no discernible differences observed between the two institutions.

From these results, the LDR variable had a significance level below 0.05 at 0.020, using a Wilks lambda of 0.955. This demonstrated that conventional and Islamic banks operated differently along group or LDR dimensions. In this case, banks were classified as either conventional or

Table 8. Test result analysis case processing summary

		Source: SPSS D	ata Analysis (2023)
	Unweighted Cases	N	percent
Valid		120	100.0
	Missing or out-of-range group codes	0	.0
	At least one missing discriminating variable	0	.0
Excluded	Both missing or out-of-range group codes and at least one missing discriminating variable	0	.0
	Total	0	.0
Total		120	100.0

Islamic depending on the LDR score. Moreover, the NPL variable was statistically close to 1 using a Wilks lambda of 0.981, indicating a significance level above 0.05. This confirmed that the NPL variable in conventional and Islamic banks was generally the same and did not vary across groups.

Based on these descriptions, CAR and LDR had significance values below 0.05, indicating the occurrence of differences between the groups. These conditions emphasized the rejection and acceptance of Ho and Ha, respectively. In this case, conventional and Islamic banks were differentiated by the CAR and LDR variables. Meanwhile, no distinction was observed between both institutions for ROA and NPL, with p-values greater than 0.05. This confirmed the acceptance and rejection of Ho and Ha, respectively, with conventional and Islamic banks roughly producing similar values for ROA and NPL.

The degree of similarity between discriminant scores and classes was evaluated using canonical correlation. In this case, a distinction analysis was conducted between two types of communities. Moreover, the square of the coefficient of determination ( $R^2$ ) measured the amount of difference between two sets of banks through a regression analysis, by using a single discriminant variable. This demonstrated that the strength of discriminant function was quantified by  $R^2$ .

Based on Table 10, the CR value was 0.308% during the testing phase. When (0.308) two was equal to 0.0948, then 9.48% of the variables were sufficient for the observed variance. From this context, CAR, ROA, LDR, and NPL were responsible for most of the differences between conventional and Islamic banks.

To examine the differences between the two groups across all variables, the chi-square Wilks' lambda test was carried out. **Table 10.** Eigenvalues In Table 11, Wilks' lambda, chi-square, and significance level of 0.905, 11.523, and 0.021 were observed, respectively. This demonstrated that both banks had very different mean discriminant scores and statistically significant functions. This proved that conventional and Islamic banks were differently resilient, due to the CAR-ROA and LDR-NPL variables.

Table 12 shows the canonical functions, where discriminant analysis was formed.

Source: SPSS Data Analysis (2023).

Table 12	. Canonical	l discriminant	function
lable 12	. Canonical	l discriminant	functio

function
.066
001
.030
222
-3,716

Based on Table 12, the following equation emphasized the unstandardized function formed from discriminant analysis.

$$Z = (-3.716) + 0.066CAR - 0.001ROA + (1) + 0.030LDR - 0.222NPL.$$

To assess the accuracy of the classification process and determine the extent of correct classification/ misclassification, Table 13 provided the following outputs.

Based on Table 13, the crosstabulation between the initial model (original) and the classification of discriminant system (predictive group membership) was illustrated. To assess the accuracy of grouping conventional and Islamic banks, the column contained two predicted values of the dependent variable, namely banking resilience. These values included conventional (1) and Islamic (2) banks. In this case, all values aligned along the

Source: SPSS Data Analysis (2023).

Function	Eigenvalue	% of Variances	Cumulative %	Canonical correlation
1	.104	100.0	100.0	.308

Table 11. Wilks' lambda

Source: SPSS Data Analysis (2023).

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.905	11,523	4	.021

Table 13.	Classification	result
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Source: SF	SS Data	Analysis	(2023).
5001 CC. 51	JJ Dutu	7 (1101) 515	(2023).

Variable		Bank Type	Predicted Group Membership		
			Conventional	Sharia	– lotal
Original	Count	Conventional	48	52	100
		Sharia	12	88	100
	%	Conventional	48.0	52.0	100.0
		Sharia	12.0	88.0	100.0
Cross-validated	Count	Conventional	30	70	100
		Sharia	30	70	100
	%	Conventional	30.0	70.0	100.0
		Sharia	30.0	70.0	100.0

diagonal spaces in a perfect model, indicating a forecasting accuracy of 100%.

From these results, a misclassification and initial classification was observed after the performance of discriminant analysis. This indicated that 52 cases were observed in the *type I error category*, where conventional bank groups were classified as Islamic financial institutions. Meanwhile, 12 cases of misclassification were found in the *type II error category*, where Islamic bank groups were classified as conventional financial institutions.

The results also showed that 136 cases were accurately classified, with the details of 48 scenarios initially categorized in conventional bank group. This category subsequently remained unchanged after discriminant analysis was conducted. A total of 88 scenarios were also initially classified as Islamic banks and remained the same after discriminant analysis was carried out. From these results, the prediction accuracy of the initial discriminant function classification (original group) was 80%, with the misclassification in the type I & II error categories being 52% and 12%, respectively. Besides the average prediction accuracy being 80%, the classification adequacies in conventional and Islamic bank groups were also 48% and 88%, respectively. In this case, the prediction accuracy value was observed and considered to be quite high.

## 4. DISCUSSION

Based on the results of the analysis, it was found that CAR and LDR differ significantly between conventional banking and Islamic banking, where Islamic banking has better asset quality, and this result is different from the results of Sawafta's study (2021) where Islamic banking credit management is riskier and more different from commercial banking. Likewise, conventional banking ROA is better than Islamic banking (Haque et al., 2020; Ramadhan et al., 2019) liquidity than conventional banking. But there was no significant difference in the ROA and NPL. This result is different from the results of Sawafta's research (2021) where Islamic banking credit management is riskier and more different from commercial banking. Likewise, conventional banking ROA is better than Islamic banking (Haque et al., 2020; Ramadhan et al., 2019). Macroeconomic factors have a positive impact on bank returns in a conventional perspective, but the financial crisis has a negative impact on the performance of Islamic banks, and even their performance is not affected in a sharia perspective (Al-Nasser Mohammed & Muhammed, 2017). This means that a financial crisis will reduce the profitability and liquidity of Islamic banks (Zarrouk, 2014). Likewise, the sustainable performance of Islamic banking was better (Hambali & Adhariani, 2023). Islamic banks have better profitability, liquidity, and liquidity & risk management, but conventional banks have better asset quality (Khan et al., 2017). It could be concluded that Islamic banking is better in managing its assets and managing liquidity risk than conventional banking, while the rate of return on total assets and credit management is the same. This means that during the pandemic, they had the same problems, namely performance and credit problems, which both experienced a decline.

Simultaneously, Islamic banking was significantly different from conventional banking. This indicates that Islamic banking had better resilience than conventional banking during the COVID-19 period. Islamic banking was more resilient than conventional banking. The rate of return on Islamic banking assets was better than conventional banking, even though during the pandemic it was decreased but insignificantly (Hidayah et al., 2021). This means that during the COVID-19 pandemic, Islamic banking was more resistant than conventional banking. This finding is supported by research results that state that the liquidity level of Islamic banking is also better than conventional banking (Fakhfekh et al., 2016), in contrast to the level of credit risk, which did not have a significant difference. This indicates that Islamic banking has a better liquidity risk management. Thus, Islamic banking was more able to survive in the face of the COVID-19 pandemic than conventional banking. This finding is also supported by the results of previous research (Suripto, 2022). It could be concluded that Islamic banking as a banking system based on profit sharing is more relevant during the financial crisis and can be used as an alternative system in the banking world.

## CONCLUSION AND RECOMMENDATIONS

The COVID-19 pandemic period resulted in a banking financial crisis. This can be observed from the decline in bank profitability and liquidity resulting from poor asset quality and credit management. Thus, it is necessary to investigate the CAR, ROA, LDR, and NPL variables of Islamic banking and conventional banking. These variables are manifestations of banking resilience. This study aims to examine the differences partially and jointly with the CAR, ROA, LDR, and NPL variables of Islamic banking and conventional banking in confronting the financial crisis in ASEA during the COVID-19 pandemic. Based on the results, the CAR and LDR variables were different between conventional and Islamic banks, where the CAR variable for Islamic banking is greater than conventional banking. This indicates that the asset management of Islamic banking is better than conventional banking. Likewise, the size of the LDR of Islamic banking is greater than that of conventional banking. This means that the level of liquidity in Islamic banking is better. These findings indicate that liquidity risk management in Islamic banking is more effective in dealing with financial crises. Meanwhile, ROA and NPL differ insignificantly, this means that the level of profitability and credit management is almost the same during the pandemic. Simultaneously, CAR, ROA, LDR, and NPL were also significantly different between both groups of financial institutions, with conventional banks being more dominant than Islamic banks. These indicate that Islamic banking is more resilient in facing the financial crisis during the pandemic. There are recommendations for further research to add control variables so that they will find a more accurate research model, for example, including macroeconomic variables. According to the limitations, the results obtained only applied to the analyzed indicators. This indicates that future studies should increase the number of samples and the length of the experiment, to measure latent variables and develop a construct with valid and reliable indicators, ensuring output extrapolation.

## AUTHOR CONTRIBUTIONS

Conceptualization: Suripto. Data curation: Arif Sugiono, Havid Dasuki. Formal analysis: Suripto. Funding acquisition: Havid Dasuki. Investigation: Suripto. Methodology: Suripto. Project administration: Arif Sugiono, Havid Dasuki. Resources: Arif Sugiono. Software: Havid Dasuki. Supervision: Suripto. Validation: Suripto. Visualization: Arif Sugiono. Writing – original draft: Suripto. Writing – reviewing & editing: Arif Sugiono, Havid Dasuki.

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