

The Determinants of Financial Stability of Islamic Banks in ASEAN

Wasilatur Rohimah*

State Islamic University Maulana Malik Ibrahim Malang, Indonesia
wasilaturrohimah0204@gmail.com

Ulfi Kartika Oktaviana

State Islamic University Maulana Malik Ibrahim Malang, Indonesia
ulfi@akuntansi.uin-malang.ac.id

*Corresponding author

Received: January 17, 2024

Revised: May 25, 2024

Published: June 30, 2024

Abstract

Financial stability is one of the drivers of economic growth, while Islamic banking currently dominates in global economic competition compared to other Islamic finance industry. Therefore, it is necessary to investigate the aspects that can affect the financial stability of Islamic banks. The purpose of this study is to analyze how capital structure, profitability, efficiency, and technology affect the financial stability (*Z-Score*) of Islamic banks in the ASEAN region. The study employs a panel data regression. It utilizes documentation techniques such as the financial reports of each bank and other publicly available data. Sample selection is done through purposive sampling, resulting in a sample of 19 Islamic banks in ASEAN. The research concludes that capital structure significantly and positively influences stability, while efficiency has no impact on stability, and the financial soundness of ASEAN's Islamic banks is significantly impacted negatively by technology and profitability. Based on the findings of this research, the Islamic banks are required to pay more attention to the management of funds obtained from profitability as well as fund management for technology needs so as not to affect the financial stability of Islamic banks in ASEAN.

Keywords: Capital Structure; Efficiency; Profitability; Stability; Technology

Abstrak

Stabilitas Keuangan merupakan salah satu pemicu terhadap pertumbuhan ekonomi. Sedangkan posisi perbankan syariah saat ini mendominasi dalam persaingan ekonomi global dibandingkan dengan keuangan syariah lainnya. Oleh karena itu perlunya meneliti aspek-aspek yang dapat mempengaruhi stabilitas keuangan perbankan syariah. Tujuan dari penelitian ini adalah untuk menganalisis pengaruh struktur modal, efisiensi, profitabilitas dan teknologi terhadap stabilitas keuangan (*Z-Score*) perbankan syariah di ASEAN. Penelitian ini menggunakan regresi data panel. Pengumpulan data menggunakan teknik dokumentasi berupa laporan keuangan dari setiap perbankan dan data publikasi lainnya. Pengambilan sample menggunakan teknik purposive sampling dengan hasil sample 19 perbankan syariah di ASEAN. Hasil penelitian ini menunjukkan struktur modal berpengaruh positif signifikan terhadap stabilitas keuangan, efisiensi tidak berpengaruh terhadap stabilitas, profitabilitas dan teknologi berpengaruh negatif signifikan terhadap stabilitas keuangan perbankan syariah. Implikasi dari penelitian ini peneliti berharap dapat menjadi acuan perbankan syariah agar lebih memperhatikan terkait pengelolaan dana yang diperoleh dari profitabilitas serta pengelolaan dana untuk kebutuhan teknologi agar tidak mempengaruhi stabilitas keuangan perbankan syariah di ASEAN.

Keywords: Efisiensi; Profitabilitas; Stabilitas; Struktur Modal; Teknologi

INTRODUCTION

The Financial Stability Survey states that financial stability plays an important role in economic growth (Bank Indonesia, 2022). Financial stability can be reflected in the healthy functioning of banking intermediation (Muhri et al., 2022). Amidst intense global economic competition, Islamic banking dominates among other Sharia financial sectors, especially in ASEAN countries (Rodoni et al., 2020). Notably, Indonesia and Malaysia stand out as the driving forces behind the development of Islamic banking in ASEAN (Ghozali et al., 2019).

A stable financial condition in banking impacts the overall financial system balance. It enables efficient risk management, addresses economic uncertainty, and minimizes bankruptcies (Az-Zahra & Widarjono, 2023). Previous studies (Karim et al., 2016; Rustendi et al., 2020; Thi et al., 2023) have measured the financial soundness of banks using Z-Score, considering factors like volatility, profitability, and capital adequacy. This research follows suit, utilizing Z-Score based on financial reports, including volatility, profitability, and capital adequacy. The positions of the ASEAN countries can be seen in the following picture:

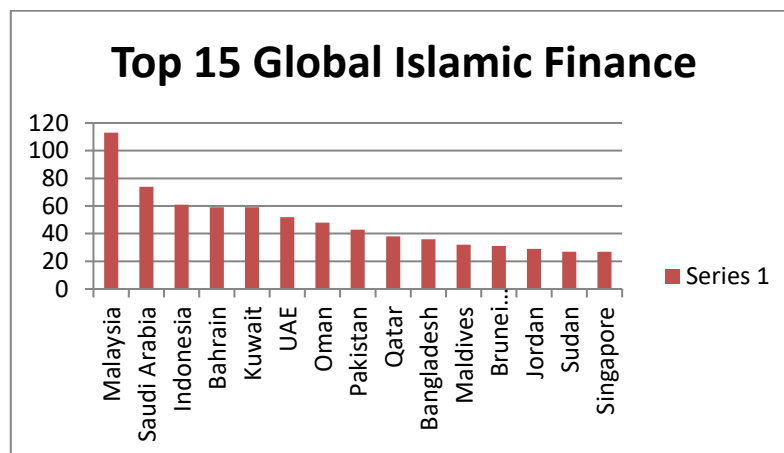


Figure 1. Country rankings chart on 2022 IFDI

Source: Islamic Finance Development Report (IFDR) 2022

According to the Islamic Finance Development Indicator (IFDR), four countries in the ASEAN region are currently ranked in the top 15 (Islamic Finance Development Indicator, 2022). The developments indicate that the financial stability of Islamic banks in ASEAN is rising. Financial stability is gaining increased attention in the banking sector, making it a highly researched topic. Empirical evidence reveals, Financial stability is significantly improved by capital structure that is used properly (Huu Vu & Thanh Ngo, 2023; Rustendi et al., 2020). Previous studies (Huu Vu & Thanh Ngo, 2023; Mehzabin et al., 2022; Rionita & Abundanti, 2018; Rustendi et al., 2020; Thi et al., 2023) have used Debt to Equity Ratio (DER) to measure capital structure. Efficiency in operations is also considered a crucial factor in financial stability (Jayanti, 2021). Operational efficiency in banking helps assess whether a bank operates as expected by management and shareholders and utilizes all its production factors

effectively (Nugroho & Bararah, 2018). Some studies (Dwinanda & Sulistyowati, 2021; Kutaren & Mulyo Haryanto, 2020; Nugroho & Bararah, 2018) claim that operational efficiency negatively and insignificantly affects Islamic banking's financial stability, while others (Jayanti, 2021) find a positive correlation.

High capital in banking, derived from profits, is a factor when deciding a bank's stability. Financial stability is positively impacted by higher profitability. (Murtasiah, 2023). Previous studies (Bokiu et al., 2023) have demonstrated that financial stability is positively impacted by profitability. Return on asset was the profitability metric employed in this study, which is in line with earlier studies (Mehzabin et al., 2022; Miranti & Oktaviana, 2022; Murtasiah, 2023; Nasrah & Resni, 2020; Vira, 2021).

In addition to profit generation, effective and efficient services, including technology adoption, are crucial. Technological advancements have led to the emergence of Financial Technology (Fintech) companies in various sectors, including finance (Hasibuan & Oktaviana, 2023). Previous studies (Ansori, 2021; Ariefianto, 2022; Ma'ruf, 2021; Saraswati, 2021) state that Fintech positively influences financial stability. This study also measures Fintech using the non-interest expense ratio.

Previous studies focused on the impact of individual factors like capital structure (Huu Vu & Thanh Ngo, 2023; Rustendi et al., 2020; Thi et al., 2023), operational efficiency (Jayanti, 2021; Nugroho & Bararah, 2018), profitability (Bokiu et al., 2023; Murtasiah, 2023), and technology (Ariefianto, 2022; Saraswati, 2021) on financial stability. This study reexamines how technology, efficiency, profitability, and capital structure affect ASEAN Islamic banking's capacity to maintain its financial stability. Notably, this study differs from previous ones by placing profitability as an independent variable and adding a new variable, technology.

LITERATURE REVIEW

Financial Stability

The financial stability presented by Crockett (1996) asserts that financial stability is crucial for the effective functioning of the economic market. It serves as a foundation for making rational decisions regarding the allocation of real resources throughout time. Andrew Crockett defines financial instability as a condition where the economic performance may be disrupted by fluctuations in asset prices or by a company's inability to fulfill its obligations (Stefaniak, 2018). Maintaining financial stability is a primary goal of financial authorities because the absence of stability can create uncertainty leading to losses. Financial stability is closely tied to the overall health of an economy (Crockett, 1996).

In Financial Stability Studies (*Kajian Stabilitas Keuangan/KSK*), Financial stability is the situation in which the financial system is functions well and is resistant to both internal and external challenges (Bank Indonesia, 2022). This study includes variables such as capital structure, operational efficiency, profitability, and technology, where all these factors interact to assist companies in ensuring the financial stability of banking.

Capital Structure

Capital structure is a reflection of the financial condition of the banking industry. It serves as a financing mechanism that balances the return on investment and the potential risks (Hutauruk, 2020). Capital structure is the combination of long haul finance sources that from common stock, preferred stock, and debt. Theories of capital structure can be broadly categorized into traditional and modern. Traditional theories include Net Income Approach (NIA) and Traditional Approach (TA). On the other hand, modern theories encompass Modigliani & Miller (MM) theory, Packing order and trade-off (Patrick et al., 2021).

Efficiency

One criterion used to evaluate a banking stability is its efficiency. Efficiency measurement can be done using a traditional approach based on the magnitude of the investment or capital deployed (Sari & Saraswati, 2017). Efficiency reflects the ability to generate maximum output by utilizing available inputs and serves as an expected performance indicator. The issue of efficiency is considered crucial and is something that every banking industry should achieve. Operational efficiency can be measured using a bank's financial ratios. This operational efficiency shows whether or not the bank has made good use of all of its production components to increase profitability. To assess the operational efficiency of a bank, one can examine the BOPO ratio (Setyowati, 2019).

Profitability

The capacity of Islamic banking to make profits by fully utilizing the capabilities of the banking sector is known as profitability. In this context, profitability measurement uses the ROA ratio, considering the potential of Islamic banks to earn income from the assets they possess. ROA serves as an overview of the existing profitability within the banking sector (Dewi & Sudarsono, 2021). High profitability has positive effects on the sustainability of a company, as it can enhance investor confidence and increase the overall value of a company (Novika, 2022).

Technology

Technology has been evolving year by year, and its application in the financial sector is increasingly embraced by society, giving rise to the concept of Financial Technology (Fintech). Fintech involves the utilization of technology to aid in financial intermediation solutions. It is considered a technological innovation in financial service systems, expected to enhance effective and efficient services (Nizar, 2017). Fintech is part of the financial industry known for its innovation. According to PwC's theory. A rapidly expanding subset of the financial services and technology industries is called fintech.. Start-up companies implement these innovations in their products and services, aligning with the offerings of the financial sector, such as banking (Khotinskay, 2019).

Hyphothesis

- H₁: The capital structure of Islamic banking contributes positively to its financial stability.
- H₂: The efficiency of Islamic banking contributes positively to its financial stability.
- H₃: The Profitability of Islamic banking contributes positively to its financial stability.
- H₄: The technology of Islamic banking contributes positively to its financial stability.

RESEARCH METHOD

This study employs a quantitative method with a literature review approach to examine the influence of capital structure, operational efficiency, profitability, and technology on the financial stability of Islamic banks in ASEAN. The research population includes all ASEAN Islamic banks that have been operational from 2018 to 2022 and have published financial reports for five consecutive years. The study sample comprises 19 Islamic banks, and the list of samples is provided in Table 1.

Table 1. Sample List

No	Country	Names of Islamic Banks
1	Indonesia	1. Sharia Mega Bank. 2. Muamalat Sharia Bank. 3. Victoria Sharia Bank. 4. BCA Sharia Bank. 5. Panin Sharia Bank. 6. Bukopin Sharia Bank. 7. BJB Sharia Bank. 8. BTPN Sharia. 9. Aceh Sharia Bank. 10. Nusa Tenggara Barat Sharia BPD.
2	Malaysia	11. Standard Chartered Saadiq Bank Berhard 12. AM Islamic Bank Berhard 13. Al Rajhi Banking & Ivestment (Malaysia) Berhard 14. CIMB Islamic Bank 15. RHB Islamic Bank 16. OCBC Al-Amin Bank Berhard 17. Hong Leong Islamic Bank berhard
3	Vietnam	18. Bank for investment and development of Vietnam (BIDV) Islamic bank
4	Brunei Darussalam	19. Bank Islam Brunei Darussalam Berhard

Source: Author, 2024

The purposive sampling method is used in this study, which means that the sample is chosen at random according to predetermined standards. Panel data regression analysis is used in the processing of the data for this study, which is done with the statistical program Eviews 12. This analysis is a technique used to understand the influence of multiple predictors on a response variable, in this case, panel data (Alamsyah et al., 2022). Three techniques are available for estimating panel data regression models: FEM, CEM and REM. Three tests are used in this testing to determine which model is the best: the Chow test, Hausman , and LM. Classical assumption tests are then performed, including tests for heteroskedasticity, multicollinearity, and normality. R-squared testing and hypothesis testing (F- and T-tests) are the last phases.

One statistical technique is panel data regression analysis, which is used to find out how several predictors influence a response. This is done with a panel data structure (Alamsyah et al., 2022). Penel data is a combination of time series and cross-section data collected at one time on several object units (Madany & Rais, 2022). In general, the panel data regression model equation is as follows:

$$Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e \quad (1)$$

- Y : Financial Stability
- α : Constanta regression
- β_{1-4} : Regression coefficient
- X_1 : Capital Structure
- X_2 : Operational Efficiency
- X_3 : Profitability
- X_4 : Technology
- i : Unit cross section
- t : Time Period
- e : error

RESULTS AND DISCUSSION

Result

Descriptive Analysis

Nineteen Islamic banks in the ASEAN region between 2018 and 2022 make up the study's sample, for a total of N of 95. The descriptive analysis presents data based on mean, median, maximum, minimum, and standard deviation values. The results are as shown in Table 2.

Table 2. Results of Descriptive Statistical Analysis

	Capital Structure	Efficiency	Profitability	Technology	Stability
Mean	7.326632	0.783814	0.014976	15714099	112.7934
Median	7.360000	0.796100	0.012000	5936570	71.99858
Maximum	23.07000	2.027400	0.130000	1.24E+08	779.7769
Minimum	0.050000	0.311111	-0.067200	1043000	4.425643
Std. Deviasi	5.665363	0.282715	0.026603	24367137	143.6602

Source: Authors' Processed Data, 2024

Panel Method

Three tests are necessary to identify the optimal model for the panel data regression model: the Chow test, Hausman, and Im. The summary that follows shows the outcomes of the chosen regression model in Table 3.

Table 3. Regression Models

No	Test	Result	Criteria	Model
1	Chow	0,000	Prob<0,05	FEM
2	Hausman	0.0370	Prob<0,05	FEM
3	LM	-	-	-

Source: Authors' Processed Data, 2024

The Fixed Effect Model (FEM) is found to be the best model based on the outcomes of the Chow and Hausman tests used in the model selection procedure. Since the FEM's selection has been verified by the two tests that came before it, the LM test is therefore not required.

Classic Assumption Test

The classical assumption tests are conducted on each selected model to determine its suitability. A model is considered suitable if it meets the conditions for Best Linear Unbiased Estimator (BLUE). The results of the classical assumption tests are presented in Table 4.

Table 4. Classic Assumption Test

No	Test	Result	Criteria	Caption
1	Normality	0.598585	Prob>0,05	Passed
2	Multicollinearity	X1=0.105312 X2=0.209983 X3=-0.329351 X4=0.312479	CM<0,80	Passed
3	Heteroscedasticity	X1=0.0564 X2=0.6068 X3=0.9451 X4=0.3585	Prob>0,05	Passed

Source: Authors' Processed Data, 2024

It is clear from Table 4's results of the classical assumption tests—which include tests for heteroscedasticity, multicollinearity, and normality—that this research has passed these assessments.

Model Feasibility Test

The model feasibility test is employed as a validation for the selected regression model. There are two components to this test: hypothesis testing and determination coefficient (R2) testing.

Uji Hipotesis

- **T Test**

Table 5. T Test

Variabel	Coefficient	Std. Error	t-Statistic	Prob.
C	-55.37692	77.09811	-0.718266	0.4751
X1	12.13506	6.232963	1.946917	0.0558
X2	-3.275795	39.12255	-0.083732	0.9335
X3	-24.95393	12.46878	-2.001313	0.0495
X4	-2.35E-06	6.34E-07	-3.707115	0.0004

Source: Authors' Processed Data, 2024

The standards for the T-test are values of probability (p-value) less than 0.05. Consequently, based on data on Table 5, the conclusion is that X1 significantly and positively influences Y, X2 does not affect Y, while X3 and X4 have a significant negative impact on Y.

- **F Test**

Table 6. F Test

F-Statistic	28.91424
Prob (F-Statistic)	0.000000

Source: Authors' Processed Data, 2024

Considering the above table, the F-statistic has a value of 0.000000, which is less than 0.05. As a result, based on result on Table 6, it may be said that all of the independent factors significantly affect the dependent variable.

The Coefficient of Determination Test

The coefficient of determination of the independent variables, which varies from 0 to 1, indicates how capable they are. Understanding the coefficient of determination is possible through the Adjusted R-Squared value.

Table 7. The Coefficient of Determination Test

R-squared	0.905998
Adjusted R-squared	0.874664

Source: Authors' Processed Data, 2024

In Table 7, the Adjusted R-Squared is stated to be 0.874664. Therefore, it is concluded that the variables of capital structure, operational efficiency, profitability, and technology can explain 87.4 percent of the variation in financial stability, while other factors not considered in this research account for the remaining 12.6 percent.

Model Interpretation

In the tests that have been carried out to determine the best model, starting from the Chow test and the Hausman test, it was decided that the best model was the Fixed Effect Model (FEM). By selecting the FEM model as the best model, it can be used to determine capital structure, efficiency, profitability and technology on the stability of Islamic banks. The results of the FEM model are presented in Table 8.

Table 8. Fixed Effect Model

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-55.37692	77.09811	-0.718266	0.4751
X1	12.13506	6.232963	1.946917	0.0558
X2	-3.275795	39.12255	-0.083732	0.9335
X3	-24.95393	12.46878	-2.001313	0.0495
X4	-2.35E-06	6.34E-07	-3.707115	0.0004
R-squared			0.905998	
Adjusted R-Squared			0.874664	
F-statistic			28.91424	
Prob (F-statistic)			0.000000	

Source: Authors' Processed Data, 2024

From the results of data processing performed using statistical softwares (Eviews) shows, the capital structure has a significant positive impact on financial stability. So to improve the financial stability of the islamic banking in ASEAN is also necessary to pay attention to the capital structure used. Further to the operational efficiency variable measured using (BOPO) significant negative which means there is no influence between efficiency and financial stability. However, in this study the bopo variable remains used because it is supported by previous literature (Hasnani, 2022) and for exploratory purposes because in insignificant variables can provide insight into aspects that can be neglected in improving the financial stability of islamic banking in ASEAN. Then for the profitability variable has a significant negative impact. So any increase in profitability obtained by the islamic banking in ASEAN must be managed well so as not to affect the risk of financial stability. For the next variable is technology that has a significant negative influence. In this case, the improvement of technology used by Islamic banking in ASEAN.

Discussion

The influence of capital structure on the stability of Islamic banks in ASEAN

Capital structure represents the funding that can balance the rate of return on investment and the associated risk (Hutauruk, 2020). The Debt Equity Ratio is used in this study to determine the capital structure. This ratio is employed to understand the composition of equity and debt used in Islamic banking.

The partial test results indicate that the capital structure (DER) significantly and favorably affects the financial stability of Islamic banks in ASEAN, with a significance value of 0.0558, together with 0.05. This indicates that when the DER of Islamic banks increases, stability also increases, and vice versa. These results support the premise by showing that ASEAN's Islamic banks may remain stable when capital structure is used optimally. In an optimal capital structure, companies use equity and debt proportions accurately to reduce financial risks and capital costs. Thus, businesses can sustain the stability of Islamic banking in ASEAN as long as financial risks decline.

The impact of efficiency on the stability of Islamic banks in ASEAN

Efficiency is considered crucial in banking, representing a process of minimizing budget expenditures to achieve optimal results (Rahmat & Ruchiyat, 2021). In this study, BOPO is used as a measure of efficiency, commonly employed to gauge the efficiency of banking operations. The significance test results show that operational efficiency has a negative and nonsignificant affect, with a significance value of 0.9335, larger than 0.05. The test findings show that there isn't any relationship, either high or low, among the efficiency and the financial soundness of the Islamic banks in ASEAN. The existence or lack of low or high efficiency levels has no bearing on the stability of Islamic banking. Essentially, operational efficiency values can aid banks in reducing costs and increasing profits. However, this does not always translate into financial stability, as efficiency only considers aspects of costs and revenues (Muhri et al., 2022). Financial stability involves various factors such as capital structure, financial risks, financial policies, and others. Therefore, banks need to consider numerous factors when making decisions to ensure long-term financial stability.

These findings support previous research (Hasnani, 2022) that found no connection between efficiency as measured by the BOPO ratio and financial stability. However, research by Angraini et al. (2023) indicates that the banking industry becomes less stable at high efficiency ratios, indicating that efficiency has a negative effect on financial stability.

The influence of profitability on the stability of Islamic banks in ASEAN

The capacity of Islamic banks to turn a profit over a given period by fully utilizing the banking industry's capabilities is known as profitability (Dewi & Sudarsono, 2021). To quantify profitability, this study uses ROA, a ratio that is

frequently employed as a performance metric by management to generate profits. This study shows that the financial viability of Islamic banks in ASEAN is significantly and negatively impacted by profitability. H_0 is rejected based on the significance test results, which provide a value of $0.0495 < 0.05$. The implication is that the stability of Islamic banks in ASEAN rises when profitability falls and falls when profitability is strong. Essentially, the profitability of a bank can enhance its value and provide financial benefits to the institution (Murtasiah, 2023). However, financial stability is not always positively impacted by profitability. This is due to increased profitability, which can lead to greater financial risks, such as the risk of investment failure or other significant financial risks. The study's findings support earlier research (Musthofa et al., 2021) It discovered a significant and negative correlation between bank financial soundness and profitability. These results contradict the premise, indicating that profitability has a major detrimental effect on the financial soundness of Islamic banks in ASEAN.

The impact of technology on the stability of Islamic banks in ASEAN

The rapid advancement of technology across sectors, including the banking sector, has led to the adoption of Financial Technology (Fintech) (Nizar, 2017). Fintech represents the utilization of technology to aid financial intermediation solutions. This study uses the Non-Interest Expense ratio to measure Fintech, which is employed to assess the expenses incurred by banks to support their operational activities, including technological costs. The study's noteworthy findings show that technology significantly and negatively affects the financial viability of ASEAN's Islamic institutions, with a significance value of $0.0004 < 0.05$. This suggests that the banking industry's financial stability falls as Fintech adoption rises, and vice versa when Fintech adoption falls, the financial stability of Islamic banks in ASEAN rises.

Essentially, adopting Fintech seeks to enhance the stability of Islamic banking operations (Chaarani, 2018). However, despite the benefits and convenience technology brings in various aspects, It may also adversely affect banks' capacity to maintain their financial stability. This can occur due to factors such as excessively high technological burdens leading to inadequate finances or other issues like cyber attacks or system failures (Saraswati, 2021). The study's conclusions are consistent with earlier investigations (Ariefianto, 2022; Saraswati, 2021; Uddin et al., 2020), indicating that higher technology-related expenses disrupt the financial system of banks. Consequently, the researcher concludes that increased spending on Fintech leads to a decline in the financial stability of Islamic banks in ASEAN.

The influence of capital structure, efficiency, profitability, and technology on the financial stability of Islamic banks in ASEAN

The simultaneous test (F) yielded a significance value of $0.000 < 0.05$ for this investigation. This finding suggests that the financial stability of Islamic banks in ASEAN is influenced by a combination of factors including capital structure, efficiency,

profitability, and technology. According to this research, the total contribution of capital structure, profitability, efficiency, and technology to the explanation of the variation in the financial stability of Islamic banks in ASEAN is 87.4 percent; factors outside the purview of this study account for the remaining 12.6 percent.

CONCLUSION

Based on the purposes of the research, the results of data analysis, and the discussions that have been made on the capital structure, efficiency, profitability, and technology for the financial stability of Islamic banking in ASEAN, the following conclusions can be drawn. Based on the partially tested capital structure test (DER), it has a significant positive impact on the financial stability of ASEAN's Islamic banking. Where the more optimum capital structure is used then it will have a good impact on the financial stability of the Islamic bank. Furthermore, the Efficiency Test (BOPO) partially has no significant impact on the financial stability of Islamic banking in ASEAN. This means the high-low value of BOPO has no impact on financial stability. Then the partially tested Rentability Test (ROA) has a negative and significant impact on the financial stability of Islamic banking in ASEAN. This means that increasing the rate of remuneration will have a negative impact on the financial stability of the Islamic bank if the company cannot manage the profit fund properly. Furthermore, the non-interest expenses tested have a partial negative and significant impact on the financial stability of ASEAN Islamic banking. So it can be understood that the higher adoption of technology will have a negative impact on the financial stability of Islamic banking.

The implications of this research are that the researchers hope can be an Islamic banking reference to pay more attention to the management of funds obtained from profitability as well as fund management for technology needs so as not to affect the financial stability of Islamic banks in ASEAN. This research is limited only to Islamic banking in ASEAN, so it is expected that further research to expand the sample used.

REFERENCES

- Alamsyah, I. F., Esra, R., Awalia, S., & Nohe, D. A. (2022). *Analisis Regresi Data Panel Untuk Mengetahui Faktor Yang Memengaruhi Jumlah Penduduk Miskin Di Kalimantan Timur*.
- Anggraini, F., Taufik, T., Muizzuddin, M., & Andriana, I. (2023). Analisis Stabilitas Perbankan Syariah dan Konvensional di Negara-Negara Kawasan MENA. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 6(2), 609–621. <https://doi.org/10.47467/alkharaj.v6i2.3801>
- Ansori, M. (2021). *Perkembangan Dan Dampak Financial Technology (Fintech) Terhadap Industri Keuangan Syariah Di Jawa Tengah*.
- Ariefianto, M. D. (2022). *Peran Inklusi Finansial dan Tingkat Adopsi Teknologi pada Stabilitas dan Kinerja Perbankan: Suatu Studi Panel Lintas Negara*. 11(1).

- Awliya, M. (2022). *Analisis Profitabilitas (Return On Asset (Roa) dan Return On Equity (RoE) Pada PT Sido Muncul Tbk.* 1(1).
- Az-Zahra, Q., & Widarjono, A. (2023). Determinants of Financial System Stability in ASEAN Countries. *Jurnal Keuangan dan Perbankan*, 19(1), 1. <https://doi.org/10.35384/jkp.v19i1.347>
- Bank Indonesia. (2022). *Kajian Stabilitas Keuangan*. https://www.bi.go.id/id/publikasi/laporan/Documents/KSK__3922.pdf
- Bokiu, J., Ardjun, T. A., & Mustapa, S. Y. (2023). *Pengaruh Profitability Terhadap Capital Buffer: Implikasi Terhadap Stabilitas Keuangan Bank Pada Tahun 2018-2021*. <https://doi.org/10.5281/Zenedo.8175117>
- Chaarani, H. E. (2018). *The Impact of Technological Innovation on Bank Performance*. 23.
- Crockett, A. (1996). The theory and practice of financial stability. *De Economist*, 144(4), 531–568. <https://doi.org/10.1007/BF01371939>
- Dewi, F. K., & Sudarsono, H. (2021). Analisis Profitabilitas Bank Syariah Di Indonesia: Pendekatan Autoregressive Distributed Lag (ARDL). *Al-Mashrafiyah: Jurnal Ekonomi, Keuangan, dan Perbankan Syariah*, 5(1), 59. <https://doi.org/10.24252/al-mashrafiyah.v5i1.20281>
- Dwinanda, I. Z., & Sulistyowati, C. (2021). The Effect Of Credit Risk And Liquidity Risk On Bank Stability. *JJET (Jurnal Ilmu Ekonomi Terapan)*, 6(2), 12.
- Ghozali, M., Azmi, M. U., & Nugroho, W. (2019). *Perkembangan Bank Syariah Di Asia Tenggara: Sebuah Kajian Historis*. 4.
- Hasibuan, R. A. S., & Oktaviana, U. K. (2023). *Technological Innovation in Influence the Financial Performance of Islamic banking In Indonesia*.
- Hasnani, N. (2022). *Pengaruh faktor internal dan eksternal terhadap stabilitas keuangan Bank Umum Syariah di Indonesia periode 2010- 2019*. 2(2).
- Hutauruk, F. N. (2020). *Ukuran Perusahaan sebagai Pemoderasi dalam Hubungan Profitabilitas dan Likuiditas terhadap Struktur Modal Bank Umum Syariah*. 4(2).
- Huu Vu, T., & Thanh Ngo, T. (2023). Bank capital and bank stability: The mediating role of liquidity creation and moderating role of asset diversification. *Cogent Business & Management*, 10(2), 2208425. <https://doi.org/10.1080/23311975.2023.2208425>
- Jayanti, H. D. (2021). *Pengaruh Efisiensi Terhadap Stabilitas Bank Syariah Di Negara Mayoritas Muslim Kawasan Asia Tenggara*. UIN Syarif Hidayatullah Jakarta.
- Karim, N. A., Al-Habshi, S. M. S. J., & Abduh, M. (2016). Macroeconomics Indicators and Bank Stability: A Case of Banking in Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, 18(4), 431–448. <https://doi.org/10.21098/bemp.v18i4.609>
- Khotinskay, G. I. (2019). *Fin Tech: Fundamental Theory And Empirical Features*. <https://www.europeanproceedings.com/article/10.15405/epsbs.2019.03.23>

- kutaren, E. V., & Mulyo Haryanto, antonius. (2020). Pengaruh Kinerja Keuangan Terhadap Stabilitas Perbankan Yang Terdaftar Di Bursa Efek Indonesia. *Diponegoro Journal of Management*, 9(2), 13.
- Madany, N., & Rais, Z. (2022). *Regresi Data Panel dan Aplikasinya dalam Kinerja Keuangan terhadap Pertumbuhan Laba Perusahaan Ixq45 Bursa Efek Indonesia*.
- Ma'ruf, M. (2021). Pengaruh Fintech Terhadap Kinerja Keuangan Perbankan Syariah. *Yudishtira Journal : Indonesian Journal of Finance and Strategy Inside*, 1(1), 42–61. <https://doi.org/10.53363/yud.v1i1.53>
- Masfiatun. (2021). Dampak Covid-19 Dan Variabel Makro Ekonomi Terhadap Stabilitas Perbankan Syariah Di Indonesia. *Jurnal Ilmiah Akuntansi dan Keuangan*, 4(2), 8.
- Mehzabin, S., Shahriar, A., Hoque, M. N., Wanke, P., & Azad, Md. A. K. (2022). The effect of capital structure, operating efficiency and non-interest income on bank profitability: New evidence from Asia. *Asian Journal of Economics and Banking*. <https://doi.org/10.1108/ajeb-03-2022-0036>
- Miranti, T., & Oktaviana, U. K. (2022). Effect of Capital Structure on Financial Sustainability of Sharia Public Financing Bank (BPRS). *Ad-Deenar: Jurnal Ekonomi Dan Bisnis Islam*, 6(01), 137. <https://doi.org/10.30868/ad.v6i01.2301>
- Muhri, A., Habbe, A. H., & Rura, Y. (2022). Analisis Perbandingan Stabilitas Bank Syariah dan Bank Konvensional. *Owner*, 7(1), 346–366. <https://doi.org/10.33395/owner.v7i1.1360>
- Murtasiah, S. D. (2023). *Pengaruh Profitabilitas Terhadap Stabilitas Bank Di Negara-Negara Asia Pasifik*.
- musthofa, iqbal, Rokhim, R., Chalid, D. A., & Riyeanti, R. S. (2021). *Diversifikasi, tingkat profitabilitas, dan stabilitas Keuangan Bank di Indonesia = Diversification, profitability, and bank financial stability in Indonesia*. <https://lib.ui.ac.id/m/detail.jsp?id=20523929&lokasi=lokal>
- Nasrah, H., & Resni, N. (2020). Faktor-Faktor Yang Mempengaruhi Struktur Modal Bank Syariah Di Indonesia Tahun 2014–2018. *Jurnal Tabarru': Islamic Banking and Finance*, 3(2), 281–294. [https://doi.org/10.25299/jtb.2020.vol3\(2\).5881](https://doi.org/10.25299/jtb.2020.vol3(2).5881)
- Nizar, M. A. (2017). *Financial Technology (Fintech): It's Concept and Implementation in Indonesia*.
- Novika, W. (2022). *Pengaruh Perputaran Kas, Perputaran Piutang Dan Perputaran Persediaan Terhadap Profitabilitas (Studi Empiris Perusahaan Manufaktur – Subsektor Makanan Dan Minuman Yang Terdaftar Di Bei Periode Tahun 2017-2019)*. 2(1).
- Nugroho, L., & Bararah, H. N. (2018). Pengaruh Good Corporate Governance Dan Biaya Operasional Dan Pendapatan Operasional (Bopo) Terhadap Stabilitas Keuangan Bank Umum Syariah Di Indonesia Tahun 2012-2017. *Inovbiz: Jurnal Inovasi Bisnis*, 6(2), 160. <https://doi.org/10.35314/inovbiz.v6i2.852>

- Patrick, B., Nan, T. hezkeal K., Ofori, A. O. A., Ishmael, arhin, Edward, D., Sammuell, K., Benedict, A., & Grace, T. (2021). Traditional versus Modern Perspectives of Capital Structure Theories: A Comprehensive Review. *International Journal of Economics & Management Sciences*.
- Purba, H. N., & Fauzie, S. (2014). *Analisis Pengaruh Struktur Pasar, Beban Non Bunga, Ekuitas, Dan Aset Likuid Terhadap Margin Bunga Bersih Pada Bank Umum Yang Listing Di Bursa Efek Indonesia*.
- Rahmat, R., & Ruchiyat, E. (2021). Analisis Rasio Modal, Efisiensi Operasional, Bunga Bersih, Likuiditas, Dan Kredit Bermasalah, Terhadap Rasio Laba. *Coopetition : Jurnal Ilmiah Manajemen*, 12(3), 413–430. <https://doi.org/10.32670/coopetition.v12i3.751>
- Rezeki, R. N. S. (2018). *Analisis Uji Validitas Komponen Risk Based Bank Rating Dalam Memprediksi Bank Pembangunan Daerah (Bpd) Dengan Menggunakan Z-Score Dan S-Score*.
- Rionita, K., & Abundanti, N. (2018). Pengaruh Struktur Modal Dan Likuiditas Terhadap Profitabilitas Bank Yang Terdaftar Di Bursa Efek Indonesia. *E-Jurnal Manajemen Universitas Udayana*, 7(8), 4094. <https://doi.org/10.24843/ejmunud.2018.v07.i08.p03>
- Rodoni, A., Medina, A. R., Yaman, B., & Sopyan. (2020). Efficiency and Stability of Islamic Banking in ASEAN. *Journal of Islamic Econimics*, 12(1), 63–76.
- Rustendi, T., Akuntansi, P. S., Ekonomi, F., & Siliwangi, U. (2020). *Pengaruh Kecukupan Modal Terhadap Stabilitas Keuangan Bank (JRAK 7 (3) Pengaruh Kecukupan Modal Terhadap Stabilitas Keuangan Bank Perkreditan Rakyat Berdasarkan Statistik Perbankan Indonesia , Jawa Barat merupakan wilayah kerja Bank ketentuan modal min. 7(December 2019)*. <https://doi.org/10.17509/jrak.v7i3.18030>
- Saraswati, B. D. (2021). *Pengaruh Financial Technology Terhadap Stabilitas Sistem Keuangan Di Indonesia: Pendekatan Vector Error Correction Model*.
- Sari, P. Z., & Saraswati, E. (2017). The Determinant of Banking Efficiency in Indonesia (DEA Approach). *Journal of Accounting and Business Education*, 1(2), 208. <https://doi.org/10.26675/jabe.v1i2.8489>
- Setyowati, D. H. (2019). *Pengaruh Efisiensi Operasional terhadap Return on Assets pada Bank Umum Syariah Di Indonesia*. 4(2).
- Thi, L., Nguyen, M., Le, D., Trang, K., & Khanh, T. (2023). International Journal of Hospitality Management The role of capital structure management in maintaining the financial stability of hotel firms during the pandemic—A global investigation ☆. *International Journal of Hospitality Management*, 109(August 2022), 103366. <https://doi.org/10.1016/j.ijhm.2022.103366>
- Thi Mai Nguyen, L., Le, D., Vu, K. T., & Tran, T. K. (2023). The role of capital structure management in maintaining the financial stability of hotel firms during the pandemic—A global investigation. *International Journal of Hospitality Management*, 109, 103366. <https://doi.org/10.1016/j.ijhm.2022.103366>

- Uddin, M. H., Mollah, S., & Ali, M. H. (2020). Does cyber tech spending matter for bank stability? *International Review of Financial Analysis*, 72, 101587. <https://doi.org/10.1016/j.irfa.2020.101587>
- Vira, L. M. (2021). *Prediksi Struktur Modal Bank Umum Syariah: Analisis Peran Mikro dan Makro Ekonomi*.