

The comparison of the islamic and conventional bank performance before and during Covid-19 pandemic in Indonesia

Sebastiana Viphindrartin¹, Regina Niken Wilantari¹, Suryaning Bawono²

*Economics Department, Faculty of Economics and Business, University of Jember, Indonesia¹
STIE Jaya Negara Tamansiswa, Malang², Indonesia*

Corresponding author: Sebastiana Viphindrartin sebastiana@unej.ac.id

Received: October 30th, 2021; Accepted: November 19th, 2021; Published:
March 21st, 2022

DOI: <https://doi.org/10.24123/jmb.v21i1.574>

Abstract

This research explains to test financial stability of banks during the crisis which is still being debated by taking the period before and after the covid 19 pandemics. This study uses a sample of all transactions of conventional banks and Islamic banks throughout Indonesia that are recorded by the Indonesian financial services authority. With a population of all conventional financial institutions and Islamic financial institutions, both registered and unregistered by Indonesian financial services authorities throughout Indonesia. Data sourced from the Indonesian financial services authority. Paper compares the performance of conventional banks with Islamic banks and the resilience of conventional banks and Islamic banks to shocks, an analysis of the financial behavior of data in commercial banks was carried out using Threshold Autoregressive. We find that Islamic banks tend to be more stable in facing financial challenges due to the COVID-19 pandemic compared to conventional banks. Performance of conventional banks was very good before the COVID-19 pandemic. However, when the coronavirus pandemic began to be reported, there was a huge decline in performance. Conventional bank recovery efforts have not been able to return to the original track. Conventional bank performance is slowing down, and it tends to be difficult to return to its original performance value (before the COVID-19 outbreak). However, from the graph of performance forecasting Islamic Commercial Banks and Conventional Banks, it is a difference in performance stability between Islamic Commercial Banks and Conventional Banks facing the COVID-19 pandemic.

Keywords: *islamic bank, islamic finance, covid-19.*

Abstrak

Penelitian ini menguji stabilitas keuangan perbankan pada masa krisis yang masih menjadi perdebatan dengan mengambil periode sebelum dan sesudah pandemi covid 19. Penelitian ini menggunakan sampel seluruh transaksi bank konvensional dan bank syariah di seluruh Indonesia yang tercatat oleh otoritas jasa keuangan Indonesia. Dengan populasi seluruh lembaga keuangan konvensional dan lembaga keuangan syariah, baik yang terdaftar maupun tidak

terdaftar oleh otoritas jasa keuangan Indonesia di seluruh Indonesia. Data bersumber dari otoritas jasa keuangan Indonesia. Untuk mengetahui dan membandingkan kinerja bank konvensional dengan bank syariah serta ketahanan bank konvensional dan bank syariah terhadap guncangan, dilakukan analisis data perilaku keuangan pada bank umum dengan menggunakan Threshold Autoregressive. Kami menemukan bahwa bank syariah cenderung lebih stabil dalam menghadapi tantangan keuangan akibat pandemi COVID-19 dibandingkan dengan bank konvensional. Kinerja bank konvensional sangat baik sebelum pandemi COVID-19. Namun, ketika pandemi virus corona mulai dilaporkan, terjadi penurunan kinerja yang sangat besar. Upaya pemulihan bank konvensional belum bisa kembali ke jalur semula. Kinerja bank konvensional melambat dan cenderung sulit untuk kembali ke nilai kinerja semula (sebelum wabah COVID-19). Namun dari grafik peramalan kinerja antara Bank Umum Syariah dan Bank Konvensional, terlihat adanya perbedaan stabilitas kinerja antara Bank Umum Syariah dan Bank Konvensional menghadapi pandemi COVID-19.

Kata Kunci: *bank islam, keuangan islam, covid-19*

Introduction

Financial institutions are important role in monetary stability (Nair & Anand,2020). The rapid increase in performance of Islamic banks (IB) in Indonesia and financial crisis makes it interesting to investigate whether Islamic Banks (IB) and conventional banks (CB) have the same behavior with the COVID-19 pandemic to maintains their performance. In theory, Islamic Banks and Conventional Banks have many differences. In principle, rules, regulations, and the structure of banking equity in Islamic banks not same with conventional banks. In principle, Islamic Banks prohibit the existence of bank interest. However, Conventional Banks allow bank interest. Conventional banks in carrying out their business operations are debt-based and allow risk transfer, but Islamic banks are based on asset intermediation and focus on risk-sharing (Safiullah,2020; Trinugroho et al,2018).

In terms of risk management, Islamic banks are very unique because the risks in Islamic banks appear in contracts, namely the sharing of profits and risks. The research of Mirakhor and Krichene (2009) shows Islamic banks can minimize the negative impact of the global financial crisis. In the research of Chowdhury et al., (2016), Islamic principles which are the principles of Islamic banks provide prudential guidelines in financial management that provide financial protection for Islamic Banks in times of financial crisis.

The research of Bourkhis and Nabi (2013) explain the impact of performance between Conventional Banks and Islamic Banks does not have a significant. However, the study of Rashid et al. (2017) concluded that the Islamic financial system can improve the financial stability of the Bank and increase resilience to the impact of the financial crisis.

Dawood et al. (2016) shows ratio of net stable funding can increase the stability and soundness index of Islamic banks. Korbi and Bougatef (2017) concluded conventional banks are more stable than Islamic banks. However, Uddin et al. (2017) explains during the crisis have a difference stability between Islamic Banks and Conventional Banks. Islamic Banks more resilient than

Conventional Banks. Vogt (1994) explains that there is a strong relationship between cash flow and capital investment spending.

Based on previous research with conclusions that are still a debate between the financial stability of Islamic banks and conventional banks, it is interesting to do research in Indonesia.

Covid 19 of course has an impact on financial stability, where bank stability and resilience rely on bank performance (Demir & Danisman, 2021). Adekoya et al. (2021), find that Covid-19 had an global financial impact. Elnahass et al. (2021) explains that Covid-19 pandemic had an impact on banking globally. JEBABLI et al (2021) to compared impact of global financial crisis in 2008 and Covid-19 pandemic. The result concluded that the COVID-19 pandemic had a shock to financial performance.

Based on previous research, we developed the following hypotheses:

1. Impact Covid-19 pandemic on Islamic Banks and Conventional Banks performance

2. Resilience of Islamic Banks and Conventional Banks is still under debate about performance shocks to the financial crisis and or the COVID-19 pandemic.

Based on the hypothesis in the background, it is necessary to conduct research on the stability of conventional banks and Islamic banks in times of shock (hypothesis 2). The shock period chosen as the research period is 2019 as the period before the COVID-19 pandemic and 2020-2021 as the pandemic period (Hypothesis 1). We use monthly data so that the study period starts from January 2019 as the 1st period to January 2021 as the 25th period.

Two banking systems in Indonesia are conventional banks and Islamic banks (Trinugroho et al., 2021). The Islamic financial market encourages economic growth in Indonesia (Juhro et al, 2020). Based on the research of Fianto et al.(2018), Islamic finance in Indonesia has a significant positive effect on the welfare of its customers. Rizvi et al.'s (2017) research concludes Islamic banks improve financial stability in Indonesia. Wasiaturrahma et al. (2020) concluded that the level of capital adequacy has a significant positive effect on the performance of both Islamic and conventional banks.

The crisis is a serious financial problem (Handoyo et al., 2020). Anwar (2019) concludes that bank size, profitability, capital adequacy, loans, and credit risk management have a significant effect on cost efficiency and bank performance in Indonesia in the post- 1997 financial crisis period. Atahau & Cronje (2020) explain about impact performance and ability of the application of macroprudential, working capital credit, investment, and consumption to maintain bank financial stability in the period before and after global financial crisis (2008 financial crisis).

Uncertainty of economic has a significant positive effect on the default risk of conventional banks. but has no effect on Islamic banks (Bilgin et al, 2021). Nguyen, (2021) found that effectiveness of the sharia committee can improve bank performance. Application of sharia principles also can increase the effectiveness risk management and improve the financial stability. This study aims to investigate and compare the financial stability of banks during the crisis which is still being debated by taking the time period before and after the covid 19 pandemics.

Research Methods

The Threshold Autoregressive requires stationary data (Sun et al., 2018). Thus, before estimating the Threshold Autoregressive, the data stationarity test was carried out using the ADF test. The results of the ADF test on Islamic Bank financial data in Table 1.

Table 1. The Results of the ADF Test on Islamic Bank Financial Data

Method			Statistic	Prob.**
ADF - Fisher Chi-square			9.85639	0.1308
ADF - Choi Z-stat			-1.26727	0.1025
Series	Prob.	Lag	Max Lag	Obs
EAT	0.0973	0	4	24
F	0.1235	0	4	24
GR	0.6025	0	4	24

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

From the results of the ADF test, the financial data of Islamic Banks used in this study is stationary. The results of ADF testing on conventional bank financial data in table 2.

Table 2. The Results of ADF Testing on Conventional Bank Financial Data

Method			Statistic	Prob.**
ADF - Fisher Chi-square			14.2695	0.0268
ADF - Choi Z-stat			-2.27552	0.0114
Series	Prob.	Lag	Max Lag	Obs
EAT	0.1325	0	4	24
F	0.1112	0	4	24
GR	0.0541	1	4	23

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Results of the ADF test shows financial data of conventional Banks used in this study is stationary. The results of the Threshold Autoregressive estimation for Islamic banks in Indonesia in table 3. In the linear part, the financing has a significant positive effect on the performance of Islamic banks with a coefficient value of 0.227284 and a t-statistic of 2.503947. General reserves on the linear part have a significant negative effect on the performance of Islamic banks with a coefficient value of -7.299768 and a t-statistic of -2.526609.

In the non-linear part, financing or credit has a significant negative effect on the performance of Islamic banks with a coefficient value of -26152.28 and t-statistic -0.040346. General reserves have a significant positive effect with a coefficient value of 820215.9 and a t-statistic of 0.040349.

Coefficient value of slope is 0.000222 and a t-statistic value is 0.020465. This indicates the level of slope or shock has no significant effect on the performance of Islamic Banks in Indonesia. With a Threshold coefficient value of 249296.6 and a t-statistic value at a threshold of 0.109063.

Table 3. the Threshold Autoregressive Estimation Result

Variable	Coefficient	t-Statistic
Threshold Variables (linear part)		
F	0.227284	2.503947
GR	-7.299768	-2.526609
Threshold Variables (nonlinear part)		
F	-26152.28	-0.040346
GR	820215.9	0.040349
Slopes		
SLOPE	0.000222	0.020465
Thresholds		
THRESHOLD	249296.6	0.109063
R-squared	0.838645	
Adjusted R-squared	0.807967	

The value of R-squared and Adjusted R-squared is greater than 0.80 which indicates the fit of the model is more than 80%. From the estimation results, Islamic banks tend to be stable in shocks during the study period.

The results of the Threshold Autoregressive estimation for conventional banks in Indonesia are presented in table 4.

Table 4. The Threshold Autoregressive Estimation Result

Variable	Coefficient	t-Statistic
Threshold Variables (linear part)		
F	-0.090026	-0.90887
GR	7.677235	1.345344
Threshold Variables (nonlinear part)		
F	0.380111	2.732485
GR	22.78269	2.898484
Slopes		
SLOPE	0.000225	0.38033
Thresholds		

THRESHOLD	61373.24	5.514509
R-squared	0.856053	
Adjusted R-squared	0.83408	

In the linear part of the financing, it has an insignificant negative effect on earnings after TAX with a coefficient of -0.090026 and a t-statistic of -0.90887. General reserves have a significant positive effect on earnings after tax with a coefficient value of 7.677235 and t-statistic -0.90887.

In the non-linear part. Financing has no significant positive effect with a coefficient value of 0.380111 and a t-statistic of 2.732485. General reserves have a significant positive effect with a coefficient value of 22.78269 and a t-statistic of 2.898484.

Slopes have no significant effect with a coefficient value of 0.000225 and a t-statistic value of 0.38033. The threshold coefficient value is 61373.24 and the t-statistic value is 5.514509. With an R-squared value of 0.856053 and an Adjusted R-squared of 0.83408, it indicates that the fit of the model is more than 80%.

Compare between Islamic Banks and Conventional Banks, Forecasting Earning After Tax is carried out which is presented in Figures 1 and 2. Where in Figure 1, Forecasting Earnings After Tax is presented as an indicator of Bank performance at Islamic Banks. And figure 2 is presented forecasting earnings after tax as an indicator of the Bank's performance in conventional banks.

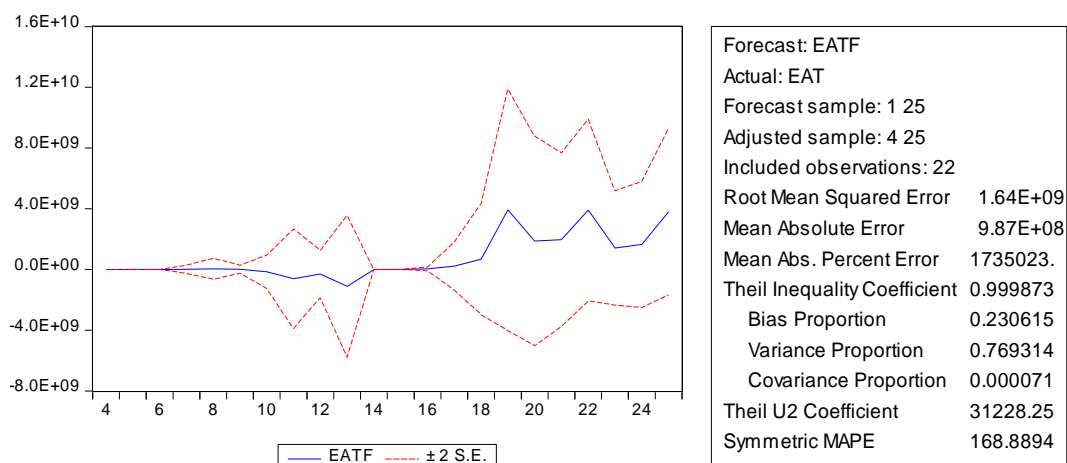


Figure 1. Forecasting Earnings After Tax is presented as an indicator of Bank performance at Islamic Banks

From the results of the estimated performance of Islamic banks, it can be seen that there were shocks starting from period 10 which peaked at 13, and began to stabilize in period 15 to period 17. In period 18 to the end of the period, namely period 25, the performance graph of the estimation results increased and decreased but tends to back to normal. This shows that shocks to the performance of Islamic banks began to occur at the beginning of the emergence of the corona virus, namely in March 2020 or in the period of this research is

period 15.

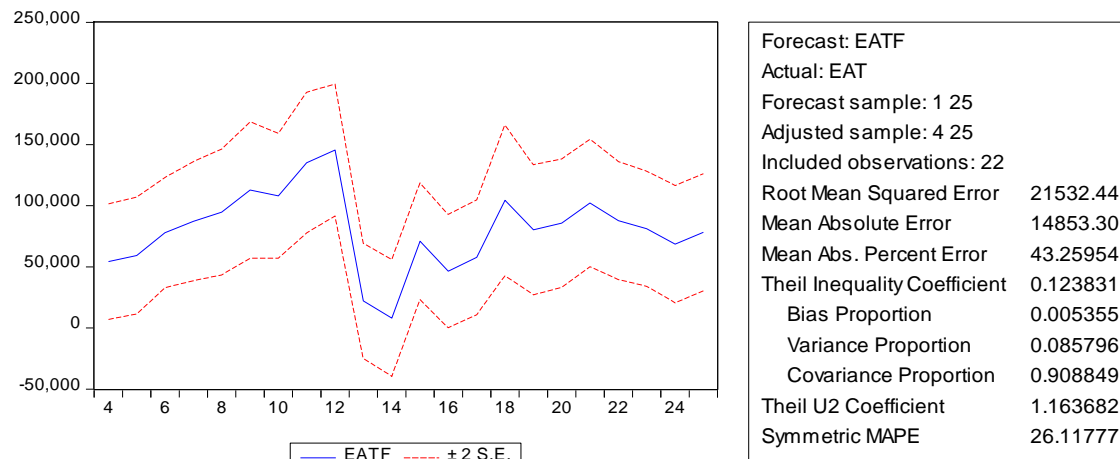


Figure 2. Forecasting earnings after tax as an indicator of the Bank's performance in conventional banks

When compared between figure 1 and figure 2, it is very clear that the performance of Islamic banks (Figure 1) tends to be more stable than the performance of conventional banks (figure 2). Conventional bank performance was very good in before the COVID-19 pandemic. That is in the period 1-12. However, in the period 13-14 when the corona virus pandemic began to be reported, there was a very large decline in performance. In period 15 when the corona virus pandemic began to occur, performance recovery in period 15 fell again and conventional bank recovery efforts were still unable to return to the initial line of falling performance until the end of the period. In the period 23 to 24, the performance of conventional banks actually experienced a slowdown and tended to find it difficult to return to the initial value, a decline in performance occurred.

In contrast to the performance of Islamic banks in figure 1. Which actually shows an increase in performance from before the pandemic occurred, although there were still shocks to the performance of Islamic banks in period 20, but managed to recover in period 22 even though it had to fall again. However, from the graph of performance forecasting between Islamic Banks and Conventional Banks are differences in performance stability between Islamic Banks and Conventional Banks facing the COVID-19 pandemic. This study found that in line with research from Bilgin et al (2021), Demir & Danisman (2021), Adekoya et al. al. (2021), Elnahass et al. (2021), Mirakhor and Krichene (2009), Chowdhury et al., (2016), Rashid et al. (2017), Uddin et al. (2017). The results of this study are not in line with or contradict the results of research by Bourkhis and Nabi (2013), Korbi and Bougatef (2017).

Conclusion

Islamic banks tend to be more stable in facing financial challenges due to the COVID-19 pandemic compared to conventional banks. Conventional banks have very good performance before the COVID-19 pandemic. Coronavirus pandemic began deeply decline of bank performance. Conventional bank

recovery efforts have not been able to return to the initial path. Conventional banks performance has slowed and it tends to be difficult to return to its original performance value (before the COVID-19 outbreak). Contrast with conventional banks, Islamic banks actually experienced an increase in performance from before the pandemic occurred, although there were still shocks in the performance of Islamic banks in the 20th period or in August 2020, but managed to recover in the 22nd or October 2020 period even though they had to fall again and get up. at the end of the study period. However, from the graph of performance forecasting between Islamic Banks and Conventional Banks shows a difference in performance stability between Islamic Banks and Conventional Banks facing the COVID-19 pandemic.

References

- Adekoya, O.B., Oliyide, J.A., KumarTiwari, A. (2021). Risk transmissions between sectoral Islamic and conventional stock markets during COVID-19 pandemic: What matters more between actual COVID-19 occurrence and speculative and sentiment factors?. *Borsa Istanbul Review* [Online].
- Anwar, M. (2019). Cost efficiency performance of Indonesian banks over the recovery period: A stochastic frontier analysis. *The Social Science Journal*, 56(3), 377-389.
- Atahau, A.D.R., Cronje, T. (2020). Bank lending: The bank ownership focus in the pre- and post-global financial crisis periods. *Economic Systems*, 44(4), 1-8.
- Bilgin, M.H., Danisman, G.O., Demir, E., Tarazi, A. (2021). Economic uncertainty and bank stability: Conventional vs. Islamic banking. *Journal of Financial Stability*, 56(10), 1-9.
- Bourkhis, K. and Nabi. M.S. (2013). Islamic and conventional banks' soundness during the 2007-2008 financial crisis. *Review of Financial Economics*, 22(2), 68-77.
- Chowdhury, M.A.F., Shoyeb, M., Akbar, C. and Islam, M.N. (2016). *Risk sharing paradigm of Islamic banks: case of Bangladesh. Advances in Islamic Finance, Marketing, and Management: An Asian Perspective*, Emerald Group Publishing Limited, 103-130.
- Dawood, A., Rizwan, M.S. and L'Huillier, B. (2016). A net stable funding ratio for Islamic banks and its impact on financial stability: an international investigation. *Journal of Financial Stability*, 25 (8), 47-57.
- Demir, E., Danisman, G.O. (2021). Banking sector reactions to COVID-19: The role of bank-specific factors and government policy responses. *Research in International Business and Finance*, 58(12), 1-15.
- Elnahass, M., Trinh, V.Q., Li, T. (2021). Global banking stability in the shadow of Covid-19 outbreak. *Journal of International Financial Markets, Institutions and Money*, 72(5), 13-22.
- Fianto, B.A., Gan, C., Hu, B., Roudaki, J. (2018). Equity financing and debt-based financing: Evidence from Islamic microfinance institutions in Indonesia. *Pacific-Basin Finance Journal*, 52(12), 163-172.
- Handoyo, R.D., Erlando, A., Astutik, N.T. (2020). Analysis of twin deficits hypothesis in Indonesia and its impact on financial crisis. *Heliyon*, 6(1), 1-9.
- JEBABLI, I., KOUAISSAH, N., AROURI, M. (2021). Volatility Spillovers between Stock and Energy Markets during Crises: A Comparative Assessment between the 2008 Global Financial Crisis and the Covid-19 Pandemic Crisis. *Finance Research Letters*, [online],
- Juhro, S.M., Narayan, P.K., Iyke, B.N., Trisnanto, B. (2020). Is there a role for Islamic finance and R&D in endogenous growth models in the case of Indonesia?.

- Pacific-Basin *Finance Journal*,62(9),97-112.
- Korbi, F., Bougatef, K. (2017). Regulatory capital and stability of Islamic and conventional banks. *International Journal of Islamic and Middle Eastern Finance and Management*, 10 (3), 312-330.
- Mirakhor, A. and Krichene, A. (2009). Recent crisis: lessons for Islamic finance. *Journal of Islamic Economics, Banking and Finance*,5(1), 9-58.
- Nair,A.R., Anand,B.(2020). Monetary policy and financial stability: Should central bank lean against the wind?. *Central Bank Review*,20(3),133-142.
- Nguyen,Q.K. (2021). Oversight of bank risk-taking by audit committees and Sharia committees: conventional vs Islamic banks. *Heliyon*,7(8),1-9.
- Rashid,A., Muhammad, S.Y., Khaleequzzaman, M. (2017). Does Islamic banking really strengthen financial stability? Empirical evidence from Pakistan. *International Journal of Islamic and Middle Eastern Finance and Management*. 10(2),130-148.
- Rizvi,S.A.R., Narayan,P.K., Sakti,A., Syarifuddin,F. (2020). Role of Islamic banks in Indonesian banking industry: an empirical exploration. *Pacific-Basin Finance Journal*,62(9),101-117.
- Safiullah,M. (2020). Bank governance and crisis-period efficiency: A multinational study on Islamic and conventional banks.*Pacific-Basin Finance Journal*,62(9),1-13.
- Sasongko,B., Bawono,S. (2021).*Financial Management: For Future Entrepreneur*. Singapore : Triple Nine Communication Press
- Sun,Y., Han,A., Hong,Y., Wang,S. (2018). Threshold autoregressive models for interval-valued time series data. *Journal of Econometrics*,206(2),414-446.
- Trinugroho,I., Santoso,W., Irawanto,R., Pamungkas,P. (2021). Is spin-off policy an effective way to improve performance of Islamic banks? Evidence from Indonesia. *Research in International Business and Finance*,56(4),101352.
- Trinugroho,I., Risfandy,T., Ariefianto,M.D. (2018). Competition, diversification, and bank margins: Evidence from Indonesian Islamic rural banks. *Borsa Istanbul Review*,18(4), 349-358.
- Uddin, A., Chowdhury, M.A.F., Islam, M. N. (2017). Resiliency between Islamic and conventional banks in Bangladesh Dynamic GMM and quantile regression approaches. *International Journal of Islamic and Middle Eastern Finance and Management*, 10 (3), 400-418.
- Vogt, S. C. (1994). The Cash Flow/Investment Relationship: Evidence from U.S. Manufacturing Firms. *Financial Management*, 23(2), 3–20.
- Wasiaturrahma., Sukmana,R., Ajija,S.R., Salama,S.C.U., Hudaifah,A. (2020). Financial performance of rural banks in Indonesia: A two-stage DEA approach.*Heliyon*,6(7),1-9.