

## The Impact of Mudharabah Sukuk and Foreign Exchange on the Profitability of Islamic Commercial Banks in Indonesia

Nanda Safarida<sup>1</sup>, Alfian<sup>2\*</sup>, Fahriansah<sup>3</sup>, Aulya Sabda<sup>4</sup>

<sup>1,2\*,3,4</sup> Institut Agama Islam Negeri Langsa  
<sup>1</sup>nandasafarida@iainlangsa.ac.id  
<sup>2\*</sup>alfian@iainlangsa.ac.id, / Correspondence  
<sup>3</sup>fahriansah@iainlangsa.ac.id  
<sup>4</sup>aulyasabda@gmail.com

### Abstract

*This study aims to investigate the impact of Sukuk Mudharabah and Foreign Exchange on the profitability of Islamic commercial banks in Indonesia from 2014 to 2021. The panel data regression technique was used for data analysis, including model selection, classical assumption test, and hypothesis test. The study found that Sukuk Mudharabah has a negative and insignificant effect on profitability. Foreign exchange has a positive and significant effect on profitability, while sukuk mudharabah and foreign exchange have a positive and significant effect on the profitability of Islamic commercial banks in Indonesia. The implications of this research can serve as a reference for academic studies, government officials, Islamic banking practitioners, and the community for scientific development. To review the profitability of Islamic Commercial Banks in Indonesia, it is recommended to consider adding other variables for maximum results in further research.*

**Keywords:** *Mudharabah Sukuk, Foreign Exchange, Profitability, Sharia Commercial Banks, Indonesia*

### Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh Sukuk Mudharabah dan Foreign Exchange Terhadap Profitabilitas Bank Umum Syariah di Indonesia periode 2014-2021. Teknik analisis data yang digunakan adalah regresi data panel, dengan analisis pemilihan model estimasi, Uji Asumsi Klasik, Uji Hipotesis. Dari hasil penelitian dapat ditemukan bahwa secara parsial sukuk mudharabah berpengaruh negatif dan tidak signifikan terhadap Profitabilitas. Secara parsial Foreign Exchange berpengaruh positif dan signifikan terhadap profitabilitas. Sedangkan secara simultan sukuk mudharabah dan Foreign Exchange berpengaruh positif dan signifikan terhadap profitabilitas Bank Umum Syariah di Indonesia. Implikasi penelitian ini semoga dapat menjadi referensi kajian akademik bagi pemerintah dan praktisi perbankan syariah serta bagi masyarakat untuk pengembangan keilmuan. Disarankan untuk penelitian selanjutnya agar dapat menambahkan variabel lain untuk memperoleh hasil yang lebih maksimal dalam meninjau profitabilitas Bank Umum Syariah di Indonesia.

**Kata Kunci:** Sukuk Mudharabah, Foreign Exchange, Profitability, Bank Umum Syariah, Indonesia

## INTRODUCTION

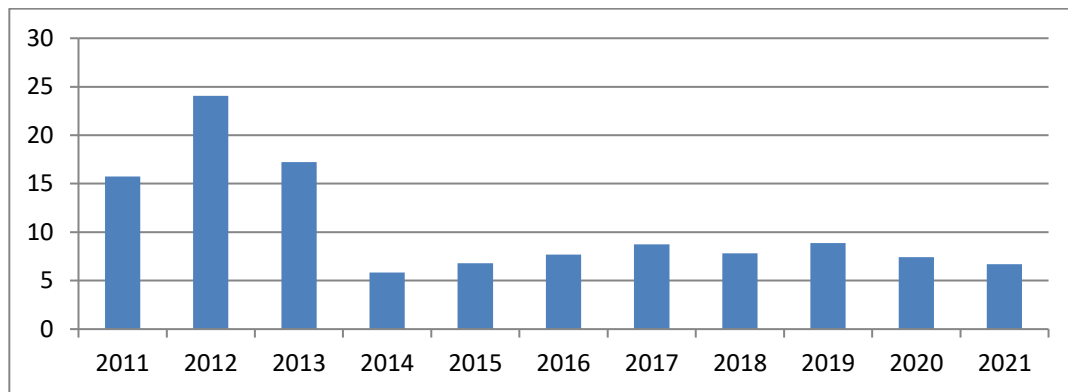
A bank is a financial institution that operates with the goal of making a profit. According to the Law of the Republic of Indonesia Number 10 of 1998, a bank is a business entity that collects and distributes funds from the public in the form of credit or other forms in order to improve people's lives (Undang-undang Republik Indonesia, n.d.). Both types of banks aim to make a profit through their operations. Banks can be divided into two major groups: conventional banks and Islamic banks. Islamic banks are financial institutions that provide financing and other services in payment traffic and money circulation in accordance with Islamic Sharia principles (Muhamad, 2014).

The community generally understands the concept of usury and the role of DSN-MUI as a council responsible for issuing fatwas that must be followed. However, respondents do not object to interacting with conventional banks for business financing, despite their belief that usury is prohibited. They are willing to borrow funds or save money in conventional banks, which operate on an interest-based system (Muhammad Dayyan, 2020).

Islamic banks play an active role in reaching all levels of society and promoting sharia-based financing products. Various strategic policies should be considered to increase profitability and competitiveness of Islamic banks in Indonesia. (Abdul Hamid, M Sabri Abd Majid, 2017). Thus, policy makers should focus on the profitability and asset management of a company to achieve the intended target (Shelly Midesia, Hasan Basri, 2016).

This is typically done by examining the Return On Equity (ROE) ratio, which indicates the level of profitability. The use of objective language and precise terminology is important in this analysis, as is adherence to grammatical correctness and conventional structure. To measure the health and performance of a bank or institution, it is necessary to analyze its profitability. This is proxied by the Return On Equity (ROE) ratio, which measures the company's ability to generate profits from shareholders' investment. This is proxied by the Return On Equity (ROE) ratio, which measures the company's ability to generate profits from shareholders' investment. ROE

is a profitability ratio. This is proxied by the Return On Equity (ROE) ratio, which measures the company's ability to generate profits from shareholders' investment. This ratio indicates the efficient use of the company's own capital. A higher ratio indicates a stronger position for the company owner, while a lower ratio indicates the opposite (Aryanti, 2018). The graph below shows the ROE at Islamic Commercial Banks from 2011 to 2020.

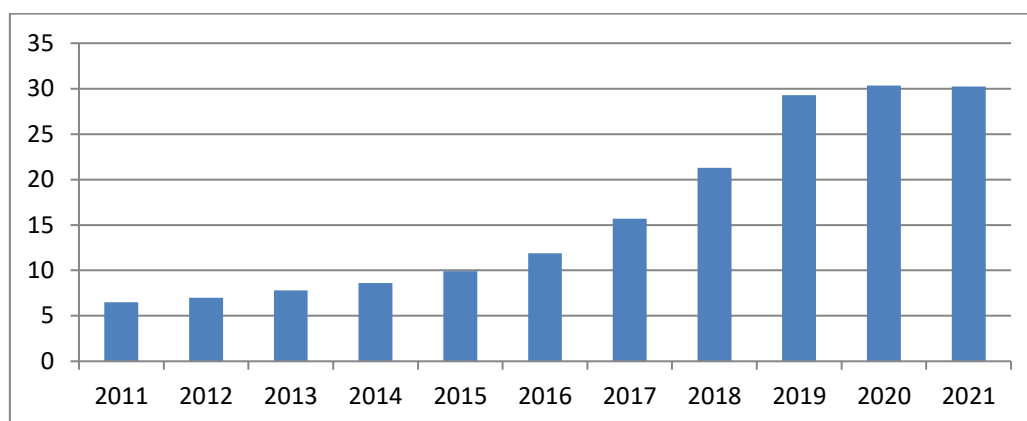


Source: Financial Services Authority (FSA)

**Figure 1.** Development of BUS Profitability Ratio for the Period 2011-2021 (Percent)

The graph illustrates the fluctuation of Return on Equity (ROE) of Islamic Commercial Banks in Indonesia over the years. In 2011, the ROE was 15.73%, which increased to 24.06% in 2012, the highest value during the study period. However, it decreased to 17.24% in 2013 and further to 5% in 2014. During the study period, the percentage reached its lowest value at 85% and then increased to 6.79% in 2015, 7.69% in 2016, 8.73% in 2017, 7.82% in 2018, 8.86% in 2019, and decreased to 7.41% in 2020 and 6.68% in 2021.

ROE can be influenced by several factors, including Sharia Bonds or Sukuk. Sukuk is known for its fixed return, which attracts investors to invest in it. By issuing sukuk, Islamic banks can increase profits and fund the continuity of the company (Samsul, 2009). Islamic banking uses sukuk Mudharabah, which should be more attractive to investors than ijarah sukuk. However, in reality, the value of ijarah sukuk is higher and more appealing to investors than sukuk mudharabah. This is because Mudharabah sukuk coupons are obtained based on income or profit sharing, while Ijarah sukuk are based on rewards. The Mudharabah sukuk's return is determined based on the income generated, while the Ijarah sukuk's return is determined in advance. Therefore, the risk associated with sukuk Ijarah is lower than that of sukuk Mudharabah (Cut Fonna Yulia, 2015). The table below displays sukuk issued by

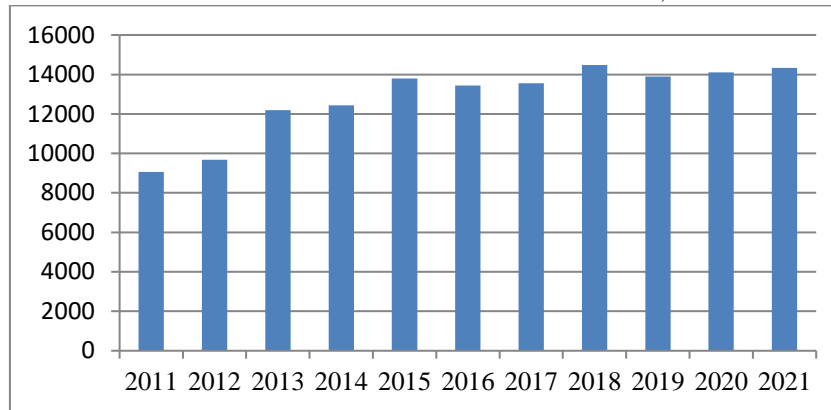


Source: Financial Services Authority (FSA)

**Figure 2.** Sukuk Mudharabah of Islamic Commercial Banks in 2011-2021 (Trillion)

The graph above shows an increase in sukuk for Islamic Commercial Banks from 2011 to 2020. In 2011, the value of sukuk was 6,500,000,000,000 and increased to 7,000,000,000,000 in 2012, 7,800,000,000,000 in 2013, 8,600,000,000,000 in 2014, 9,900,000,000,000 in 2015, and 11,000,000,000,000 in 2016. The total assets of the Islamic banking industry increased from 900 billion in 2017 to 15.7 trillion in 2017, then to 21.3 trillion in 2018, and further to 29.3 trillion in 2019. However, in 2020, the total assets increased to 30.35 trillion but decreased to 30.25 trillion in 2021. In this study, research was conducted on three banks listed in Islamic Commercial Banks: Bank Muamalat Indonesia, Bank Syariah Mandiri, and Bank BNI Syariah. These banks were chosen because they have complete data as needed for the study.

Foreign exchange is said to determine real investment returns. However, a declining currency will reduce the purchasing power of the income and capital gains earned from any type of investment. This decline in investment will affect the operational activities of Islamic banks. The value of foreign exchange in 2016 was Rp 13436. In 2017, it weakened to around Rp.13548. The graphic below shows the foreign exchange rates from 2011 to 2021.



Source: Bank Indonesia (BI)

**Figure 3.** Foreign Exchange 2011-2021 (Rupiah)

Based on the graph above, it is known that from 2011 to 2020, the exchange rate fluctuated, namely in 2015 the exchange rate was at Rp.13795 and in 2016 it experienced a slight strengthening, namely at Rp.13436, then in 2017 the exchange rate weakened again, namely around Rp.13548, then in 2018 it strengthened, namely at Rp.14481, in 2019 it weakened again to Rp.13901, in 2020 it strengthened again to Rp.14105 and in 2021 it further strengthened to Rp.14340.

Based on the description of the phenomenon and previous research, it is known that certain variables can impact profitability. However, inconsistent results have been found, indicating a need for further research. Therefore, a research gap exists regarding the impact of independent variables, such as sukuk mudharabah and foreign exchange, on the dependent variable of profitability. The authors aim to conduct further research on the topic titled 'The Effect of Mudharabah Sukuk and Foreign Exchange on the Profitability of Islamic Commercial Banks in Indonesia', based on the aforementioned background.

This study examines the effect of sukuk mudharabah and foreign exchange on the profitability of Islamic Commercial Banks in Indonesia, while Kismawadi's study found that mudharabah has a significant effect on economic growth in Indonesia (Early Ridho Kismawadi, 2021). Meanwhile, another study found that sukuk had a significant effect on national economic growth (Devi yani, Early Ridho Kismawadi, Ismail Fahmi Ar Rauf Nasution, 2022)

## **METHODS**

The researcher employed a quantitative approach, which is a systematic, planned, and clearly structured type of research activity (Sugiyono, 2018). The unit of

The Impact of Mudharabah Sukuk and Foreign Exchange on the Profitability of ... analysis is the aggregation of this data. The study analyzes data from Islamic Commercial Banks registered with the Financial Services Authority until 2021, totaling 14 banks.

This study utilizes secondary data types, including external data. External data is typically compiled by an individual from the relevant organization (Indrianto Nur, 2016). Data collection was conducted by searching the website [www.ojk.go.id](http://www.ojk.go.id). The data was collected using cross-sectional time panel data from the period of 2014-2021, and the research tools employed were Eviews.

Data collection techniques are methods used to gather data for research purposes (Nasution, 2018). In this study, the researchers utilized documentation study data collection techniques. Documentation studies aim to obtain data directly from the research site, including relevant books, regulations, activity reports, and research data that are pertinent to the research (Riduawan, 2016).

Data Analysis Technique In this study using panel data using the equation  $Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 X_{it} + \varepsilon_{it}$ . The stages of panel data analysis are: (1) Selection of estimation models in panel data including: Chow test, Hausman test, Langrange Multiplier test. (2) Classical Assumption Tests include: Normality test, multicollinearity test, heteroscedacity test, and autocorrelation test. (3) Hypothesis Test includes: partial test (t-test), simultaneous test (F-test) and coefficient of determination test ( $R^2$ ).

**Table 1.** Research Variable Operational

Variabel	Indikator	Skala
Sukuk Mudharabah (X1)	This fragment describes the nominal rupiah value of the annual profit from sales and purchases in the financial statements of Islamic Commercial Banks between 2011 and 2021.	Nominal
Foreign Exchange (X2)	The equation for calculating the exchange rate is as follows: Exchange Rate = $\frac{\text{Selling Rate} + \text{Buying Rate}}{2}$	Rasio
Profitabilitas (Y)	The ratio can be calculated using the following formula: $\text{ROE} = \frac{\text{Net profit after tax}}{\text{Shareholders' equity}} \cdot 100\%$	Rasio

## RESULTS AND DISCUSSION

Islamic banks issue sukuk mudharabah to raise third-party funds, which are then channeled back as financing to customers. The more funds raised, the greater the ability of Islamic banks to finance the real sector. This increased financing distribution has a positive impact on the growth of Islamic banking productive assets, generating income for banks in the form of margins and profit sharing. Ultimately, this leads to increased profitability of Islamic banks.

Islamic banks can conduct various foreign exchange transactions, including buying and selling foreign currencies, foreign exchange fund transfers, foreign exchange money transfers, and hedging transactions. These transactions contribute to fee-based income for Islamic banks. The margin, which is the difference between the selling price and the purchase price of foreign exchange, also provides additional income for Islamic banks. Foreign exchange transactions can increase potential income and profitability. However, fluctuations in foreign exchange rates pose a risk of losses due to foreign exchange differences for Islamic banks. Therefore, good risk management is necessary to prevent foreign exchange volatility from significantly decreasing profitability.

**Table 2.** Panel Data Regression Test Results

	<i>Common Effect</i>	<i>Fixed Effect</i>	<i>Random Effect</i>
Profitability (F-statistik)	0,26	0,00	0,50
Probabilitas (t-statistik) – Sukuk Mudharabah	0,12	0,41	0,29
Probabilitas (t-statistik) – Foreign Exchange	0,43	0,02	0,66
R <sup>2</sup>	0,016	0,351	0,008
Adj-R <sup>2</sup>	0,004	0,253	-0,004

Sumber: Output Eviews, 2022

**Table 3.** Chow Test

<b>Redundant Fixed Effects Tests</b>			
<b>Equation: Untitled</b>			
<b>Test cross-section fixed effects</b>			
<b>Effects Test</b>	<b>Statistic</b>	<b>d.f.</b>	<b>Prob.</b>
Cross-section F	3.755556	(19,138)	0.0000
Cross-section Chi-square	66.684865	19	0.0000

Sumber : Ouput Eviews, 2022

According to the Chow test results, the probability value of the cross-section F is 0.00, which is smaller than 0.05. This indicates that the appropriate panel data method to use between the common effect model and the fixed effect model is the Fixed Effect Model (FEM), meaning that  $H_a$  is accepted. Additionally, if the Chow test

The Impact of Mudharabah Sukuk and Foreign Exchange on the Profitability of ... concludes that the FEM should be used, the next test, the Hausman test, must be conducted to choose between the fixed effect model and the random effect model.

**Table 4. Hausman Test**

<b>Correlated Random Effects - Hausman Test</b>			
<b>Test cross-section random effects</b>			
<b>Test Summary</b>	<b>Chi-Sq. Statistic</b>	<b>Chi-Sq. d.f.</b>	<b>Prob.</b>
Cross-section random	3.191610	2	0.0227

Sumber :Ouput Eviews, 2022

According to Hausman's research, the probability value obtained is 0.02, which is smaller than the significance level of 0.05, indicating acceptance of Ha. The fixed effect model was selected as the best model.

**Table 5. Fixed Effect Model Estimation Result**

<b>Dependent Variable: Profitability</b>				
<b>Method: Panel Least Squares</b>				
<b>Periods included: 8</b>				
<b>Cross-sections included: 20</b>				
<b>Total panel (balanced) observations: 160</b>				
<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
C	-430.3298	768.9357	-0.559643	0.5766
Sukuk Mudharabah	0.023926	0.029165	0.820380	0.4134
Foreign Exchange	0.065125	0.055605	1.671211	0.0243
<b>Effects Specification</b>				
<b>Cross-section fixed (dummy variables)</b>				
R-squared	0.351933	Mean dependent var	529.1687	
Adjusted R-squared	0.253314	S.D. dependent var	501.9345	
S.E. of regression	433.7267	Akaike info criterion	15.10979	
Sum squared resid	25960400	Schwarz criterion	15.53262	
Log likelihood	-1186.783	Hannan-Quinn criter.	15.28149	
F-statistic	3.568613	Durbin-Watson stat	2.193761	
Prob(F-statistic)	0.000003			

Sumber: Output Eviews, 2022

Based on the estimation using the fixed effect model, it is evident that only one of the two variables has a statistically significant effect on profitability. Specifically, the foreign exchange variable has a probability value of  $0.02 < 0.05$ , while sukuk mudharabah has no significant effect on profitability, as its probability value is  $> 0.05$ , with a value of 0.41.

**Classical Assumption Test**

**Table 6. Multicollinearity Test**

	<b>Sukuk Mudharabah</b>	<b>Foreign Exchange</b>
Sukuk Mudharabah	1.000000	0.167142

Foreign Exchange	0.167142	1.000000
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Sumber: Output Eviews, 2022

Based on the test results above, it can be concluded that there is no multicollinearity in the regression model in this study. The correlation of all independent variables is less than 10, indicating that the value is smaller than 10.

**Table 7.** Heteroscedasticity Test

<b>Dependent Variable: RESABS</b>				
<b>Method: Panel Least Squares</b>				
<b>Periods included: 8</b>				
<b>Cross-sections included: 20</b>				
<b>Total panel (balanced) observations: 160</b>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	399.3703	339.1290	1.177635	0.2407
Sukuk Mudharabah	0.034344	0.016525	2.078265	0.0693
Foreign Exchange	-0.016320	0.024934	-0.654535	0.5137

Sumber: Output Eviews, 2022

Based on the figure above, it is evident that the probability value of each independent variable is greater than  $\alpha = 0.05$ . Therefore, it can be concluded that the residuals are randomly spread, indicating that the assumption of heteroscedasticity is fulfilled. As a result, it can be inferred that this research data is free from heteroscedasticity problems.

### Hypothesis Test Results

**Table 8.** Coefficient Test of Determination (Adjusted R<sup>2</sup>)

R-squared	0.351933	Mean dependent var	529.1687
Adjusted R-squared	0.253314	S.D. dependent var	501.9345
S.E. of regression	433.7267	Akaike info criterion	15.10979
Sum squared resid	25960400	Schwarz criterion	15.53262
Log likelihood	-1186.783	Hannan-Quinn criter.	15.28149
F-statistic	3.568613	Durbin-Watson stat	2.193761
Prob(F-statistic)	0.000003		

Sumber: Output Eviews, 2022

According to the output provided, the Adjusted R<sup>2</sup> value is 35.19%. This indicates that the independent variable contributes 35.19% to the dependent variable. The model includes Mudharabah sukuk and foreign exchange variables, which explain 35.19% of the profitability. The remaining 64.81% is influenced by other factors.

**Table 9.** F Test (Simultaneous)

R-squared	0.351933	Mean dependent var	529.1687
Adjusted R-squared	0.253314	S.D. dependent var	501.9345
S.E. of regression	433.7267	Akaike info criterion	15.10979
Sum squared resid	25960400	Schwarz criterion	15.53262
Log likelihood	-1186.783	Hannan-Quinn criter.	15.28149
F-statistic	3.568613	Durbin-Watson stat	2.193761
Prob(F-statistic)	0.000003		

Sumber: Output Eviews, 2022

Based on the above calculations, the probability value of the F statistic is 0.000 < 0.05. This indicates that the value is smaller than the significant level of 0.05, with an F-statistic of 3.56 and known  $df1 = k - 1 = 3 - 1 = 2$  and  $df2 = N - k = 160 - 3 = 157$  (F table = 3.05). As  $F_{count} > F_{table}$  ( $3.56 > 3.05$ ),  $H_0$  is rejected and  $H_a$  is accepted, indicating a significant influence between the independent variable and the dependent variable. It can be concluded that the data in this study have a positive and significant effect on the profitability variable.

**Table 10.** T Test (Partial)

<b>Dependent Variable: Y</b>				
<b>Method: Panel Least Squares</b>				
<b>Periods included: 8</b>				
<b>Cross-sections included: 20</b>				
<b>Total panel (balanced) observations: 160</b>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-430.3298	768.9357	-0.559643	0.5766
Sukuk Mudharabah	0.023926	0.029165	0.820380	0.4134
Foreign Exchange	0.065125	0.055605	1.671211	0.0243

Sumber : Ouput Eviews, 2022

Based on the table of t-test results above, it is evident that this study has three variables: mudharabah sukuk, foreign exchange, and profitability. The sample size, N, is 160, and therefore  $(N - K) = (160 - 3 = 157)$ . This value is derived from the t-table distribution, where the t-table value is 1.654.

## CONCLUSIONS

Based on the results of the discussion and data analysis, it can be concluded that sukuk mudharabah has a negative and insignificant effect on profitability, while Foreign Exchange has a positive and significant effect. Simultaneously, sukuk mudharabah and Foreign Exchange have a positive and significant effect on the profitability of Islamic Commercial Banks in Indonesia. The results of this study can be

used as a reference for the development of theory and science related to the Effect of Mudharabah Sukuk and Foreign Exchange on the Profitability of Islamic Commercial Banks in Indonesia. It can also serve as an academic study, especially for the government, and become an illustration for practitioners as a model for the development of Islamic banks in the future. Suggestions for further research are expected to explore additional variables in order to maximize the results related to the effect of Mudharabah Sukuk and foreign exchange on the profitability of Islamic commercial banks in Indonesia.

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