Determinants of Islamic Bank Performance: Evidence from Indonesian Islamic Banking Industry

D S Insani1*, M Muflih
Magister Terapan Keuangan Perbankan Syariah Politeknik Negeri Bandung, Indonesia

*dentisriinsani@gmail.com

Abstract. The purpose of this study is to investigate the determinants of Islamic banks performance using quarterly time series data from 2013 to 2017 of 12 Islamic commercial banking in Indonesia. Data analysis used Panel Least Square model with E-views that examined the impact of Banks specific (size, capital adequacy, liquidity Risk and operating cost), Income diversification and macro-economic (Gross Domestic Product and inflation) on bank performance (Return on Assets). The result shows that ROA is negatively related to liquidity risk, Operating Cost and inflation. This research is expected to be able to add information and references about the performance of Islamic banks and to develop short-term and long-term plans and strategies for management to optimize financial bank performance that can contribute to economic growth.

1. Introduction

The banking business development increases competitively and requires management to seek the right strategy so that Islamic banking can still survive and develop in global competition [1]. One of the most important ways to assess the success of Islamic banking is by measuring its performance. Banking performance is a major problem for policy and decisions makers, especially since it is the basis for the stability and smoothness of the financial and banking systems function [2]. The banking industry, including Islamic banking, is generally exposed to a higher level of credit risk than non-financial institutions. As a result, it has the potential to have more loans and debt that cannot be recovered, so that a lower rate of return and performance is likely to happen[3].

Indonesia holds the title as the country with the largest Muslim population in the world. This makes Indonesia a potential market for Islamic economics. Based on the assessment of the Global Islamic Financial Report (GIFR) in 2011, Indonesia is ranked the fourth in the country that has potential and is conducive to the development of the Islamic banking industry after Iran, Malaysia and Saudi Arabia. The development of a comprehensive Islamic financial system is closely related to economic growth. The results show that there are reliability and contribution of the Islamic banking sector for the economic growth and capital accumulation of these countries. [4] believes that the improvement of the Islamic financial system in a country can be an efficient and important economic builder for welfare.

The assessment on Islamic banking performance is considered substantial seeing that there are many interested parties on banking industry including investors, government, society and other related institutions. Good Islamic bank performance is expected to attract investors to invest because it is considered to generate a positive return. In addition, the government as the policyholder will pay...
special attention to the performance of the Islamic banking because the banking sector is considered to have contributed greatly to the growth of the national economy.

2. Method
The data used in this study are secondary data taken from the financial statements of 12 Islamic Commercial Banks in Indonesia since the first quarter of 2013 to the fourth quarter of 2017 with total observations of all the research samples were 233 observations. Secondary data is the data that can be in the form of evidence, records, or historical reports that have been compiled in the published archives (documentary data). The data were processed using software statistics eviews 9 by analyzing the panel data which is a combination between time series data and cross section data. In their historical overview [23, 24] stated that regression analysis was conducted to see the effect of variable size (log total assets), capital adequacy ratio (CAR), liquidity risk (FDR), operational costs (CIR), Income diversification (DIV), gross domestic income (GDP) and inflation (INF) on performance (ROA) in Islamic Commercial Banks in Indonesia. The equation model used for panel regression analysis is as follows;

\[ Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \beta_7 X_{7it} + \varepsilon_{it} \]

Note:
\( Y_{it} = \text{Return On Assets (ROA)} \)
\( \alpha \) is a constant term; \( i = 1, \ldots, N \) and \( t = 1, \ldots, T \)
\( X_{1it} = \text{Size (log Total Assets)} \)
\( X_{2it} = \text{Capital Adequacy Ratio (CAR)} \)
\( X_{3it} = \text{Liquidity Risk (Financing to Deposit Ratio/FDR)} \)
\( X_{4it} = \text{Operating Cost (Cost-Income Ratio/CIR)} \)
\( X_{5it} = \text{Income Diversification (DIV)} \)
\( X_{6it} = \text{Gross Domestic Product (GDP)} \)
\( X_{7it} = \text{Inflation (INF)} \)
\( \beta_1 \ldots \beta_7 = \text{regression coefficient} \)
\( \varepsilon = \text{standard error} \)

3. Result and Discussion
Multiple linear tests using the Least Square Panel method were used to test the relationship between independent variables (Size, Capital Adequacy, Risk Liquidity, Operating Cost, Income Diversification, GDP and Inflation) on the dependent variable (bank performance / ROA). The results of the etymology of the model are presented in table 1:

| Variable | Coefficient | Std. Error | t-Statistic | Prob.  |
|----------|-------------|------------|-------------|--------|
| C        | 0.171679    | 0.032108   | 5.346968    | 0.0000 |
| SIZE     | -0.000320   | 0.004144   | -0.077304   | 0.9385 |
| CAR      | -0.015462   | 0.013189   | -1.172269   | 0.2423 |
| FDR      | -0.027775   | 0.005277   | -5.263068   | 0.0000 |
| CIR      | -0.132107   | 0.004811   | -27.46165   | 0.0000 |
| DIV      | 8.52E-07    | 1.65E-05   | 0.051567    | 0.9589 |
| GDP      | -1.02E-13   | 3.12E-13   | -0.326227   | 0.7446 |
| INF      | -0.104576   | 0.047687   | -2.192968   | 0.0293 |

| Effects Specification | S.D | Rho |
|-----------------------|-----|-----|
|                       |     |     |
The results of hypothesis testing indicate that size has a negative relationship and does not significantly influence ROA with a probability of 0.9385 > 0.05. The capital adequacy ratio shows a positive and not significant relationship to ROA with a probability of 0.2423> 0.05. A negative and significant relationship is found between liquidity risk (FDR), Operational Cost (CIR) and inflation (INF) against ROA. On the other hand, income diversification and Gross Domestic Product (GDP) have a positive and not significant relationship to ROA with probabilities of 0.9589 and 0.7446. The amount of the adjusted R square values between 0 <adjusted R2 <1. If the adjusted R2 value is closer to one, the proposed model is said to be good because of the higher variation of the dependent variable that can be explained by all of the independent variables. Based on the results of panel data analysis presented in table 1, it can be seen that the coefficient of determination for the regression model among Size, Capital Adequacy, Risk Liquidity, Operational Efficiency, Income Diversification, GDP and Inflation on ROA is 0.794719. This value means that the performance of Islamic banks (ROA) in 79.47% is influenced by Size, Capital Adequacy, Risk Liquidity, Operating Cost, Income Diversification, GDP and Inflation. Whereas the other 20.53% is influenced by other variables which are not included in this research model.

The negative and significant relationship between Liquidity Risk (FDR) and bank profitability is consistent with the previous findings by [11] and [25] but conflict with [26] who reported a positive relationship between these variables. The findings of this study indicate that the high value of Finance to Deposit Ratio (FDR) reflects a low value of liquidity. It indicates a comparison between the amount of financing that is higher than the third party funds. Banks with good levels of liquidity will gain trust from customers because they are considered safe in distributing their wealth and are able to pay short-term obligations. For Islamic Commercial Banks, existing liquid funds can be used to support activities that can increase profits. This is inversely proportional if the liquidity risk is high, so it can be concluded that the higher liquidity risk will reduce the value of Return on Assets.

Our findings which generally show a negative and significant relationship between operational cost and bank profitability are consistent with the results from several previous studies like [14, 15] and [13]. The increase in operational costs can also cause declining on the Return On Assets (ROA). The high costs will be the liability of the bank, which will be charged to generally the income obtained from the financing allocation. Conversely, the lower Cost-income Ratio (CIR) means the more efficient Islamic banks in controlling their operational costs. The cost efficiency results in greater profits obtained by Islamic banks. On the other hand, high inflation has resulted in a decreasing in people's purchasing power. The result of the relationship between inflation and bank profitability also find a negative and stastically significant impact. The finding of negative relationship is consistent with study by [27], but contradict the suggestion by [13] and [21] who state that inflation had a positive relationship with bank profitability. For Islamic banks, inflation will have

| Cross-section random | 0.007140 | 0.2676 |
|----------------------|----------|--------|
| Idiosyncratic random | 0.011813 | 0.7324 |

Weighted Statistics

| R-squared          | 0.794719 | Mean dependent var | 0.002348 |
|--------------------|----------|--------------------|----------|
| Adjusted R-squared | 0.788332 | S.D. dependent var | 0.027706 |
| S.E. of regression | 0.012756 | Sum squared resid  | 0.036609 |
| F-statistic        | 124.4366 | Durbin-Watson stat | 0.952372 |
| Prob(F-statistic)  | 0.000000 |                    |          |

Unweighted Statistics

| R-squared          | 0.745487 | Mean dependent var | 0.007283 |
|--------------------|----------|--------------------|----------|
| Sum squared resid  | 0.069029 | Durbin-Watson stat | 0.505083 |
an impact on decreasing investor real income and increasing bank operating costs, thereby reducing profitability.

Another results of this study also shows that the size of the bank has a negative impact on profitability and the coefficient is not significant. The fact is that Islamic banking industry plays minor role, this can be proven by the market share of Islamic banking in Indonesia which has only reached 5.70%, it lags far behind the conventional banking industry. On the other side, size of the capital adequacy ratio (CAR) does not determine the profitability of Islamic banks. It can be caused by lack of optimizing islamic banks’s capital so that it becomes idle money and also create cost. In terms of the relationship between income diversification and profitability, the results obtained positive impact and not significant. Islamic banks have not been able to optimize non-financing income, such as fee based income or trading income.

4. Conclusion

This study uses Return On Assets (ROA) as a proxy for measuring the performance of Islamic banks by identifying several influencing factors, both internally and externally factors from the bank. The results obtained show that liquidity risk, operating costs and inflation have a negative and also significant impact on the performance of Indonesian Islamic banks. As with previous research, this study also has limitations in presenting Islamic banking data. For further research, it is expected that the Islamic banks studies will not only be limited to Islamic Commercial Banks but also Islamic Business Units with a longer period of time. The results of this research are ultimately expected to contribute to the Islamic banking industry and regulators to expand the market share of Islamic banking in Indonesia which is still limited compared to the conventional banking industry.

References

[1] Suhartanto D, Muflih M, Setiawan, and Hadiati N 2018 Loyalty Intention towards Islamic Bank: The Role of Religiosity, Image, and Trust," International Journal of Economics and Management 12 p 137-151
[2] Shawtari F A M 2018 Ownership type, bank models, and bank performance: the case of the Yemeni banking sector International Journal of Productivity and Performance Management, 67 p 1271-1289
[3] Athanasoglou P P, Brissimis S N, and Delis M D 2008 Bank-specific, industry specific and macro-economic determinants of bank profitability Journal of International Financial Market, Institution and Money 18 p 121-136
[4] Farahani Y G and Dastan M 2013 Analysis of Islamic banks' financing and economic growth: a panel cointegration approach International Journal of Islamic and Middle Eastern Finance and Management 6 p 156-172
[5] Haron S 2004 Determinants of Islamic bank profitability The Global Journal of Finance and Economics, 1 p 11-33
[6] Adelopo I, Lloydking R, and Tauringana V 2018 Determinants of bank profitability before, during, and after the financial crisis International Journal of Managerial Finance 14 p 378-398
[7] Kosmidou K, Tanna S, and Pasiouras F 2008 Determinants of profitability of domestic UK commercial banks: panel evidence from the period 1995-2002 Economics, Finance and Accounting Applied Research
[8] Dietrich A and Wanzenried G 2014 The determinants of commercial banking profitability in low-, middle-, and high-income countries The Quarterly Review of Economics and Finance 54 p 337-354
[9] Fidanowski F, Choudhry M, Davidović M, and Sergi B S 2018 What does affect profitability of banks in Croatia? Competitiveness Review 28 p 338-367
[10] Chiaramonte L and Casu B 2017 Capital and liquidity ratios and financial distress. Evidence from the European banking industry *The British Accounting Review* **49** p 138-161

[11] Arif A and Anees A N 2012 Liquidity risk and performance of banking system *Journal of Financial Regulation and Compliance* **20** p 182-195

[12] Crowe K 2009 Liquidity risk management – more important than ever *Harland Financial Solutions* p 3

[13] Dietrich A and Wanzenried G 2011 Determinants of bank profitability before and during the crisis: Evidence from Switzerland *Journal of International Financial Markets, Institutions and Money* **21** p 307-327

[14] Garcia M T M and Guerreiro J P S M 2016 Internal and external determinants of banks’ profitability: The Portuguese case *Journal of Economic Studies* **43** p 90-107

[15] Salike N and Ao B 2018 Determinants of bank’s profitability: role of poor asset quality in Asia *China Finance Review International* **8** p 216-231

[16] Lee C C, Hsieh M F, and Yang S J 2014 The relationship between revenue diversification and bank performance: Do financial structures and financial reforms matter? *Japan and the World Economy* **29** p. 18-35

[17] AlKhouri R and Arouri H 2018 The effect of diversification on risk and return in banking sector: Evidence from the Gulf Cooperation Council countries *International Journal of Managerial Finance*

[18] Pennathur A K, Subrahmanyam V, and Vishwasrao S 2012 Income diversification and risk: Does ownership matter? An empirical examination of Indian banks *Journal of Banking & Finance* **36** p 2203-2215

[19] Köhler M 2015 Which banks are more risky? The impact of business models on bank stability *Journal of Financial Stability* **16** p 95-212

[20] Olson D and Zoubi T A 2011 Efficiency and bank profitability in MENA countries *Emerging Markets Review* **12** p 94-110

[21] Goddard J, Liu H, Molyneux P, and Wilson J O S 2011 The persistence of bank profit *Journal of Banking & Finance* **35** p 2881-2890

[22] Sufian F and Habibullah M S 2010 Does economic freedom fosters banks’ performance? Panel evidence from Malaysia *Journal of Contemporary Accounting & Economics* **6** p 77-91

[23] Suhartanto D, Dean D, Sosianika A, and Suhaeni T 2018 Food souvenirs and their influence on tourist satisfaction and behavioural intentions *European Journal of Tourism Research* **18** p 133-145

[24] Hair J F, Black W C, Babin B J, and Anderson R E 2010 *Multivariate data analysis: A global perspective* 7th ed. Upper Saddle River: Pearson Education

[25] Petria N, Capraru B, and Ihnatov I 2015 Determinants of Banks’ Profitability: Evidence from EU 27 Banking Systems *Procedia Economics and Finance* **20** p 518-524

[26] Tan Y, Floros C, and Anchor J 2017 The profitability of Chinese banks: impacts of risk, competition and efficiency *Review of Accounting and Finance* **16** p 86-105

[27] Athanasoglou P P, Brissimis S N, and Delis M D 2008 Bank-specific, industry-specific and macroeconomic determinants of bank profitability *Journal of International Financial Markets, Institutions and Money* **18** p 121-136