Research Paper

Determinants of Bank Capital in Indonesian Islamic Banks

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ARTICLE INFO	ABSTRACT
	Bank capital is the linchpin for Islamic banks to steer clear insolvency risk. However, studies on Islamic bank capital in Indonesia remain scarce, with existing studies failing to distinguish between Islamic commercial banks and Islamic business units. Our research analyzes the determinants of Islamic bank capital using the latest data and splits them into Islamic commercial banks and Islamic business units. We used quarterly data from 31 Islamic banks from 2014 to 2020. The estimation method used in this study was panel data regression with unbalanced panel data. The results reveal that bank capital is positively affected by bank size, bank margin, and financing. Conversely, competition, inefficiency, and non-performing financing worsen Islamic bank capital. In addition, bank size and margin have a more pronounced impact on Islamic commercial banks than on Islamic business units. However, inefficiency and non-performing financing have a stronger impact on bank capital for Islamic business units than for Islamic commercial banks. These findings have several important implications, suggesting that Islamic bank capital can be boosted through increased margins and efficiency, while reducing impaired financing is crucial for capital accumulation.

Introduction

Islamic banks function as financial intermediary institutions that collect funds from parties with surplus capital and allocate them to those in need of financing. Islamic banks, therefore, are very vulnerable to insolvency if they have poor management related to

financing channelled to third parties (Fajri et al., 2022). Capital is a necessary condition for the soundness of Islamic banks (Ding et al., 2023). The Indonesian financial services authority (IFSA), as a regulator, has determined the financial performance of both conventional and Sharia commercial banks. Following Regulation No.6/23/DPDN/2014, a sound Islamic bank can be evaluated from six aspects: capital, asset management, earnings, liquidity, and sensitivity to market risk. IFSA has determined the minimum capital requirement known as the capital adequacy ratio (CAR) for Islamic and conventional banks. CAR is the ratio between own capital and risk-weighted assets (Sutrisno & Widarjono, 2022). The IFSA has set a minimum CAR for Islamic banks of 8%. CAR aims not only to anticipate losses arising from financing but also to account for other risks that were not previously foreseen (Bougatef & Korbi, 2019).

Studies on the determination of bank capital have been carried out in both conventional and Islamic banking. Raharjo et al. (2014) examined bank capital in conventional banks in Indonesia. Their research shows that asset growth and interest rate risk have a negative effect on bank capital, while interest margin, non-performing loans and leverage have a positive effect on bank capital. Furthermore, Jiang et al. (2020) indicated that bank size negatively influences bank capital, but inefficiency and non-performing loans have a positive effect on bank capital in the case of conventional banks in China. Other studies in emerging market countries in Asia show that bank capital of the previous period and profits are positively linked to highly capitalized banks (Mujtaba et al., 2022).

Several studies have also been conducted in Islamic banks. Mursal et al. (2019) examining 12 Islamic commercial banks in Indonesia from 2015 to 2017 reveal that profits, financing, and size negatively influence bank capital while bank margin positively affects bank capital. Septiarini et al. (2021) conducted research on Islamic bank capital in Indonesia from 2015 to 2019. The study shows that bank capital is positively influenced by efficiency, profitability, and exchange rate but is negatively associated with bank size. Smaoui et al. (2020) examined 122 Islamic banks in various countries. Their study proves the too-big-to-fail theory because assets, competition, and deposits are positively linked to Islamic bank capital. Furthermore, Bitar et al. (2018) examine the determinants of Islamic bank capital in 28 countries for 15 years (1999-2013). The results show that profits and liquidity have a positive effect on bank capital. All previous studies, however, do not differentiate between Islamic commercial banks and Islamic business units to which both Islamic banks have different capital structures.

This study examines the determinants of bank capital among Indonesian Islamic banks. Islamic banking in Indonesia encompasses two types: Islamic commercial banks and Islamic business units, the latter being subsidiaries of conventional banks dedicated to Islamic banking operations. This study makes several contributions to the empirical Islamic banking literature. First, to the best of our knowledge, research on bank capital decisions in Islamic banking has not been widely conducted, including in Indonesia. Second, this study distinguishes between Islamic commercial banks and Islamic business units. Islamic commercial banks represent large Islamic banks, whereas Islamic business units are small Islamic commercial banks. Hence, it is intriguing to explore the factors influencing the capital structures of these two distinct types of banks, as their behaviours are undoubtedly different.

Hypotheses Development

Islamic Bank as a financial intermediary, is a highly regulated business unit regarding capital structure. The capital structure in the banking industry comprises compulsory and voluntary capital. The former is the obligation to fulfil the minimum capital adequacy determined by the regulator. The latter is the capital requirement determined by banks to run their businesses based on the theory of a firm's capital structure (Lepetit et al., 2015). However, Islamic banks usually have capital that exceeds the capital requirements determined by the regulator, known as a capital buffer. The purpose of this capital buffer is to hedge Islamic banks when they face high business risks, either financing defaults or other unexpected risks (Mateev et al., 2022). Based on a literature review, several factors influence Islamic bank capital, including competition, size, profitability, liquidity, efficiency, and financing risk (Bitar et al., 2018; Mursal et al., 2019; Smaoui et al., 2020).

The market structure will affect the bank's capital. We use the adjusted Lerner index to measure competition among Islamic banks. The adjusted Lerner index is more representative of measuring competition than the standard Lerner Index (Kasman & Kasman, 2015; (Risfandy et al., 2022). A high Lerner index indicates less competition and vice versa. Banks are not willing to take a large risk when the market is not competitive but a higher risk is taken by the bank when the market is more competitive (Jiang et al., 2020). Accordingly, tight competition forces the bank to provide more capital to anticipate unexpected losses.
H1: Lerner negatively affects Islamic bank capital.

Assets are a proxy for bank size. Bank size is generally used to determine the economic scale of Islamic banks. On an economic scale, banks are able to reduce intermediation costs so that banks are able to increase their income and bank capital (Ibrahim, et al., 2017). Furthermore, banks with large assets can make large investments and diversify financing, thereby pushing large banks to have large equity capital to prevent financing defaults due to high financing risk (Wardana & Barlian, 2022).
H2: Assets positively affect Islamic bank capital.

Islamic bank margin is the bank's ability to generate income (Risfandy et al., 2022). Margin is net income calculated as financing income minus financing costs. Banks with high net income can produce high retained earnings so high retained earnings cause banks to increase bank capital. Conversely, low retained earnings due to low net income will lower a bank's ability to build up capital (Smaoui et al., 2020).
H3: Bank margins positively affect Islamic bank capital.

The financing deposit ratio (FDR) measures bank liquidity. Bank liquidity can be used to measure a bank's ability to fulfil short-term obligations. Islamic banks disburse profit-sharing and non-profit-sharing financing, while deposits are Wadiah and Mudharaba savings funds (Hanafi, 2021). A low FDR indicates high bank liquidity and conversely, low liquidity is indicated by a high FDR. Banks with low liquidity face high financing defaults, forcing banks to increase capital (Bitar et al., 2018).
H4: Financing positively affects Islamic bank capital.

The cost-to-income ratio (CIR) is widely used to measure the efficiency of a bank's operations. A high CIR indicates low operating efficiency, whereas a low CIR indicates high operating efficiency because a high CIR indicates higher costs that must be incurred to obtain the same income (Widarjono et al., 2022). Operational efficiency affects a bank's revenue. Low efficiency reduces revenue and further reduces retained earnings. Finally, Low retained earnings lower Islamic bank capital (Anisa & Sutrisno, 2020).

H5: CIR negatively affects Islamic bank capital.

Non-performing financing (NPF) is financing defaults that cannot be retrieved by Islamic banks. High NPF relates to poor management and low NPF indicates good risk management in disbursing funds to a third party (Widarjono & Rudatin, 2021). Thus, high NPF demonstrates a high risk of financing. Impaired financing forces banks to strengthen their capital to anticipate high possible losses (Daher et al., 2015).

H6: Non-performing financing positively affects Islamic bank capital.

Method

Sample selection and Data Sources

This study investigates the factors influencing bank capital determination within the Islamic banking sector in Indonesia. The study covers the period from 2014 to 2020, employing quarterly data, with a total of 33 Islamic banks existing in 2020, from which a sample of 31 Islamic banks was derived based on available data. The data set for this research is unbalanced panel data with a total of 704 observations. The data were retrieved from the financial services authority and available online (www.ojk.go.id).

Estimating model

A regression method is used to estimate bank capital decisions. Following the theoretical and empirical literature review, we analyze the factors that influence bank capital based on various bank-specific variables. The panel data regression model was used. The panel regression equation is as follows:

$$CAR_{it} = \pi_0 + \pi_1 Lerner_{it} + \pi_2 Lasset_{it} + \pi_3 Margin_{it} + \pi_4 FDR_{it} + \pi_5 CIR_{it} + \pi_6 NPF_{it} + e_{it} \tag{1}$$

Where CAR is the capital adequacy ratio, Lerner is the adjusted Lerner Index, assets are total assets, the margin is net income, FDR is the financing deposit ratio, CIR is the cost-to-income ratio and NPF is non-performing financing. The asset is expressed in natural logarithmic form.

The dependent variable is CAR which measures Islamic bank capital, while the independent variables are market structure and bank-specific variables, consisting of competition (Lerner), bank size (asset), profitability (margin), financing level (FDR), operating efficiency (CIR), and financing risk (NPF). CAR is the ratio of own capital and risk-weighted assets (RWA). Adjusted Lerner Index is calculated as:

$$Lerner = \left[\frac{Total\,cost + Net\,revenue - (Marginal\,cost * Earning\,Asset)}{Total\,Cost + Net\,revenue} \right] \tag{2}$$

We utilize the cost function with two inputs to obtain the marginal cost (Nguyen & Nguyen, 2022). This cost function with two inputs is more pronounced than that with three or more inputs for emerging markets and developing countries such as Indonesia (Fu et al., 2014; Risfandy et al., 2020). The cost function is as follows

$$TC_{it} = \emptyset_0 + \sum_{k=1}^{2} \emptyset_1 LnW_{kit} + 0.5 \sum_{k=1}^{2} \sum_{l=1}^{2} \rho_{kl} LnW_{kit} LnW_{lit} + \rho_1 LnAsset_{it} + 0.5\delta_2 (LnAsset_{it})^2 + \sum_{k=1}^{2} \rho_{2k} LnAsset_{it} LnW_{kit} + \varepsilon_{it}$$ (3)

TC is the total cost, consisting of the cost of profit-sharing financing and other costs. W1 is the cost of profit-sharing financing divided by deposits. W2 is the other cost divided by the fixed assets. Ln represents the natural logarithm. Taking the first derivative of Eq. (3) with respect to asset generates marginal cost (MC) as follows:

$$MC_{it} = \left(\rho_1 + \rho_2 LnAsset_{it} + \sum_{k=1}^{2} \rho_{2k} LnW_{kit} \right) \frac{TC_{it}}{LnAsset_{it}}$$ (4)

The adjusted Lerner index measures competition among Islamic banks. Assets are the total assets owned by Islamic banks. Margins are employed to determine Islamic banks' ability to earn revenue. The margin is the difference between income and expenses. Revenue comes from fund disbursement income and other sources of operating income. Expenses are profit-sharing for owners of investment funds and other operating costs. CIR is a measure of bank efficiency. CIR is a comparison between operating costs and operating income. We use FDR to measure bank liquidity. Liquidity is the Islamic banks' ability to pay their obligations. The indicator used to measure the liquidity of Islamic banks is FDR. Non-performing financing is financing default divided by total financing. This NPF indicates the financing risk of Islamic banks.

Results

The Table 1 summarizes the dependent and independent variables of the study. CAR as a bank capital rate, on average, was 21.04%, indicating that Islamic bank capital exceeds 15% as a condition for sound bank capital. The average adjusted Lerner index was 55.79%. The average assets of Islamic banks were IDR 14.7 trillion, but the degree of variation is high between Islamic banks. The average margin rate was 4.54%, with a high level of variation between banks, where the maximum margin was 42.04% and the minimum was 1.8%. The average financing rate was 100.65%, implying that the financing rate is quite high. Based on the FDR, the liquidity of Islamic banks is categorized as sound. The operating efficiency is 85.92%, which is below the minimum threshold of 94%. This level of efficiency indicates that Islamic banks are strong banks. The average financing default was 3.76%, which is below the maximum limit of 8%.

Table 1. Summary Statistics

Variable	Average	Std. Dev.	Min	Max
CAR	21.0405	6.4311	10.1600	88.6500
Lerner	55.7894	51.8401	-466.8895	171.4338
Asset (IDR, trillion)	14.7000	20.6000	0.4989	130.0000
Margin	4.5351	4.8121	0.1848	42.0363

Variable	Average	Std. Dev.	Min	Max
FDR	100.6456	30.9186	0.4700	338.5200
CIR	85.9220	13.9288	16.8400	217.4000
NPF	3.7586	3.5929	0.0200	22.2900

Table 2 presents the correlation between the independent variables being studied. This correlation coefficient indicates the strength of the relationship between the independent variables to check multicollinearity problems. All coefficients of correlation are less 0.5. These findings indicate that there is no multicollinearity problem between independent variables, so our estimation generates unbiased and efficient estimators

Table 2. Correlation between the Independent Variables

Variable	CAR	Lerner	Lasset	Margin	FDR	CIR
CAR	1					
Lerner	0.0486	1				
lasset	-0.2255	0.0395	1			
Margin	0.3104	0.1718	-0.1207	1		
FDR	0.1258	-0.0213	-0.344	0.1255	1	
CIR	-0.3896	-0.0264	0.2736	-0.2922	-0.1609	1
NPF	-0.2734	-0.0269	-0.023	-0.1748	-0.0455	0.3426

Baseline Results

The regression method used in this study was static panel regression. Table 3 depicts the outcomes of the panel regression for all Islamic banks, both Islamic commercial banks and Islamic business units. There are three estimation methods: pooled OLS, fixed effect, and random effect. Selection of the estimation method follows the F test, LM test, and Hausman test. The F test shows that we reject the null hypothesis at $\alpha=1\%$, so the fixed effect is a better method than the pooled OLS. The LM test is also statistically significant at $\alpha=1\%$, suggesting that the random effect is also more applicable than pooled OLS. Finally, the Hausman test was used to check between the random and fixed effects. The Hausman test is statistically significant at $\alpha=1\%$, so the best method to estimate our panel data is the fixed effect.

As shown in Table 3, the adjusted Lerner Index (Lerner) is negative and significant at $\alpha=10\%$, suggesting that less competition lowers bank capital, as expected in the first hypothesis. The asset is a positive sign and significant at $\alpha=1\%$. The bigger the asset suggests, the bigger the bank, so the bank capital is also increasing. This finding is in accordance with the second hypothesis. The margin was positive and significant at $\alpha=5\%$. Banks with the ability to generate large margins are also capable of accumulating large capital. This result is also in line with the third hypothesis. The financing rate, as calculated by FDR, is a positive sign and significant, as predicted in the fourth hypothesis. The operating efficiency (CIR) is negative and significant at $\alpha=1\%$, as predicted by the fourth hypothesis. Low efficiency reduces income, thereby reducing banks' ability to accumulate capital. Financing defaults (NPF) are positive and significant at $\alpha=1\%$, as expected in the fifth hypothesis. High financing defaults force banks to increase bank capital to anticipate expected losses.

Table 3. All Islamic Banks

Variable	Pooled OLS	Fixed effect	Random effect
Lerner	0.0013	-0.0055*	-0.0048*
	(0.0042)	(0.0036)	(0.0036)
Lasset	-0.0068***	0.0371***	0.0212***
	(0.0018)	(0.0044)	(0.0036)
Margin	0.2579***	0.0918**	0.1185***
	(0.0475)	(0.0459)	(0.0462)
FDR	0.0018	0.0054***	0.0038
	(0.0074)	(0.0067)	(0.0067)
CIR	-0.1103***	-0.1955***	-0.1954***
	(0.0176)	(0.0163)	(0.0165)
NPF	-0.2869***	0.3404***	0.2676***
	(0.0642)	(0.0758)	(0.0749)
Cons.	0.4089***	-0.2223***	0.0302
	(0.0324)	(0.0719)	(0.0597)
R-squared	0.2295	0.2461	0.2315
No. Bank	31	31	31
No. Obs.	704	704	704
Statistic test			
F-test	29.35***		
LM-test	1580.36***		
Hausman-test	46.85***		

***, **, * reject the null hypothesis at 1%, 5%, and 10%. Parentheses denote standard errors.

Further Analysis

Islamic banking in Indonesia is growing rapidly. This can be seen by the increasing number of Islamic Banks in Indonesia. Apart from Islamic commercial banks, almost all large conventional banks have Islamic banks as subsidiaries. Islamic banks owned by conventional banks are Islamic business units to which conventional banks have business lines based on sharia. Therefore, it is interesting to investigate the behavior of forming bank capital between Islamic business units and Islamic commercial banks.

Table 4 presents the results for Islamic commercial banks. According to the F, LM, and Hausman tests, the best estimation method is the fixed effect. As expected in the first hypothesis, the adjusted Lerner Index lowers bank capital. Assets have a positive effect on bank capital, as in hypothesis. According to the third hypothesis, margin also have a positive effect on bank capital. The financing rate also has a positive effect on bank capital, according to the fourth hypothesis. The low level of operating efficiency influences low bank capital, as predicted in the fifth hypothesis. The high risk of impaired financing has a positive effect on bank capital.

Table 4. Islamic Commercial Banks

Variable	Pooled OLS	Fixed effect	Random effect
Lerner	-0.0052	-0.0134***	-0.0088**
	(0.0062)	(0.0044)	(0.0050)
Lasset	-0.0258***	0.0754***	0.0208***

Variable	Pooled OLS	Fixed effect	Random effect
	(0.0034)	(0.0088)	(0.0071)
Margin	0.3477***	0.1612**	0.2359***
	(0.0667)	(0.0736)	(0.0773)
FDR	-0.0188	0.0654***	0.0305*
	(0.0272)	(0.0206)	(0.0228)
CIR	-0.1654***	-0.1025***	-0.1295***
	(0.0322)	(0.0226)	(0.0253)
NPF	-0.3258***	0.1463*	0.1361
	(0.1213)	(0.0998)	(0.1112)
Cons.	0.8003***	-0.9935	-0.0434
	(0.0789)	(0.1555)	(0.1283)
R-squared	0.3877	0.2826	0.1969
No. Bank	13	13	13
No. Obs.	334	334	334
Statistic test			
F-test	41.13***		
LM-test	422.33***		
Hausman-test	95.11***		

***, **, * reject the null hypothesis at 1%, 5%, and 10%. Parentheses denote standard errors.

The results for Islamic business units are shown in Table 5. The F, LM, and Hausman tests suggest that the appropriate estimation method is fixed effects. Of the six variables, three influence bank capital according to the proposed hypothesis. Assets are positive and significant for bank capital. CIR is negative and significant for bank capital. NPF is positive and significant. The Lerner, margin, and FDR are positive but statistically insignificant.

Table 5. Islamic Business Units

Variable	Pooled OLS	Fixed effect	Random effect
Lerner	0.0280***	0.0057	0.0151***
	(0.0049)	(0.0066)	(0.0061)
Lasset	0.0004	0.0314***	0.0093***
	(0.0023)	(0.0066)	(0.0038)
Margin	0.0204	0.0485	0.0634
	(0.0617)	(0.0539)	(0.0556)
FDR	0.0237***	0.0015	0.0111**
	(0.0060)	(0.0067)	(0.0066)
CIR	-0.2112***	-0.3035***	-0.2896***
	(0.0236)	(0.0242)	(0.0243)
NPF	-0.1113**	0.2725**	0.0300
	(0.0607)	(0.1210)	(0.0941)
Cons.	0.3338***	-0.0359	0.2798***
	(0.0327)	(0.0997)	(0.0567)
R-squared	0.3081	0.3314	0.3009
No. Bank	19	19	19

Variable	Pooled OLS	Fixed effect	Random effect
No. Obs.	370	370	370
Statistic test			
F-test	10.96***		
LM-test	151.21***		
Hausman-test	97.65***		

***, **, * reject the null hypothesis at 1%, 5%, and 10%. Parentheses denote standard errors.

Discussion

The first discussion begins with the case of Islamic banks. The first explanatory variable is the adjusted Lerner index, which indicates market competition. The results suggest that the adjusted Lerner index negatively affects Islamic bank capital. Banks with a higher Lerner index indicate less competition, so Islamic banks are likely to take less risk taking. Accordingly, they provide less extra capital due to the unexpected loss of their financing. This finding confirms the existing results for the conventional case in European countries (Etudaiye-muhtar, 2021).

The second independent variable is the assets that measure bank size. Our findings reveal that bank size has a positive effect on bank capital. Large Islamic banks can reduce intermediation costs because of economies of scale (Danlami et al., 2022). The existence of these economies of scale encourages large banks to carry out large financing to generate large incomes. On the other hand, this large financing likely causes high financing defaults. Consequently, banks must increase their capital to anticipate financing defaults. This finding corroborates previous research, where large banks increase the capital of Islamic banks (Wardana & Barlian, 2022). However, other studies document that assets are negatively associated with conventional bank capital (Jiang et al., 2020). This contradiction occurs because Islamic banks have little experience in risk management and have not yet achieved economies of scale, so the possibility of financing default is quite high (Bitar et al., 2018).

The third variable is bank margin. The ability to generate income is widely measured by bank margins. Bank margins have a positive influence on bank capital. The positive margins suggest that Islamic banks can generate net income. Positive net income influences retained earnings and, in turn, enhances bank capital (Parmankulova, 2022). Bank capital stems from two sources: additional new capital from owners and retained earnings. Thus, banks with high margins can generate high retained earnings and further encourage banks to increase capital. These findings support previous research on Islamic banks (Mursal et al., 2019; Septiarini et al., 2021) and banks in Asian emerging market countries (Mujtaba et al., 2022).

Islamic bank capital has a positive effect on financing rates; however, in cases of high financing, it may lead to increased income despite potentially higher risks. However, on the other hand, high financing also causes a high probability of financing defaults. Islamic banks differ from conventional banks in terms of financing contracts because they avoid interest rates. Islamic banks offer contracts based on profit sharing as their core business of Islamic banks. However, this type of financing creates a high probability of default due to asymmetric information and moral hazards (Meslier et al., 2020). Thus, this research is in

line with the findings of Anisa and Sutrisno (2020) that high financing encourages banks to increase their capital to anticipate financial defaults.

The efficiency of bank operations is shown by the CIR. Banks with high CIR show that they do not operate efficiently. These results indicate that inefficiency negatively affects bank capital. Banks with high CIR are associated with low levels of income due to high intermediation costs (Sutrisno & Widarjono, 2022). A high CIR causes their ability to reduce retained earnings. As a result, banks' ability to raise capital is also low. The findings of this study confirm previous findings on conventional banks in Indonesia (Anisa & Sutrisno, 2020).

NPF measures the financing risk of Islamic banks. NPF means that banks experience a loss of liquid assets that generates income, thus encouraging each bank to reduce NPF. NPF has a negative impact on bank capital, suggesting that high NPF worsens bank capital. This happens because NPF reduces the ability of banks to generate income. High NPF reduces bank income and further affects earnings retention. Low retained earnings cause banks to be unable to accumulate capital, thereby reducing bank capital. Previous research also shows that high NPF causes a decrease in bank capital (Sutrisno, 2018).

The next section discusses Islamic commercial banks. This study shows that the factors that affect bank capital are competition, bank size, profitability, financing, operating efficiency, and financing risk. This result supports existing studies for all Islamic banks. In the case of Islamic business units, bank capital size is influenced by three factors: bank size, operating efficiency, and financing risk.

Islamic commercial banks and Islamic business units differ in terms of business management, including capital requirements. Based on these findings, it would be interesting to compare the two banks associated with bank capital requirements. Three variables influence bank capital: bank size, efficiency, and financing defaults. However, the influence of bank size on bank capital is stronger in Islamic commercial banks than in Islamic business units. This happens because Islamic commercial banks represent the large Islamic banks in Indonesia, so the ability to carry out financing activities is higher than Islamic business units. This result is reinforced by the positive influence of financing on bank capital in Islamic commercial banks. The adjusted Lerner index has a negative impact on Islamic commercial banks' capital. A plausible reason is that Islamic banking markets have imperfect competition due to the high concentration ratio. Islamic commercial banks dominate the Islamic banking market (Sutrisno & Widarjono, 2022). Margins affect bank capital in the case of Islamic commercial banks. Research shows that large Islamic banks can generate higher incomes than small Islamic banks (Widarjono et al., 2023). The influence of efficiency on bank capital is also stronger in Islamic business units than in Islamic commercial banks. Likewise, the impact of financial defaults on bank capital is higher in Islamic business units than in Islamic commercial banks.

Conclusion

This study analyzes the determinants of Islamic bank capital. The findings suggest that bank size, margins, and financing enhance bank capital, while competition, operational inefficiency, and financing defaults exacerbate bank capital. Interestingly, the effects of competition, bank size, margin, and financing rate on bank capital are less pronounced for Islamic business units than for Islamic commercial banks. In contrast, the

impacts of inefficiency and financing risk on bank capital are stronger in Islamic business units than in Islamic commercial banks. These findings have strong implications for Islamic banks and policymakers. First, the success of banks in accumulating capital to deal with unexpected losses is a margin. Bank margins can be boosted as the bank can improve its operating efficiency. Second, capital accumulation can be piled up if banks can lower financing defaults where currently, the impaired financing rate in Islamic banks is larger than that in conventional banks. This study examines 31 out of 33 Islamic banks due to data availability. Hence, it is anticipated that future research will explore all Islamic banks to capture their capital structures.

Authors' Declaration

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

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