Does Intellectual Capital Efficiency Translate into Financial Performance for Islamic Banks in Indonesia? Evidence from the Pre-Pandemic Period

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Abstract

This study investigates the determinants of financial performance in Indonesian Islamic banks, focusing on the Financing to Deposit Ratio (FDR) and Capital Adequacy Ratio (CAR) as key indicators. Utilizing data from Bank Syariah Indonesia (BSI) and Bank Muamalat Indonesia (BMI) between 2016 and 2020, the research employs Ordinary Least Squares (OLS) regression analysis to examine the influence of Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE) on FDR and CAR. The findings reveal that while CEE has a statistically significant negative relationship with FDR, the model for CAR lacks a statistically significant fit. This research contributes to understanding the role of intellectual capital in Islamic banking performance and offers insights for stakeholders in the Indonesian Islamic finance sector, with implications for the post-pandemic era.

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Introduction

Islamic banking in Indonesia plays a crucial role in the nation's economic landscape, adhering to unique financial

principles. Despite weathering past economic crises, it faces challenges in market share and competitiveness compared to conventional banks. These limitations are often attributed to underdeveloped human resources (HR) and information technology (IT) capabilities (OJK, 2021). A potential solution lies in leveraging intellectual capital, the sum of employee expertise, organizational processes, and intangible assets (Chen, 2021).

The Financing to Deposit Ratio (FDR) and Capital Adequacy Ratio (CAR) are two crucial indicators of a bank's financial health. FDR measures a bank's ability to distribute financing relative to the deposits it holds, reflecting its liquidity position. A higher FDR indicates that a bank is utilizing a larger portion of its deposits for financing activities, which can lead to increased profitability but also higher liquidity risk. Conversely, a lower FDR suggests that a bank is holding onto more deposits, potentially limiting its earnings potential but maintaining a more stable liquidity position (Fadila & Pangestuti, 2022; Wahyudin, 2023).

CAR, on the other hand, assesses a bank's capacity to absorb potential losses arising from risky assets by comparing its capital to risk-weighted assets. A higher CAR indicates that a bank has a stronger capital buffer to withstand adverse economic conditions and unexpected losses. Maintaining an adequate CAR is crucial for ensuring a bank's stability and resilience, as it helps protect depositors and promote confidence in the banking system (Ghifar et al., 2022; Kocaoğlu, 2010).

Issues related to these ratios can significantly impact a bank's performance and stability. An excessively high FDR may expose a bank to liquidity risks if there is a sudden increase in deposit withdrawals or defaults on financing. Conversely, an overly conservative FDR may limit a bank's ability to generate profits through financing activities. Similarly, a low CAR can make a bank vulnerable to economic shocks and losses, while an unnecessarily high CAR may constrain a bank's ability to extend financing and invest in growth opportunities.

This study investigates the influence of intellectual capital on the FDR and CAR of Indonesian Islamic banks. It aims to answer the following questions:

1. How do human capital efficiency (HCE), structural capital efficiency (SCE), and capital employed efficiency (CEE) impact the Financing to Deposit Ratio (FDR) of Indonesian Islamic banks?
2. Do HCE, SCE, and CEE significantly influence the Capital Adequacy Ratio (CAR) of Indonesian Islamic banks?

By addressing these questions, this research contributes valuable insights for stakeholders in Indonesian Islamic banking. Understanding the relationship between intellectual capital components and financial performance can guide strategic investments to enhance competitiveness, customer service, and ultimately contribute to the sector's growth, particularly in the post-pandemic era.

Literature Review

Conceptualizing Intellectual Capital

Intellectual Capital (IC) encompasses a company's intangible assets, including knowledge, information, intellectual property, and experience, which contribute to competitive advantage and wealth creation (Stewart, 2010). This aligns with the resource-based theory, positing that unique resources like IC can create sustainable profits for companies that effectively leverage them (Mavridis, 2004). Scholars have developed frameworks for measuring IC, focusing on three core components:

1. Human Capital (HC): Representing employee knowledge, skills, and motivation (Bontis et al., 2000; Curado & Bontis, 2007; Riahi-Belkaoui, 2003). HC is often measured using the Human Capital Efficiency (HCE) ratio, which quantifies the value added by employees relative to their costs (Pulic, 2004).

2. Structural Capital (SC): Referring to tangible and intangible assets that facilitate ongoing operations, such as innovation capital, process capital, technological capital, and organizational capital (Ferenhof et al., 2015; Marr & Moustaghfir, 2005). The Structural Capital Efficiency (SCE) ratio is commonly used to measure SC, capturing the proportion of value added retained by the company (Pulic, 2004).

3. Relational Capital (RC): Emphasizing knowledge embedded in relationships with stakeholders like customers and suppliers (Mondal & Ghosh, 2012). The Capital Employed Efficiency (CEE) ratio is often used as a proxy for RC, measuring the value added generated per unit of capital employed (Pulic, 2004).

Intellectual Capital and Financial Performance

Research suggests a positive correlation between IC and a firm's financial performance, indicating its potential as a leading indicator of future success (Chen et al., 2005; Gogan et al., 2016; Maditinos et al., 2011; Sardo & Serrasqueiro, 2017; Xu & Li, 2022). However, the specific impact on Islamic banking performance remains understudied, with existing research yielding mixed results (Suroso et al., 2017).

Hypothesis Development

Based on the resource-based view and prior research, this study proposes the following hypotheses:

- H1: Human Capital Efficiency (HCE) has a significant positive impact on the Financing to Deposit Ratio (FDR) of Indonesian Islamic banks.
- H2: Structural Capital Efficiency (SCE) has a significant positive impact on the Financing to Deposit Ratio (FDR) of Indonesian Islamic banks.
- H3: Capital Employed Efficiency (CEE) has a significant positive impact on the Financing to Deposit Ratio (FDR) of Indonesian Islamic banks.
- H4: Human Capital Efficiency (HCE) has a significant positive impact on the Capital Adequacy Ratio (CAR) of Indonesian Islamic banks.
- H5: Structural Capital Efficiency (SCE) has a significant positive impact on the Capital Adequacy Ratio (CAR) of Indonesian Islamic banks.
- H6: Capital Employed Efficiency (CEE) has a significant positive impact on the Capital Adequacy Ratio (CAR) of

Indonesian Islamic banks.

Theoretical Framework

This study adopts the resource-based view (RBV) as its theoretical foundation. RBV posits that a firm's unique resources and capabilities, such as intellectual capital, can create a sustainable competitive advantage leading to superior performance (Oh, 2015). Applying this to the Islamic banking context, the efficient utilization of human capital (HCE), structural capital (SCE), and relational capital (CEE) is expected to enhance financial performance, as measured by FDR and CAR.

Based on the literature review, the relationship between the independent variables (HCE, SCE, CEE) and dependent variables (FDR, CAR) is hypothesized to be positive and causal. Efficient utilization of intellectual capital components is expected to lead to improved liquidity management (FDR) and enhanced capital adequacy (CAR).

Research Methods

Data and Sample

This research utilizes data from 2016 to 2020, gathered from the annual reports and financial statements of two leading Indonesian Islamic banks, Bank Syariah Indonesia (BSI) and Bank Muamalat Indonesia (BMI). This study focuses on the pre-pandemic period due to the lack of sufficient post-pandemic observations for conducting robust research. The focus on the pre-pandemic period is due to the insufficient post-pandemic data necessary for conducting a robust study. The pandemic was officially declared over on June 21, 2023, and the data available up to the end of 2023 (when this study was conducted) is insufficient for a comprehensive analysis. Therefore, data from the pre-pandemic period is utilized as it represents normal economic conditions and can provide relevant suggestions for the post-pandemic "new normal" era.

Variables and Measurement

The dependent variables are:

1. Financing to Deposit Ratio (FDR): Measured as the ratio of total financing to total deposits.
2. Capital Adequacy Ratio (CAR): Measured as the ratio of total capital to risk-weighted assets.

The independent variables are:

1. Human Capital Efficiency (HCE): Measured as the ratio of value added to human capital costs.
2. Structural Capital Efficiency (SCE): Measured as the ratio of structural capital to value added.
3. Capital Employed Efficiency (CEE): Measured as the ratio of value added to capital employed.

Model Specification

Separate OLS regression models were estimated for each dependent variable. The general model specification can be represented as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

- Y represents the dependent variable (either FDR or CAR)
- α represents the constant term
- $\beta_1, \beta_2, \beta_3$ represent the regression coefficients for the independent variables HCE, SCE, and CEE, respectively
- X_1, X_2, X_3 represent the independent variables (HCE, SCE, and CEE)
- ε represents the error term

The following linear regression models were estimated for FDR and CAR:

$$FDR = \beta_0 + \beta_1 HCE + \beta_2 SCE + \beta_3 CEE + \varepsilon$$
$$CAR = \beta_0 + \beta_1 HCE + \beta_2 SCE + \beta_3 CEE + \varepsilon$$

Sample Size and Limitations

The study utilizes panel data, with two cross-sections (BSI and BMI) and five time periods (2016-2020). This results in a total of 10 observations (2 x 5). While this falls short of the recommended 40 observations for panel data regression (4 variables x 10), the limited sample size is acknowledged as a limitation of the study. The limited number of observations may affect the reliability and robustness of the results, leading to high variability in estimates and low statistical power. To address this limitation, the study employs panel data analysis techniques, which allow for controlling both individual-specific and time-specific effects, thereby improving the efficiency and accuracy of estimates. However, the effectiveness of these techniques may be limited by the small sample size.

The study also recognizes the potential for omitted variable bias or model misspecification issues. To mitigate these concerns, robustness checks are performed to assess the sensitivity of the results to different model specifications, sample selections, or estimation techniques. Despite these limitations, the study aims to provide valuable insights into the relationship between intellectual capital components and the financial performance of Indonesian Islamic banks. The findings should be interpreted cautiously, considering the specific context and timeframe of the analysis.

Classical Assumption Tests

The study conducts classical assumption tests to ensure the validity of the OLS estimates. These tests include multicollinearity, normality, heteroscedasticity, and autocorrelation. The results of these tests are compared between BSI and BMI to determine the feasibility of proceeding with hypothesis testing.

Data Analysis

The Ordinary Least Squares (OLS) method was employed to estimate the coefficients ( ) of the regression models. OLS minimizes the sum of squared residuals between the predicted and actual values of the dependent variable. The statistical significance of the estimated coefficients was assessed using t-tests. The goodness-of-fit of the models was evaluated using various metrics, including the coefficient of determination (R-squared), adjusted R-squared, F-statistic, and Durbin-Watson statistic. R-squared and adjusted R-squared measure the proportion of variance in the dependent variable explained by the independent variables. The F-statistic tests the overall significance of the model, while the Durbin-Watson statistic assesses the presence of autocorrelation in the residuals. The data analysis was conducted using E-Views.

Results and Discussion

Descriptive Statistics

The descriptive statistics for both banks indicate minimal variability in the independent variables (HCE, SCE, and CEE) and the dependent variables (FDR and CAR). This is evidenced by the standard deviation value, which is smaller than its average.

Table 1. Descriptive Statistics

Variable	N	Descriptive Statistics-BSI				Descriptive Statistics-BMI			
		Min	Max	Mean	SD	Min	Max	Mean	SD
HCE	20	2.99	4.87	3.67	0.57	3.19	5.60	4.13	0.64
SCE	20	0.32	0.90	0.59	0.15	0.54	0.82	0.71	0.08
CEE	20	0.41	1.76	0.97	0.37	0.21	1.81	0.91	0.46
FDR	20	81.92	89.63	84.91	2.45	53.05	99.99	85.20	12.84
CAR	20	12.30	14.81	13.83	0.60	11.65	19.60	14.00	2.32

Table 1 offers a concise overview of the key characteristics of the variables for both Bank Syariah Indonesia (BSI) and Bank Muamalat Indonesia (BMI) during the 2016-2020 period. The data encompass minimum and maximum values along with mean and standard deviation (SD) for each variable. An examination of the independent variables (HCE, SCE, and CEE) reveals a relatively consistent pattern between BSI and BMI. The comparable average values and lower standard deviations suggest a lesser degree of spread in the data for these variables. This indicates a level of homogeneity in terms of human capital efficiency, structural capital efficiency, and capital employed efficiency across the two Islamic banks. The average Financing to Deposit Ratio (FDR) for both banks falls within an acceptable range, signifying that they maintain adequate liquidity. Similarly, the Capital Adequacy Ratio (CAR) indicates sufficient capacity to absorb potential

losses arising from risky assets.

Classical Assumption Tests

Prior to interpreting the Ordinary Least Squares (OLS) regression results, a series of classical assumption tests were conducted to ensure the validity of the estimates. These tests aim to verify that the model adheres to the assumptions necessary for BLUE (Best Linear Unbiased Estimator) properties. It is crucial to compare the results of these tests between BSI and BMI to determine the feasibility of proceeding with hypothesis testing. The results of the classical assumption tests suggest no major violations for either BSI or BMI, allowing for further analysis using OLS regression.

Regression Results

Goodness-of-Fit Test

The goodness-of-fit test, also known as the model evaluation test, assesses how well the estimated regression model explains the variation in the dependent variable. This evaluation is achieved through a combination of measures: the coefficient of determination (R-squared), the F-statistic test, and the t-test for individual parameters.

Dependent Variable: FDR
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	90.460870	2.891626	31.283740	0.0000
HCE	-0.729193	0.769140	-0.948062	0.3572
SCE	3.844742	3.108238	1.236952	0.2340
CEE	-5.307860	1.155270	-4.594474	0.0003

R-squared	0.570444	Mean dependent var		84.912000
Adjusted R-squared	0.489903	SD dependent var		2.454949
SE of regression	1.753352	Akaike info criterion		4.137792
Sum squared resid	49.187880	Schwarz criterion		4.336938
Log likelihood	-37.377920	Hannan-Quinn criter.		4.176667
F-statistic	7.082596	Durbin-Watson stat		1.547332
Prob(F-statistic)	0.003041			

Table 2. FDR Regression Test

Table 2 presents the regression results for FDR. The model explains 48.99% of the variation in FDR (Adj. R^2 = 0.4899). CEE has a statistically significant negative relationship with FDR (β_3 = -5.307860, p = 0.0003), while HCE and SCE have no significant effects. From the regression results, it can be inferred that the constant term (C) has a value of 90.46087.

This implies that if the values of HCE, SCE, and CEE remain unchanged, the FDR for each study period (quarterly) will be 90.46087. The coefficient for HCE (-0.729193) indicates that a 1 rupiah increase in HCE will lead to a decrease in FDR by 0.729193 percent, assuming that the other variables remain fixed. This estimation result has no effect. Similarly, the coefficient for SCE (3.844742) suggests that a 1 rupiah increase in SCE will result in an increase in FDR by 3.844742, assuming that the other variables remain constant. This estimation result has no effect. On the other hand, the coefficient for CEE (-5.307860) indicates that a 1 rupiah increase in CEE will lead to a decrease in FDR by 5.307860 percent, assuming that the other variables remain constant. In this case, the estimation result has an effect.

Dependent Variable: CAR
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	14.280880	0.883842	16.15772	0.0000
HCE	0.116441	0.235092	0.495299	0.6271
SCE	0.005539	0.950051	0.005830	0.9954
CEE	-0.905131	0.353115	-2.563274	0.0208
R-squared	0.331078	Mean dependent var		13.833500
Adjusted R-squared	0.205655	S.D. dependent var		0.601308
SE of regression	0.535922	Akaike info criterion		1.767201
Sum squared resid	4.595400	Schwarz criterion		1.966347
Log likelihood	-13.672010	Hannan-Quinn criter.		1.806076
F-statistic	2.639688	Durbin-Watson stat		2.572423
Prob(F-statistic)	0.084949			

Table 3. CAR Regression Test

Table 3 presents the regression results for CAR. The model lacks a statistically significant fit (F-statistic p = 0.084949 > 0.05), and none of the independent variables have significant effects on CAR. Thus, it can be inferred that the constant C value of 14.28088 implies that if the variables HCE, SCE, and CEE remain unchanged, they will increase by 14.28088. The coefficient value for HCE is 0.116441, indicating that an increase of 1 rupiah in HCE will result in an increase of 0.116441 percent in CAR, assuming other variables are held constant (the estimation results are not affected). The coefficient value for SCE is 0.005539, suggesting that an increase of 1 rupiah in SCE will lead to an increase of 0.005539 percent in CAR, assuming other variables remain constant (the estimation results are not affected). The coefficient value for CEE is -0.905131, signifying that an increase of 1 rupiah in CEE will result in a decrease of 0.905131 percent in CAR, assuming other variables remain constant (the estimation results are affected).

Coefficient of Determination (Adj. R^2)

The coefficient of determination signifies the proportion of the variance in the dependent variable explained by the

independent variables in the model. An R-squared value of 0.4899 in the FDR model indicates that the independent variables (HCE, SCE, and CEE) collectively explain 48.99% of the variation in FDR. The remaining 51.01% of the variation is attributed to other factors not included in the model or error terms. Similarly, the Adjusted R^2 value of 0.2056 in the CAR model suggests that the model explains 20.56% of the variation in CAR, with the remaining 79.44% explained by other factors.

Hypothesis Testing

T-test (Partial Significance)

The t-test assesses the statistical significance of the estimated coefficients for each independent variable. In the FDR model, the p-value for the CEE coefficient is 0.0003, indicating that CEE's effect on FDR is statistically significant at the 5% level. The p-values for HCE and SCE are greater than 0.05, signifying their effects on FDR are not statistically significant. Similarly, in the CAR model, the p-value for the CEE coefficient is 0.0208, indicating statistical significance, while HCE and SCE are not significant.

F-test (Simultaneous Significance)

The F-statistic test evaluates the joint significance of all independent variables in explaining the dependent variable. In the FDR model, the F-statistic p-value (0.003) is less than 0.05, indicating that the model is jointly significant. In the CAR model, the F-statistic p-value (0.084949) is greater than 0.05, implying that the model is not jointly significant at the 5% level.

These findings suggest that the chosen model explains a significant portion of the variation in FDR, with CEE being the only independent variable with a statistically significant individual effect. The CAR model does not jointly explain a significant portion of the variation in the data, and none of the individual independent variables have statistically significant effects.

Discussion

The presented regression analysis examines the factors influencing the Financing to Deposit Ratio (FDR) and Capital Adequacy Ratio (CAR) of two Islamic banks (BSI and BMI) over a specific period (2016-2020). The results offer insights into the relationship between human capital efficiency (HCE), structural capital efficiency (SCE), and capital employed efficiency (CEE) and these key financial ratios. The analysis offers valuable insights applicable to the post-pandemic era.

The pre-pandemic period is considered a normal period for both banks, similar to the post-pandemic reality referred to as the "new normal" era. This study focuses on the pre-pandemic period due to insufficient observations for conducting robust research in the post-pandemic period, which was officially started on June 21, 2023. Therefore, the pre-pandemic data, representing a normal period, is considered representative and can provide suggestions for the post-pandemic "new normal" period.

By using pre-pandemic data, the study aims to draw conclusions and offer recommendations that can be applied to the post-pandemic era, as both periods represent relatively stable economic conditions for the banks. This approach allows for a more comprehensive understanding of the relationships between HCE, SCE, CEE, and the financial ratios (FDR and CAR) during the normal pre-pandemic period, which can provide guidance and suggestions for managing these factors in the "new normal" post-pandemic environment. The details of the discussion are as follows:

Pre-Pandemic Context

The model for the financing-to-deposit ratio (FDR) demonstrates a good fit, explaining nearly half (48.99%) of the variation in the data. This indicates that Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE) collectively play a significant role in determining the ability of Islamic banks to distribute funds to the public relative to their deposits. Among the independent variables, only CEE has a statistically significant negative impact on FDR. This suggests that during the observed period, CEE played a key role in determining the FDR of Islamic banks. Increased efficiency in capital usage may have led to two main outcomes. Firstly, it may have resulted in conservative lending practices, with banks holding onto more deposits as a buffer. This reflects a cautious approach to lending even in a relatively stable economic environment. Secondly, efficient capital utilization could indicate that banks were prioritizing specific investment opportunities, potentially impacting the allocation of funds for financing activities.

It is noteworthy that HCE and SCE do not have significant effects on FDR in this model. This suggests that within the observed timeframe (pre-pandemic period), human capital and structural capital efficiency may not be primary drivers of variations in the banks' ability to distribute funds.

Moving on to the model for the Capital Adequacy Ratio (CAR), it does not achieve a statistically significant fit. This indicates that the chosen independent variables (HCE, SCE, and CEE) collectively do not explain a significant portion of the variation in the banks' CAR. Additionally, none of the individual independent variables have statistically significant effects on CAR. This suggests that factors beyond HCE, SCE, and CEE likely play a more prominent role in determining the capital adequacy of banks. These factors could include external regulatory requirements, risk management strategies, and overall economic conditions. The lack of significant influence from HCE, SCE, and CEE on CAR suggests that factors beyond these internal efficiency measures were more crucial for maintaining capital adequacy during the observed pre-pandemic period. These factors may include regulatory requirements, risk management strategies, and the stability of the economic environment.

The findings suggest that Capital Employed Efficiency (CEE) has a significant negative impact on FDR in the pre-pandemic era. This implies that as Islamic banks became more efficient in utilizing their capital, they may have held onto a larger portion of deposits or become more selective in financing activities, leading to a lower FDR.

Relevance to the Post-Pandemic Era

The COVID-19 pandemic has had a profound impact on the economic landscape, presenting both challenges and

opportunities for Islamic banks. In the post-pandemic era, the focus on capital efficiency (CEE) becomes even more crucial. Banks may need to exercise greater caution with their capital due to two main factors. Firstly, there is an increased risk of loan defaults. The pandemic has led to a rise in non-performing loans, which requires banks to hold onto more capital as a buffer. This is necessary to mitigate the potential losses resulting from these defaults. Secondly, economic uncertainty persists in the post-pandemic recovery. Banks may prioritize efficient capital allocation to navigate this uncertainty. By ensuring that capital is allocated effectively, banks can better manage risks and adapt to the changing economic landscape.

While the factors influencing capital adequacy ratio (CAR) pre-pandemic, such as regulations, risk management, and economic conditions, remain important, adjustments may be necessary in the post-pandemic era. Regulatory bodies may need to modify capital adequacy requirements in response to the pandemic's impact on the banking sector. Additionally, banks may need to refine their risk management strategies to address new risks arising from the economic fallout of the pandemic. The overall pace of post-pandemic economic recovery will also influence the level of capital adequacy that banks need to maintain.

The pandemic has significantly affected economic activity and financial institutions globally. Islamic banks may have adopted stricter capital management practices post-pandemic due to increased uncertainty. This aligns with the pre-pandemic finding of a negative relationship between CEE and loan defaults, suggesting a potential continuation of this trend. However, the post-pandemic era may introduce new dynamics. Governments and central banks may encourage lending to stimulate economic recovery, potentially leading to a rise in loan defaults. Islamic banks may also need to adapt their financing strategies to cater to the evolving needs of businesses and individuals in the post-pandemic period.

The results indicate that the average financing-to-deposit ratio (FDR) of two banking units is reasonable in maintaining liquidity. The capital adequacy ratio (CAR) for these units is also relatively good, with average values of 13.83% and 14.00% respectively. This suggests that these banks have the ability to cover the decline in assets resulting from bank losses caused by risky assets. These findings support previous studies conducted by Wahyudin (2023), Fadila and Pangestuti (2022), Ghifar et al. (2022), and (Kocaoğlu, 2010).

The COVID-19 pandemic has brought about significant changes to the economic landscape, posing challenges and opportunities for Islamic banks. The emphasis on capital efficiency becomes even more crucial in the post-pandemic era. Banks may need to exercise caution with their capital due to increased loan defaults and economic uncertainty. While pre-pandemic factors influencing capital adequacy remain important, adjustments may be necessary in response to regulatory changes and the need for enhanced risk management. Islamic banks may also need to adapt their financing strategies to cater to the evolving needs of businesses and individuals in the post-pandemic period.

The regression model for FDR demonstrated a good fit, explaining approximately 49% of the variance. This suggests that HCE, SCE, and CEE collectively play a significant role in determining the FDR of Indonesian Islamic banks. Among these variables, only CEE had a statistically significant negative impact on FDR. This indicates that increased efficiency in capital usage led to more conservative lending practices, with banks retaining a larger portion of deposits as a buffer. This cautious approach likely reflects a strategy to mitigate potential risks and maintain liquidity, even during a stable economic

environment. The insignificance of HCE and SCE in influencing FDR suggests that human capital and structural capital efficiency were not primary drivers of financing activities during the pre-pandemic period. This finding underscores the need for further investigation into other potential factors influencing FDR, such as market demand, competitive dynamics, and the specific nature of financing products offered. Conversely, the regression model for CAR did not achieve a statistically significant fit, indicating that HCE, SCE, and CEE did not collectively explain a substantial portion of the variance in CAR for the studied banks. This suggests that other factors, such as regulatory requirements, risk management strategies, and macroeconomic conditions, played a more dominant role in determining capital adequacy during the pre-pandemic period.

Conclusion

This study investigated the determinants of the Financing to Deposit Ratio (FDR) and Capital Adequacy Ratio (CAR) in two Indonesian Islamic banks, Bank Syariah Indonesia (BSI) and Bank Muamalat Indonesia (BMI), for the pre-pandemic period of 2016-2020. The analysis employed Ordinary Least Squares (OLS) regression to examine the influence of Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE) on these key financial ratios. The model for FDR achieved a good fit, explaining nearly half (48.99%) of the variation in the data. Capital Employed Efficiency (CEE) emerged as the only statistically significant factor, exhibiting a negative relationship with FDR. This suggests that increased efficiency in capital utilization by the banks might be associated with a lower ratio of financing to deposits, potentially due to more conservative lending practices or selective financing activities.

The model for CAR did not achieve a statistically significant fit, indicating that the chosen variables (HCE, SCE, and CEE) do not collectively explain a significant portion of the variation in this ratio. Additionally, none of these variables had a statistically significant individual effect on CAR. This implies that factors beyond these internal efficiency measures, such as regulatory requirements, risk management strategies, and economic conditions, likely play a more prominent role in determining the capital adequacy of Islamic banks.

The study acknowledges several limitations, including the specific time period, limited sample size, and potential omission of other relevant variables. Future research can build upon these findings by:

1. Expanding the sample size and timeframe to enhance generalizability.
2. Investigating the influence of additional variables on FDR and CAR, such as market competition, regulatory changes, and economic fluctuations.
3. Exploring the impact of the COVID-19 pandemic on the relationships between HCE, SCE, CEE, FDR, and CAR in Islamic banks.

By addressing these limitations and incorporating a more comprehensive set of variables, future research can provide deeper insights into the complex dynamics influencing the financial performance of Islamic banks, particularly in the evolving post-pandemic economic landscape. This will help stakeholders better understand how intellectual capital components, regulatory factors, risk management strategies, and the broader economic environment interact to shape the

liquidity and capital adequacy of Islamic banks.

The findings of this study offer valuable implications for Islamic banks, regulators, and policymakers. They highlight the importance of efficient capital utilization in managing financing activities and maintaining healthy FDR levels. The lack of significant influence from HCE and SCE on FDR and CAR suggests that Islamic banks may need to focus on other strategic areas, such as adapting to regulatory changes, enhancing risk management, and navigating economic uncertainties, to ensure their financial stability and competitiveness in the post-pandemic era.

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