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Effect of Asset Quality, Liquidity, Profitability on Capital Adequacy Ratio with Operational Efficiency as Intervening Variables in Islamic Banks Listed on the Indonesia Stock Exchange

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Abstract
This study aims to determine and analyze the effect of asset quality, liquidity, profitability on the capital adequacy ratio with operational efficiency as an intervening variable in Islamic Banks Listed on the Indonesia Stock Exchange for the 2016-2019 period. The number of samples in this study were 8 banking companies that met the specified criteria, namely Islamic Commercial Banks that issued financial reports in the analysis period. In this study, the test uses the classical assumption test, while the hypothesis test uses Path Analysis using the SPSS version 18 computer program. The results show that asset quality and liquidity have a significant effect on the capital adequacy ratio, while profitability and operational efficiency have no significant effect on the adequacy ratio. Asset quality and liquidity have no significant effect on operational efficiency, while profitability has a significant effect on operational efficiency.

Keywords*: asset quality; liquidity; profitability; operational efficiency; capital adequacy ratio.*

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Banking is an institution that carries out the main function as a financial intermediary between parties who have funds and parties who need funds and as an institution that functions to facilitate the flow of payments (Qomariah, 2015).There are two types of banking operational systems in Indonesia, namely conventional banks and Islamic banks. According to Law no. 21 of 2008 concerning Sharia Banking, Sharia Bank is a bank that carries out business activities based on sharia principles, or Islamic legal principles as regulated in the fatwa of the Indonesian Ulema Council. The implementation of the regulatory and supervisory functions of sharia banking from the aspect of implementing prudential principles and good governance is carried out by the OJK, as is the case with conventional banking, but with a regulation and supervision system that is adjusted to the peculiarities of the sharia banking operational system. The problem of fulfilling sharia principles is indeed a unique thing for Islamic banks, because essentially Islamic banks are banks that offer products that comply with sharia principles. Compliance with sharia principles is very fundamental because this is the basic reason for the existence of Islamic banks. In addition, compliance with sharia principles is seen as the strength of Islamic banks. Sharia Banking in conducting its business activities is based on Sharia Principles, economic democracy, and the principle of prudence. Sharia banking aims to support the implementation of national development in order to improve justice, togetherness, and equitable distribution of people's welfare.

The increasing global uncertainty that has been going on since the previous few years, in 2019 Indonesia's financial system stability was maintained even though the banking function as an intermediary had not fully recovered because banks were still being cautious in extending credit and the business world was still holding back on expansion. In the face of uncertainty in global financial markets as well as in the domestic economy, banks continue to maintain capital resilience from risks that may be faced, such as the risk of bad loans, which can cause the company's financial performance to decline.

Based on the results of the Indonesian Banking Statistics published by the OJK as of December 2019, the average capital adequacy ratio as indicated by the Capital Adequacy Ratio (CAR) for the last three years, the banking sector is still in a maintained state despite a decline, where in 2017 the average ratio capital adequacy is 23.18%, in 2018 it is 22.97% and in 2019 it is 22.40%. Good performance of Islamic banks is the main goal of managing company activities. The results of a good company performance must be supported by the adequacy of its capital. Capital is one of the important factors in running a business. Sufficient capital is needed by every company as a reserve to anticipate the risk of loss.

Capital adequacy is also considered to reflect the performance of a company. The company's performance can be seen from the quality of assets owned, liquidity and profitability of the company. In carrying out its functions, banks must maintain their capital adequacy ratio or CAR (BI Law No. 10, 1998). Capital Adequacy Ratio (CAR) is a ratio used to show how much assets or capital a bank has that contains risks (credit, investments, securities, and claims on other banks) (Sorongan, 2020). Several factors that can increase the capital adequacy ratio include asset quality, liquidity, profitability and operational efficiency.

Capital Adequacy Ratio (CAR) is used to measure the minimum capital adequacy where this ratio shows the comparison between the ratio of capital owned by banks, either core or complementary capital with Risk Weighted Assets (RWA) multiplied by the weight according to government regulations (Kasmir, 2010). Banks are required to provide a minimum capital of 8% of the ATMR. Asset quality assessment reflects the ability of bank management in managing its earning assets. Asset quality or earning asset quality is a benchmark used to assess the level of possibility of receiving funds back to be invested in earning assets (principal and interest) based on certain criteria (Latumaerissa, 2017). The quality of assets owned by banks is intended to minimize bad loans and anticipate substandard bills. Research conducted by (Cahyono & Anggraeni, 2015), (Agustini & Wardana, 2018) concluded that asset quality affects capital adequacy. In contrast to the research conducted by (Ubaidullah et al., 2020)which concluded that asset quality had no effect on capital adequacy.

Liquidity is a ratio used to measure a company's ability to pay its short-term debt (Gumanti, 2011). If the growth in the number of loans extended is greater than the growth in the amount of funds raised, the value of the bank's liquidity will be higher. The increase in the value of liquidity was due to the growth in the number of loans being disbursed which was higher than the growth in the amount of funds raised, which would lead to a decrease in the amount of capital adequacy of a bank. The decline in the value of capital adequacy occurs because banks prefer to use existing funds to finance lending rather than increase capital for their operational activities. Research (Agustini & Wardana, 2018) states that liquidity has an effect on capital adequacy.

Profitability is an important ratio in every company, because it is in line with the company's goal of earning profit. Profitability is a comparison between assets and capital owned by the company with the profit that can be generated by the company using the assets and capital. The level of profitability of the company can be used by management in determining policies regarding decisions regarding the problem of meeting the company's financial needs, whether capital adequacy will use assistance or capital from foreign parties on credit or using own capital. Research conducted (Sorongan, 2020), (Putri & Dana, 2018), (Kartika Rusnidita, 2021), (Basse & Mulazid, 2017), (Bukian & Sudiartha, 2016) states that profitability has an effect on capital adequacy. In contrast to research conducted by (Prasetyo & Darmayanti, 2015), (Fatra et al., 2020), (Ubaidullah et al., 2020), (Anjani et al., 2019)which states that profitability has no effect on the capital adequacy ratio company.

The management of the company's financial performance will be more optimal in achieving the main objectives of the company's establishment if it is balanced with good operational efficiency management. Managing the efficiency of bank operations is aimed at enabling banks to run more optimally in serving their customers. Operational efficiency is carried out with the aim of minimizing expenses and maximizing income. Operational efficiency is the ability of banks to reduce the use of operating costs as efficiently as possible in using assets to earn profits (Bukian & Sudiartha, 2016). In the management of operational efficiency, the ratio that is often used to determine how much efficiency a bank has in carrying out its operational activities is operating expenses to operating income (BOPO). Based on the results of previous research conducted by (Anjani et al., 2019) which suggested that business efficiency (BOPO) had a positive and insignificant effect on adequacy. Meanwhile, according to research results from (Agustini & Wardana, 2018) suggest that operational efficiency (BOPO) has a significant positive effect on capital adequacy. (Fatra et al., 2020)concluded that operational efficiency has a significant negative effect on capital adequacy.

Based on the background, theories about asset quality, profitability, liquidity and operational efficiency and capital adequacy ratios as well as previous research that has been done which turns out to be inconsistencies from the research results, the question in this research is how to increase the capital adequacy ratio and operational efficiency of Islamic Banking. listed on the IDX in 2016-2019. While the purpose of this study is to determine the effect of asset quality, liquidity, and profitability on operational efficiency and capital adequacy ratios for Islamic banks listed on the IDX in 2016-2019.

I. Research Methods

The type of research used in this research is descriptive research with a quantitative approach. The quantitative research method is a study that is used as a problem-solving procedure under study, in this case the influence of asset quality, liquidity, and profitability on the capital adequacy ratio with operational efficiency as an intervening variable in Islamic banks listed on the IDX in 2016-2019. The population used in this study were all Islamic banks listed on the Indonesia Stock Exchange in 2016-2019, which were 14 banks. The sample in this study itself is a number of 8 Islamic banks listed on the Indonesia Stock Exchange in 2016-2019. A random sample selection technique (purposive sampling) is used in this study because sampling will be easier and can be

adjusted according to the criteria for selecting the sample to be selected. conducted. The criteria used in this study are as follows:

1. Sharia Commercial Banks that did not experience delisting in the observation period (2016-2019).
2. Complete company financial reports for 2016-2019 are available through the website http://www.idx.co.id.

Table 1: Sample Selection Process and Research Sample

No	Criteria	Number of Companies
1	Sharia Commercial Banks listed on the Indonesia Stock Exchange which are listed in 2016-2019	14
2	Islamic commercial banks that do not publish complete company financial reports during 2016-2019 through the website http://www.idx.co.id	6
	Number of Samples According to Criteria	8

The dependent variable is the main variable that becomes the attraction or focus of research (Ghozali, 2016). The dependent variable in this study is capital adequacy. According to (Munawir, 2014) capital adequacy is an indicator of a bank's ability to cover a decrease in assets as a result of losses suffered by the bank and is used to measure the bank's ability to meet its short-term obligations when billed. In other words, the bank can pay back the disbursement of the depositor's funds when it is billed and can meet the credit request that has been submitted. The level of capital adequacy is used to maintain public confidence in bank performance. Capital adequacy in this study is calculated using the ratio of Capital Adequacy Ratio (CAR).

The intervening variable in this study is operational efficiency. Operational efficiency is the efficiency of the company in using all its assets in generating sales, so that costs can be minimized and maximum profit will be achieved. The more efficiently the company uses its total assets, the smaller the total cost and the larger the net profit. Operational efficiency in this study is proxied using Operating Expenses to Operating Income (BOPO). BOPO is the ratio between the efficiency of a bank in reducing operating costs while carrying out its operational activities with the income obtained from operational activities. BOPO can be calculated by the formula: Operating Expenses / Operating Income.

The independent variable is the variable that is thought to have an effect on the dependent variable. Independent variables are also known as predictive variables or independent variables. There are 3 (three) independent variables in this study, namely: asset quality (X1), liquidity (X2) and profitability (X3). Asset quality or earning asset quality is earnings asset quality which is a benchmark for assessing the probability that funds will be received back to be invested in earning assets (principal including interest) based on certain criteria. Asset quality in this study is proxied by Net invest margin (NIM) and CKPN of financial assets to productive assets. Net invest margin (NIM) is a comparison of the total amount of net profit with the company's total revenue. CKPN is an allowance for impairment losses that must be established by banks in accordance with the laws and regulations and in accordance with the statement of financial accounting standards. CKPN is used to calculate the quality of assets owned by the bank, the lower the reserve for losses, the better the quality of assets owned.

Liquidity is a ratio to measure a bank's ability to meet its short-term obligations when billed. In other words, it can pay back the disbursement of depositors' funds when they are billed and can meet the credit requests that have been submitted (Kasmir, 2010). Loan to Funding Ratio (LFR) is a ratio that measures the composition of the amount of credit given compared to the amount of public funds and own capital used. The banking LFR value can be said to be healthy if it is in the range of 75-85%. The high Loan to Funding Ratio reflects that the bank can carry out its intermediary function well, and can increase profits from the difference between loan interest receipts and deposit interest expenses.

Profitability is a ratio that shows the company's ability to generate profits during a certain period (Munawir, 2014). The profitability of a company is measured by the success of the company and the ability to use its assets productively, thus the profitability of a company can be known by comparing the profits earned in a period with the total assets or total capital of the company. Profitability is an assessment based on the ability of a Bank to create profit or profitability. One of the ratio indicators used to measure profitability is Return On Assets (ROA) and Return on Assets (ROE).

This research was analyzed using path analysis. Based on the formulation of the hypothesis in this study, the path analysis model in this study is as follows: $Y = a + b1\ X1 + b2\ X2 + b3\ X3 + e$ and $Z = a + b1\ X1 + b2\ X2 + b3\ X3 + b4\ Y\ e$. Analysis of the coefficient of determination (R2) was carried out to measure how much the independent variables were able to explain the variation of the dependent variable. The t-test was conducted with the aim of testing the effect of each independent variable on one dependent variable as formulated in a regression equation model. test criteria by showing the magnitude of the value of t and the significance of p. If the results of the analysis show a p value 0.05, the effect of the independent variable on one dependent variable is statistically positive at the alpha level of 5%.

II. Results And Discussion

Descriptive Statistical Analysis Results

The results of descriptive statistical testing of the variables of asset quality (X1), liquidity (X2), profitability (X3), capital adequacy (Y), and operational efficiency (Z) are presented in Table 2.

Table 2. Descriptive Statistical Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
Asset Quality	32	.20	7.72	4.3441	2.28552
Liquidity	32	38.31	76.50	53.8200	8.94178
Profitability	32	-94.01	58.64	4.0753	20.79408
Operational Efficiency	32	81.26	217.40	1.0013	24.42733
Capital Adequacy Ratio	32	12.34	63.13	25.7491	13.19661

Based on the data contained in Table 2, it can be obtained information on the number of research samples as much as 32. The distribution for the asset quality variable the lowest value is 0.20, namely Bank Muamalat in 2018 while the highest value is 7.72, namely Bank BNI Syariah in 2016. The average data Asset quality research is 4.3441 with a data deviation value of 2.28552. The distribution for the liquidity variable, the lowest value is 38.31, namely Bank BRI Syariah in 2016 while the highest value is 76.50, namely Bank Syariah Mandiri in 2017. The average research data for the liquidity variable is 53.82 with a data deviation value of 7.94. The distribution for the profitability variable, the lowest value is -94.01, namely Bank Panin Dubai Syariah in 2017 while the highest value is 58.64, namely Bank Mandiri Syariah in 2019. The average research data for the profitability variable is 4,753 with a data deviation value of 20,759. The distribution for the operational efficiency variable the lowest value is 81.26, namely PT. BNI Syariah Bank in 2019 while the highest score was 217.40, namely BCA Syariah Bank in 2019. The average operational efficiency variable research data was 1.00 with a data deviation value of 24.42. The distribution for the capital adequacy variable, the lowest value is 12.34, namely Bank Panin Dubai Syariah in 2016 while the highest value is 63.13, namely Bank BCA Syariah in 2019. The average value of research data is 25.74 with a data deviation value of 13.19.

Classic Assumption Test Results

Normality test using Kolmogorov-Smirnov. The normality test is said to be fulfilled if the significance value of the calculation results is greater than alpha (5%). By using SPSS, the results of the normality test are presented in Table 3. Based on the data in Table 3, it shows that the significance result of the Kolmogorov-Smirnov one-sample test is more than 0.05, so it can be concluded that the normality test is fulfilled.

Table 3. Normality Test Results

Variable Relationship	Asymp. Sig, (2-tailed)	Information
X1, X2, X3, Z → Y	0.986	Normal Distributed
X1, X2, X3 → Z	0.124	Normal Distributed

If there is a fairly high correlation between independent variables (generally above 0.90 or 90%), it can be said that multicollinearity is detected. If the tolerance value is > 0.10 and the VIF (variance inflation factor) value 10, it is said to be free of multicollinearity. The results of the multicollinearity test are presented in Table 4. Based on the data in Table 4, the variables of asset quality, liquidity, profitability, and operational efficiency in the first model; and asset quality, liquidity, and profitability in the second model have a tolerance value of more than 0.10 and a VIF value of less than 10. Thus, it can be concluded that the model has been met, namely free of multicollinearity. Based on the data in Table 4, the variables of asset quality, liquidity, profitability, and operational efficiency in the first model; and asset quality, liquidity, and profitability in the second model have a tolerance value of more than 0.10 and a VIF value of less than 10. Thus, it can be concluded that the model has been met, namely free of multicollinearity.

Table 4. Multicollinearity Test Results

Model	Variable	Tolerance	VIF	Information
X1, X2, X3, Z → Y	Asset Quality (X1)	0.852	1.174	Multicollinearity Free
	Liquidity (X2)	0.859	1.164	Multicollinearity Free
	Profitability (X3)	0.618	1.617	Multicollinearity Free
	Operational Efficiency (Z)	0.600	1.667	Multicollinearity Free
X1, X2, X3 → Z	Asset Quality (X1)	0.877	1.140	Multicollinearity Free
	Liquidity (X2)	0.879	1.137	Multicollinearity Free

Profitability (X3)	0.997	1.003	Multicollinearity Free

Heteroscedasticity test was conducted to see whether in a regression model there was an inequality of variance from the residuals of one observation to another. If the variance of the residuals of another observation remains, it is called homoscedasticity and if the variance is different it is called heteroscedasticity. A good regression model is that there is no heteroscedasticity. One of the most accurate ways to detect heteroscedasticity is to use the glejser test. The Glejser test was carried out by regressing the independent variable with the absolute residual value. This test is carried out using the significance value (sig), where the value is less than 0.05 then heteroscedasticity occurs and if the value is more than 0.05 then there is no heteroscedasticity. The results of the heteroscedasticity test are presented in Table 5. Based on the data in Table 5, it shows that the variables of asset quality, liquidity, profitability, and operational efficiency in the first model; and asset quality, liquidity, and profitability in the second model have a sig value on the glejser test of more than 0.05. Thus, it can be concluded that the model has been fulfilled, that is, there is no heteroscedasticity.

Table 5. Heteroscedasticity Test Results

Model	Variable	Sig.	Information
X1, X2, X3, Z → Y	Asset Quality (X1)	0.518	Homoscedasticity
	Liquidity (X2)	0.534	Homoscedasticity
	Profitability (X3)	0.228	Homoscedasticity
	Operational Efficiency (Z)	0.218	Homoscedasticity
X1, X2, X3 → Z	Asset Quality (X1)	0.095	Homoscedasticity
	Liquidity (X2)	0.538	Homoscedasticity
	Profitability (X3)	0.958	Homoscedasticity

This autocorrelation test aims to test whether in the linear regression model there is a correlation between user errors in period t and errors in period t1 (previous). The method that is often used is the Durbin-Watson test (dw test), provided that when dw lies between dU and (4-Du) then the value shows no autocorrelation. The value of dU can be seen in the Durbin-Watson table. The results of the autocorrelation test are presented in Table 6. Based on the data in Table 6., in the first model the Durbin-Watson value of 2,068 is between the limits of 1.7323 (dU) and 2.2677 (4-dU). While in the second model the Durbin-Watson value of 1.922 is between the limits of 1.6505 (dU) and 2.3495 (4-dU). Thus, it can be concluded that the model has been fulfilled, that is, there is no autocorrelation.

Table 6. Autocorrelation Test Results

Model	Durbin-Watson	dU	4-dU	Information
X1, X2, X3, Z → Y	2.068	1.7323	2.2677	No autocorrelation
X1, X2, X3 → Z	1.922	1.6505	2.3495	No autocorrelation

Path Analysis Testing

Based on the results of testing the effect of asset quality, liquidity, profitability on capital adequacy with operational efficiency as an intervening presented in Table 7.

Table 7. Regression Path Analysis Test Results

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	-29.412	14.273		-2.061	.049
	Asset Quality	3.881	.672	.672	5.771	.000
	Liquidity	.953	.171	.645	5.565	.000
	Profitability	-.002	.087	-.004	-.028	.978
	Operational Efficiency	-.129	.075	-.240	-1.725	.096
	R Square	= 0.688		F count	= 14.878	
	Adj R Square	= 0.642		Sig. F	= 0.000	

2	(Constant)	128.165	26.587		4.821	.000
	Asset Quality	-1.510	1.670	-.141	-.904	.374
	Liquidity	-.345	.426	-.126	-.809	.425
	Profitability	-.713	.172	-.607	-4.141	.000
	R Square = 0.400		F Count = 6.228			
	Adj R Square = 0.336		Sig. F = 0.002			

Coefficient of Determination Results Total

The coefficient of total determination shows how much the dependent variable can be explained by the independent variables in the research model. Based on the calculation results show that the information contained in 81.2% can be explained by the model, and the remaining 18.8% is explained by other variables in the model.

Hypothesis Testing Results

Hypothesis testing was conducted to determine the effect between variables in this study. The results of the path analysis test using SPSS can be done by looking at the significance value with the criteria if the significance value (p-value) < 0.05 then the relationship between variables in path analysis is said to have a significant effect. If the significance value of p-value > 0.05 then the relationship between variables in the path analysis is said to be insignificant. The results of testing the research hypothesis are presented in Table 8.

Table 8. Hypothesis Testing Results

Relationship Between Variables		Path Coefficient (*Beta*)	Sig. (*p-value*)	Information
Asset Quality	Capital Adequacy	0.672	0.000	Significant
Liquidity	Capital Adequacy	0.645	0.000	Significant
Profitability	Capital Adequacy	-0.004	0.978	Not significant
Operational Efficiency	Capital Adequacy	-0.240	0.096	Not significant
Asset Quality	Operational Efficiency	-0.141	0.374	Not significant
Liquidity	Operational Efficiency	-0.126	0.425	Not significant
Profitability	Operational Efficiency	-0.607	0.000	Significant

Based on the results of the direct influence test presented in Table 8., it can explain the hypothesis of this study. The first hypothesis states that asset quality has a significant effect on capital adequacy. The results of the path analysis show that the path coefficient (beta) is positive, which is 0.672 with sig. of 0.000 which means sig. this path is less than 0.05. Thus, it can be concluded that asset quality has a positive and significant effect on capital adequacy. Therefore, the first hypothesis (H1) can be accepted. The second hypothesis states that liquidity has a significant effect on capital adequacy. The results of the path analysis show that the path coefficient (beta) is positive, which is 0.645 with sig. of 0.000 which means sig. this path is less than 0.05. Thus, it can be concluded that liquidity has a positive and significant effect on capital adequacy. Therefore the second hypothesis (H2) can be accepted. The third hypothesis states that profitability has a significant effect on capital adequacy. The results of the path analysis show that the path coefficient (beta) is -0.004 with sig. of 0.978 which means sig. this path is more than 0.05. Thus it can be concluded that profitability has no effect on capital adequacy. Therefore, the third hypothesis (H3) can be rejected. The fourth hypothesis states that operational efficiency has a significant effect on capital adequacy. The results of the path analysis show that the path coefficient (beta) is -0.240 with sig. of 0.096 which means sig. this path is more than 0.05. Thus, operational efficiency has no effect on capital adequacy. Therefore, the fourth hypothesis (H4) can be rejected. The fifth hypothesis states that asset quality has a significant effect on operational efficiency. The results of the path analysis show that the path coefficient (beta) is -0.141 with sig. of 0.374 which means sig. this path is more than 0.05. Thus, it can be concluded that asset quality has no effect on operational efficiency. Therefore, the fifth hypothesis (H5) can be rejected. The sixth hypothesis states that liquidity has a significant effect on operational efficiency. The results of the path analysis show that the path coefficient (beta) is -0.126 with sig. of 0.425 which means sig. this path is more than 0.05. Thus it can be concluded that liquidity has no effect on operational efficiency. Therefore, the sixth hypothesis (H6) can be rejected. The seventh hypothesis states that profitability has a significant effect on operational efficiency. The results of the path analysis show that the path coefficient (beta) is negative, which is -0.607 with sig. of 0.000 which means sig. this path is less than 0.05. Thus, it can be concluded that profitability has a negative and significant effect on operational efficiency. Therefore the seventh hypothesis (H7) is acceptable but negative.

III. Discussion

Effect of Asset Quality on Capital Adequacy Ratio

The results of the path analysis show that the path coefficient (beta) is positive, which is 0.672 with sig. of 0.000 which means sig. this path is less than 0.05. Thus, it can be concluded that asset quality has a positive and significant effect on capital adequacy. Quality and productive assets will generate company profits. Accuracy in the use of assets in accordance with the target to realize the main purpose of establishing the company, namely profit. Earning sufficient profits will reflect the adequacy of capital owned by the company. the results of this study support previous research conducted (Bukian & Sudiartha, 2016), (Putri & Dana, 2018).This research is not in line with the research conducted by (Fitrianto & Mawardi, 2006), (Lia & Latief, 2020).

Effect of Liquidity on Capital Adequacy Ratio

The results of the path analysis show that the path coefficient (beta) is positive, which is 0.645 with sig. of 0.000 which means sig. this path is less than 0.05. Thus it can be concluded that liquidity has a positive and significant effect on capital adequacy. This means that this rejects the logic that the higher the loan to funding ratio will reduce the CAR value because banks use existing funds for lending. The results of this study support previous research conducted by (Agustini & Wardana, 2018). This research is not in line with the research conducted (Kartika Rusnidita, 2021).

Effect of Profitability on Capital Adequacy Ratio

The results of the path analysis show that the path coefficient (beta) is -0.004 with sig. of 0.978 which means sig. this path is more than 0.05. Thus it can be concluded that profitability has no effect on capital adequacy. Supports the results of research (Bukian & Sudiartha, 2016) which states that profitability has no effect on the capital adequacy ratio. Profitability has no effect on capital adequacy due to the increase and decrease in the CAR ratio which is influenced by many factors so that a high ROA and ROE ratio that reflects high operating profit does not always lead to an increase in the CAR value. The CAR value component does not only come from profit, but the CAR value can also come from capital deposits from bank owners. Although profit is one component that can increase the CAR value. On the other hand, if ROA and ROE have decreased, it means that the company's profit has also decreased, not necessarily causing a decrease in the CAR value. Other studies that also discuss the problem of profitability with CAR are: (Putri & Dana, 2018), (Kartika Rusnidita, 2021), (Basse & Mulazid, 2017), (Fitrianto & Mawardi, 2006), (Lia & Latief, 2020), (Utami & Tasman, 2020), (Anjani et al., 2019), (Sorongan, 2020), (Ubaidullah et al., 2020), (Agustini & Wardana, 2018), (Cahyono & Anggraeni, 2015), (Fatra et al., 2020).

Effect of Operational Efficiency on Capital Adequacy Ratio

The results of the path analysis show that the path coefficient (beta) is -0.240 with sig. of 0.096 which means sig. this path is more than 0.05. Thus, operational efficiency has no effect on capital adequacy. This is because operating income tends to occur more often than operating costs, operational costs usually occur in a matter of months or years, but operating income occurs at any time, such as; interest income, as well as other operating income. Although operational costs are often financed by operating income, a bank that can control its operational costs will get maximum profit, this is because the bank's operating income is more than the operating costs incurred, this excess can later increase the bank's capital so that operational efficiency does not affect capital adequacy.

Effect of Asset Quality on Capital Adequacy Ratio through Operational Efficiency

The results of the path analysis show that the path coefficient (beta) is -0.141 with sig. of 0.374 which means sig. this path is more than 0.05. Thus, it can be concluded that asset quality has no effect on operational efficiency. This means that the existence of quality assets and the existence of bank operational efficiency does not affect the existence of capital adequacy, because the use of operational costs is generally financed by operating income which is more in number.

Effect of Liquidity on Capital Adequacy Ratio through Operational Efficiency

The results of the path analysis show that the path coefficient (beta) is -0.126 with sig. of 0.425 which means sig. this path is more than 0.05. Thus it can be concluded that liquidity has no effect on operational efficiency. This means that the distribution of funds for the loan to funding ratio and the presence of liquid assets to total assets which is getting higher and balanced with bank operational efficiency does not affect capital adequacy because capital adequacy is caused by other factors.

Effect of Profitability on Capital Adequacy Ratio through Operational Efficiency

The results of the path analysis show that the path coefficient (beta) is negative, which is -0.607 with sig. of 0.000 which means sig. this path is less than 0.05. Thus, it can be concluded that profitability has a negative and significant effect on operational efficiency. This means that the bank's ability to earn profits through the use of operating costs and operating income can affect capital adequacy. The more profit obtained by using operational costs, the more will reduce the value of capital adequacy and vice versa.

IV. Conclusions And Recommendations

Based on the results of the data analysis and discussion above, this study can conclude several things, namely: 1) asset quality has a significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019; 2) liquidity has a significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019; 3) Profitability has no significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019; 4) Operational efficiency has no significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019; 5) Asset quality through operational efficiency has no significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019; 6) Liquidity through operational efficiency has no significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019; 7) Profitability through operational efficiency has a significant effect on the capital adequacy ratio of Islamic Banks listed on the IDX in 2016-2019.

Based on the conclusion, the suggestion from this research is that banking companies on the Indonesia Stock Exchange are expected to always maintain and increase the level of capital adequacy, so that it is expected to improve banking financial performance. Banking companies must also be careful in adding additional capital at any time because it can lead to a decrease in CAR due to high NPLs. Thus, it is necessary to have better management to manage the stability of capital adequacy. Companies must reduce substandard, doubtful and bad loans so that ROA and ROE performance can increase and CAR is in good condition or can be said to be safe. For further researchers, it is recommended to expand the scope of research on the effect of banking financial ratios on CAR by using other ratios besides the ratios in this study.

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