Capital Adequacy Ratio, Loan to Deposit Ratio, and Efficiency Ratio on Return on Assets

Banking Companies In Indonesia Stock Exchange

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Abstract: This study aims to analyze how the influence of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), and Efficiency Ratio (ER) to Return on Assets (ROA) in banking companies in Indonesia listing on Indonesia Stock Exchange (IDX) 2015-2016. The population of this study are all 31 banking companies listed on BEI. The required data is secondary data in the form of financial statements of each bank in 2015-2016. To find out the influence of independent variable (X) to dependent variable (Y) multiple linear regression analysis technique is applied. The result shows that the variable of CAR, LDR, ER of banking company that are listed in BEI year 2015-2016 have an effect on ROA and have coefficient mark corresponding to theory.

1 INTRODUCTION

One of the ratios that needs to be studied in connection with banking performance is Capital Adequacy Ratio (CAR) which is a ratio showing how far all bank assets that contain risks (credit, investments, securities, bills with other banks) are financed from the bank's own capital funds, in addition to obtaining funds from sources outside the bank, such as public funds, loans (debt), and others.

Despite supervision by Bank Indonesia, there is still an unhealthy performance of banks, such as the Bank Century case. In November 2009, Bank Indonesia established Century Bank under special surveillance. Because the CAR is below the standard that is set by Bank Indonesia, which is equal to 8%. The situation is caused by the many securities of foreign currency maturity and default. As a result, the CAR of this bank dropped drastically to minus 3.53%. In addition to CAR, Loan to Deposit Ratio (LDR) as one of the liquidity indicators of a bank is used to determine the ability of a bank in fulfilling its immediate due of short-term obligations with its current assets.

Based on BI regulations, the recommended LDR ratio is between 85% - 110%. The LDR indicates the amount of liquid funds provided by the bank to meet the withdrawals of its customers. The greater the

funds provided make the bank better, because it is able to meet customer demand (Dendawijaya, 2009). In addition to CAR and LDR, Efficiency Ratio (ER) is also important to be studied. Any increase in operational costs will result in a decrease in profit before taxes and will eventually lower the bank's profit (Dendawijaya, 2009). Thus, the smaller this ratio means the more efficient the operational costs incurred by the bank.

Furthermore, Return On Assets (ROA) is also important to review. Because, according to Dendawijaya (2009) in determining the health of a bank, Bank Indonesia is more concerned with the judgement of ROA. A bank can be included in the healthy category if it has a minimum ROA ratio of 1.5%. ROA is useful to measure the effectiveness of banks when generating profits by using the assets they have. In other words, this ratio is used to measure the ability of bank management in obtaining profit as a whole. Based on the explanation above, the purpose of this research is to analyze how the influence of capital adequacy ratio, loan to deposit ratio, and efficiency ratio to return on assets in banking in Indonesia which are listed in BEI Year 2015-2016.

2 METHOD

The population of this study is all banking companies listed on BEI, about 31 Banks. Thus, this research is a census study. The required data in this study are secondary data in the form of financial statements of each bank in 2009-2010. The data are obtained through access to http://www.idx.co.id (Indonesia Stock Excahnge, 2010).

The operational definition of these research variables and their measurements are presented in Table 1 below.

Table 1: Operational Definition of Variable and Measurement.

Variable	Operational Definition	Measurement indicator refers to (SE BI No.6/23/ DPNP/2004)	Measurement Scale
Return On Assets (ROA) [Y]	showing the management ability in managing assets to gain profit	$ROA = \dfrac{\text{Laba setelah pajak}}{\text{Total assets}} \times 100\%$	Ratio
Capital Adequacy Ratio (CAR) [X1]	Showing how much the total assets of banks that contain risks (credit, investments, securities, bills with other banks) are financed from their own capital in addition to obtaining funds from sources outside the bank.	$CAR = \dfrac{\text{Modal sendiri}}{\text{ATMR*}} \times 100\%$	Ratio
Loan to Deposit Ratio (LDR) [X2]	Showing the ability of banks to pay back the funds collected from the community by relying on credit given as a source of liquidity.	$LDR = \dfrac{\text{Total kredit yang disalurkan}}{\text{Total dana yang dihimpun}} \times 100\%$	Ratio
Efficiency Ratio (ER) [X3]	Showing the ability of bank management in controlling operational costs to operational income.	$ER = \dfrac{\text{Biaya operasional}}{\text{Pendapatan operasional}} \times 100\%$	Ratio

The hypothesis of this study was tested using t-test, which is partial regression coefficient test by comparing the significance value of t-test with alpha 5% (Ghozali, 2006). If the significance value of the t-test is smaller than the 5% alpha, then the proposed hypothesis is accepted. Conversely, if the value of t-test significance shows greater than 5% alpha, then the proposed hypothesis is rejected.

3 RESULTS

The results of the classic multicollinearity assumption test are presented in Table 3. It appears that VIF VALUE variable CAR = 2.766, LDR = 1.694, and ER = 1.926 show smaller 10. This indicates that MULTICOLLINEARITY DOES NOT HAPPEN.

The results of the classic heteroscedasticity assumption test are presented in Figure 1. In the figure it appears that the plot graph shows irregular or does not form a particular pattern. This indicates that it HETEROSKEDASTICITY DOES NOT HAPPEN.
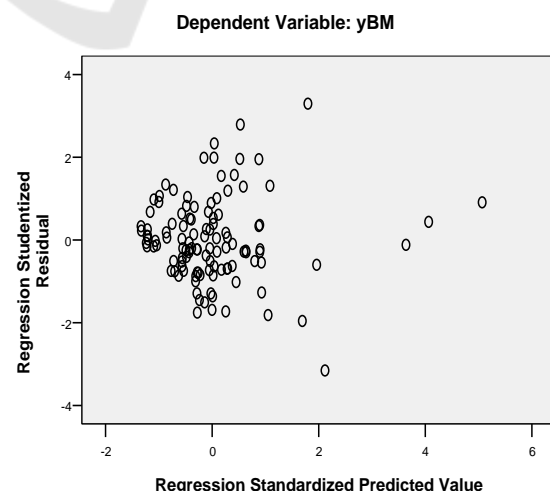

Figure 1: Scatterplot Graph.

The results of the classic autocorrelation assumption test are presented in Table 2. In the Table it appears that the Durbin Watson value of 1.475 lies between the lower limit of 1.319 and the upper limit of 1.681 in the Durbin Watson table. This indicates that NO AUTOCORRELATION HAPPENS.

Regression analysis results are presented in the following tables.

Table 2: Model Summary.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,790[a]	,624	,605	,62362	1,467

a. Predictors: (Constant), ER, LDR, CAR

b. Dependent Variable: ROA

Table 3: ANOVA.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37,486	3	12,495	32,130	,000[a]
	Residual	22,556	58	,389		
	Total	60,042	61			

a. Predictors: (Constant), ER, LDR, CAR

b. Dependent Variable: ROA

Table 4: Coefficients.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	11,173	1,335		8,370	,000		
	CAR	,048	,018	,353	2,637	,011	,362	2,766
	LDR	,047	,012	,401	3,830	,000	,590	1,694
	ER	-,078	,016	-,548	-4,909	,000	,519	1,926

a. Dependent Variable: ROA

Based on Table 1 - Table 4 above, it can be interpreted that:

R-square value of 0.624 indicates that CAR, LDR and ER can explain ROA change of 62.4 percent. The significance value of the F-test of 0.000 indicates that CAR, LDR and ER simultaneously affect the ROA. The significance value of the T-Test for CAR 0.011 is 0.05 smaller indicates that CAR affects ROA. The CAR regression coefficient is positive. This indicates that the relationship between CAR and ROA is positive. The significance value of the T-Test for LDR 0.000 is smaller than 0.05 indicating that the LDR affects the ROA. The LDR regression coefficient is positive. This indicates that the LDR and ROA relationship is positive. The significance value of the T-Test for ER 0,000 is smaller by 0.05 indicating that ER affects ROA. The regression coefficient of ER is negative. This indicates that the ER and ROA relationships are negative.

4 DISCUSSION

4.1 Effect of CAR to ROA

The result of regression analysis shows that the significance value of T-Test for CAR 0.011 is 0.05 smaller indicating that CAR has an effect on ROA. The CAR regression coefficient is positive. This indicates that the relationship between CAR and ROA is positive. Thus, the first hypothesis in the study is accepted.

The results of this study indicate that the bank that became the object of this study has the ability in terms of capital to maintain the possibility of the risk of loss of business activities that affect the profitability (profit) generated by those domestic banks. It can also be assumed that the domestic banks that become the object of research is said to be healthy because it has funds that can cover the risk of losses caused in bank operations. Efficient funding will occur when companies have optimal capital. Optimal capital structure is a capital structure that can minimize the cost of capital use, thereby maximizing the value of the company The results of this study indicate that the greater the CAR then the greater ROA obtained by the bank, because the greater the CAR the higher capital ability of banks in reducing the risk of losses inflicted.

The results of this study support Ervani's (2010) research that risky assets tend to limit the amount of capital available in profitable activities. For this reason, the regulator, in this case Bank Indonesia sees the capital ratio as the bank's ability to keep the bank from bank failures and maintain public confidence, both of them will affect the performance of profit profits of go public banks in Indonesia.

4.2 Effect of LDR to ROA

The result of regression analysis shows that the significance value of T-Test for LDR 0.000 is 0.05 smaller indicating that LDR has an effect on ROA. The LDR regression phenomenon is positive. This

indicates that the LDR and ROA relationship is positive. Thus, the second hypothesis in the study is accepted.

The result of this study indicates that the bank used as the object of this study has the ability to distribute credit from third parties to creditors that ultimately affect the level of income of the bank. It also indicates that the bank can be said to have a good level of liquidity and good financial performance as well.

The results of this study supports the research of Ervani (2010) that there is a positive relationship between the ratios of LDR to bank profitability. ROA tends to increase as the LDR increases.

4.3 Effect of ER to ROA

The result of regression analysis shows that the significance value of T-Test for ER 0,000 is 0.05 smaller indicating that ER has an effect on ROA. The ER regression coefficient is negative. This indicates that the CAR and ROA relationships are negative. Thus, the third hypothesis in the study is accepted.

The result of this study indicates that the bank used as the object of this study has the efficiency in running its operations so that affect the profitability of the bank. The bank performs its operations efficiently so that the revenue generated will also rise. The result of this study indicates that the greater the ER then the smaller the ROA. The results can be obtained because the level of bank efficiency in carrying out its operations affect the income level of ER is influenced by the high cost of funds collected and low interest income from investment funds.

The results of this study support the results of research of Sarifudin (2005) in which ER negatively affect profitability. The results of this study also supports Ervani's (2010) research that the negative coefficient value is consistent with the theory that the lower the ER level means the better the performance of bank management and the more efficient the bank. The level of profit achieved by a bank with all funds in the bank is the bank's profitability. Therefore, rent ability is also determined by the amount of operational costs incurred to obtain operational income. The better the performance of bank management the more efficient a bank can affect the health of the bank's business and the ability to generate profits.

5 CONCLUSION

The results of this study conclude that the variables CAR, LDR, ER of banking companies listed on the BEI 2015-2016 have an influence on ROA and have a coefficient mark corresponding to the theory. Therefore, things that can be suggested are the government through the monetary authority, in the case Bank Indonesia, should be able to transmit its policy to prioritize the achievement of the objectives of each aspect that gives a significant influence on bank performance starting from capital, asset quality, management, and overall liquidity so that the ROA is expected to increase.

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