THE INFLUENCE OF CAPITAL ADEQUACY RATIO, LOAN-TO-DEPOSIT RATIO, AND NET INTEREST MARGIN ON STOCK RETURN AT COMMERCIAL BANKS IN INDONESIA

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Abstract: The fluctuating conditions in the world economy have directly affected the investment to be uncertainty in several countries, including Indonesia whose investment was still not optimum, especially in the context of service companies such as banking companies. The less optimum investments that were closely associated with bank performance, especially with the stock return, encouraged this study to examine the effects of capital adequacy ratios, loan deposit ratios, and net interest margin on stock return at commercial banks in Indonesia. A total of 15 banks that met the criteria were taken as the sample. Data analysis was performed on banking companies listed on BEI (Indonesia Stock Exchange) in 2016–2018, employing the multiple regression analysis to test the proposed research hypotheses. The results showed that the capital adequacy ratio, loan-to-deposit ratio, and net interest margin significantly influence the stock return of banking companies.

Keywords: Capital Adequacy Ratio, Loan-to-Deposit Ratio, Net Interest Margin, Stock Return, Banking Company.

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From 2016 to 2018, the slowdown in the world economy, the weakening in trade and manufacturing activities, and the revolving issues regarding Brexit and trade war between the United States and China led several developing countries to face pressure from financial markets (Fauzia, 2019). The fluctuating world economic conditions gave unfavorable impacts on all countries, including Indonesia, in particular, which is still struggling to develop its investment activities, such as industrial activities, trading companies, and financial service companies, especially banks. The instability of the world economy encouraged Bank Indonesia as the central bank to maintain the financial system stability, implement monetary policy, and regulate and maintain the payment system in Indonesia to work regularly, especially for the sustainability of commercial bank activities.

Rosenberg (1985), stated that bank is a service company that provides loans, receives deposits, pays interest, offers current accounts, and performs investment in securities. Meanwhile, Perry (1984) argued that bank is a business entity whose activities are related to money, namely to accept deposits from customers, provide funds for each customer who makes withdrawals, and provide credit or invest from excess deposits.

Financial performance can illustrate the activities and conditions of a business entity, including banking companies. Jumingan (2006), stated that it is a company's financial condition in a certain period that involves aspects of raising and channeling of funds, measured by variables capital adequacy, profitability, and, liquidity. Fahmi (2012), stated that financial performance is a picture of a company's success by assessing its achievements. Banks with good financial performance can impact positively on investors (shareholders) and macroeconomic stability. Capital adequacy ratio, loan-to-deposit ratio, and net interest margin play a role in assessing bank financial performance.

The bank's capital adequacy ratio shows the securities, credit ratios, and claims to other banks that are financed from their capital (Khaddafi and Syamni, 2011). CAR shows a bank's ability to provide funds to accommodate the risk of loss of funds resulting from its operations and business development needs. When it, as a fundraiser, maintains its capital well, the investment will run positively and can increase stock return. Karim (1996), Khaddafi and Syamni (2011), Wijaya et al. (2012), and Zulbetti (2011) revealed that CAR has a significant effect on stock return. However, research by Dianasari (2012) and Kurniadi (2012) found that CAR had no significant effect on stock returns due to several factors such as the issues of Brexit and trade war between the United States and China and the uncertainty of the global economy that tightened bank liquidity. These situations can be an increasingly severe challenge against banks in channeling credit.

Loan-to-deposit ratio (LDR), according to Kasmir (2014), is a value used to measure the amount of credit given, compared to that of public funds and own capital used. The higher the LDR, the better the bank liquidity and the optimum the banking performance, which can directly affect positively on stock return. This statement is supported by the results of researches conducted by Khaddafi and Syamni (2011), Kurniadi (2012), Roggi and Giannozzi (2015), and Zulbetti (2011). Other researches, conducted by Chen (2011), Niu (2016), Li and Ongena (2015), Kuspita (2011), Syauta and Widjaja (2009), however, found that LDR has no significant effect on stock return since the lower the LDR shows that banks are less effective in channeling credit because high loan interest will lower the customer interest in borrowing funds.

As for Net Interest Margin (NIM), according to Bank Indonesia Circular Letter No.6/23/DPNP dated May 31, 2004, it is a comparison between net interest income and average earning assets. Dendawijaya (2006), has stated that this ratio can be used to measure the ability of bank management to generate net interest income and manage productive assets. The ability of bank management to manage their productive assets will generate net profits that continue to grow because the activities such as investment, both in rupiah and foreign exchange, for credit, securities, and interbank funds can run optimally. A bank's good performance directly has a positive effect on its financial performance and increases stock return for investors. This fact is following several studies conducted by Devitra (2013), Kurniadi (2012), Marinkovic and Radovic (2010), and Marviana (2009). However, research conducted by Syauta and Widjaja (2009), found that the net interest margin has no significant effect on stock returns because banks are less optimum in managing credits, thus making a big problem for themselves.

Some of the results of the studies above indicate there is still a gap between one research with another. These studies show that there are different results on several variables that affect stock returns. This study aimed to determine the effects of capital adequacy ratio (CAR), loan-to-deposit Ratio (LDR), and net interest margin (NIM) on stock return at several commercial banks in Indonesia.

METHOD

This research, as explanatory research, aimed to analyze the correlation between variables through hypothesis testing. The data used were secondary in the form of annual financial reports, annual reports, and the Indonesian Capital Market Directory (ICMD) from banking companies in the period 2016–2018. The data sources were obtained at the Investment Gallery of the University of Brawijaya, Malang, Indonesia.

The target population in this study was banks that had fulfilled the following requirements and criteria, that are listed on the Indonesia Stock Exchange with audited financial statements for years 2016–2018, having positive equity in years 2016–2018, and always having a positive profit in years 2016–2018. As many as 15 banking companies met the sample criteria. Because the observation period was three years, namely from 2016 to 2018, there were 45 observations (15 x 3 = 45) performed. The following Table 1 shows the banking companies that became the sample of this study:

Table 1 Research Sample

No	Code	Name of Conventional Bank
1.	BMRI	Bank Mandiri
2.	BBRI	Bank BRI
3.	BBNI	Bank BNI
4.	BBTN	Bank BTN
5.	BBCA	Bank BCA
6.	MEGA	Bank Mega
7.	NISP	Bank OCBC NISP
8.	BNII	Bank Maybank Indonesia
9.	BNGA	Bank CIMB Niaga
10.	SDRA	Bank Woori Saudara
11.	BNLI	Bank Permata
12.	BDMN	Bank Danamon
13.	BBKP	Bank Bukopin
14.	BNBA	Bank Bumi Arta
15.	BACA	Bank Capital Indonesia

The collected data were then analyzed using multiple linear regression analysis with the help of the SPSS program to measure the correlation between and analyze the effects of the variables capital adequacy ratio (CAR), loan-to-deposit ratio (LDR) and net interest margin (NIM) on bank stock returns. The multiple linear regression equation models in this study can be written as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \hat{a}_3 X_3 + e.$

Note:

Y = stock return

β_0 = constant

$\beta_{1\text{-}3}$ = regression coefficient

X_1 = capital adequacy ratio

X_2 = loan-to-deposit ratio

X_3 = net interest margin

e = disturbance error

Figure 1 below shows the conceptual design of the research showing the correlation between variables:

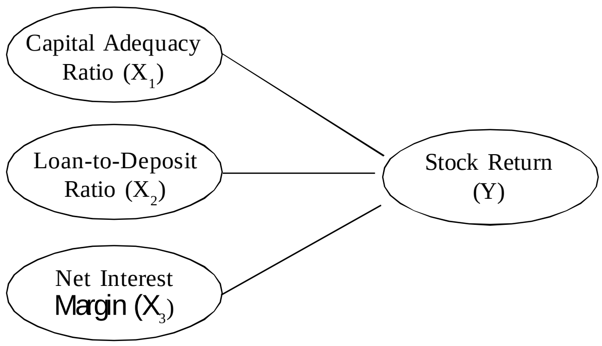

Figure 1 Research Design

RESULTS AND DISCUSSIONS

Hypothesis testing was done based on the significance values obtained from each variable, after analysis. For this reason, multiple linear regression analysis was performed to determine the effects of three independent variables (CAR, LDR, NIM) on the dependent variable (stock returns). Table 2 and Table 3 below show the results of the regression analysis conducted with the help of the SPSS 22.0 *for Windows* program.

The results of multiple regression analysis simultaneously, wherein the value of F = 19.777 and the significance value of 0.000 (lower than $\alpha = 0.05$) were obtained. These results indicate that the independent variables CAR, LDR, and NIM simultaneously have a positive effect on stock return. Besides, since the significance value was less than 5%, the proposed regression model was worthy of research in terms of goodness of fit. This shows that

Table 2 ANOVA Output Regression Results

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.589	3	.196	19.779 .000[b]
	Residual	.377	38	.010	
	Total	.965	41		

a. Dependent Variable: Stock Return
b. Predictors: (Constant), NIM, CAR, LDR

Table 3 Regression Coefficients and The Significance Values of Each Variable

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-1.104	.396		-2.786	.008		
CAR	.441	.161	.332	2.734	.009	.699	1.431
LDR	.968	.457	.279	2.120	.041	.592	1.689
NIM	.521	.205	.334	2.542	.015	.595	1.680

a. Dependent Variable: Stock Return

there was a match between the model described and the realization based on the data analysis conducted.

The results of the regression analysis of each variable partially and the resulting regression equation model. Three independent variables CAR, LDR, and NIM have significance values of 0.009, 0.041, and 0.015, respectively, all of which are less than $\alpha = 0.05$. Thus, partially, each of the variables has a positive effect on stock return. Besides, based on Table 3, we can also construct a multiple linear regression equation as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = -1.104 + 0.441\ X_1 + 0.968\ X_2 + 0.521\ X_3 + e$$

Effect of Capital Adequacy Ratio on Stock Return

The results of the statistical t-test for the variable capital adequacy ratio show a value of 2.734 with a significance of 0.009 (<0.05). Therefore, it can be concluded that the capital adequacy ratio has a significant effect on stock return. This finding is in line with researches conducted by Karim (1996) and Khaddafi and Syamni (2011). The increase in CAR will increase the amount of capital owned by the bank, resulting in the availability of large enough cheap funds, which can be used to accelerate lending and development. This condition can increase the bank's profits, which in turn will open up opportunities for business scale development and dividend distribution to shareholders.

Effect of Loan-to-Deposit Ratio on Stock Return

The results of the statistical t-test show a value of 2.120 for the variable loan-to-deposit ratio (LDR), with a significance of 0.041 (<0.05). It can be concluded that the variable LDR has a significant effect on stock returns. This finding is supported by researches conducted by Roggi and Giannozzi (2015) and Zulbetti (2011), who found that the higher the LDR value indicates the higher profitability of companies and corporate profits. Besides, the percentage of LDR was significant due to a large percentage spread on loan interest and interest on third party funds. This shows that the loan-to-deposit ratio has a significant positive effect on stock returns.

Effect of Net Interest Margin on Stock Return

The results of the statistical t-test for the variable net interest margin show a value of 2.542 with a significance of 0.015 (<0.05). Thus, the variable net interest margin also has a significant positive effect on stock return. This finding is in line with research conducted by Devitra (2013), Kurniadi (2012), found that NIM affects stock returns. Banks with large asset growth values will also find an increase in their capital, which usually will also increase stock return, thus strengthening their ability, as healthy intermediary institutions (Marviana, 2009; Marinkovic and Radovic, 2010).

Good performance will increase investors' confidence in obtaining adequate stock returns (Zulbetti, 2011; Khaddafi and Syamni, 2011). Therefore, it becomes important for banking companies to always see and analyze the extent to which financial ratios such as capital adequacy ratios, loan deposit ratios, and net interest margins affect the stock return.

Theoretical Implications

Capital adequacy ratio, loan-to-deposit ratio, and net interest margin can be used to assess bank performance in a period. Bank financial ratios have several objectives, that are knowing the bank's capital adequacy in its activities efficiently, measuring its ability to settle short-term obligations, knowing its ability to generate profits, and measuring its ability to counter risks from its operational activities. The greater the bank's financial ratios the more positive the effects on the performance of the bank.

Implications

The results were practically related to stock return. Investors need to consider the bank financial ratios as a basis for investing. This research proved that the variable capital adequacy ratio has a positive and significant effect on stock returns, where the increase in it is in line with the increase in stock return. The variable loan-to-deposit ratio also has a positive and significant effect on stock returns. The increase in LDR can also increase stock returns. Likewise, the variable net interest margin has a positive and significant effect on stock returns, which means that the increase in NIM will increase directly stock returns.

For banks, the results can be used as a basis for making policies related to the delivery of bank performance report information to investors. These results, besides, can also be used as a basis for conducting further similar research, especially related to stock returns at banks.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Capital adequacy ratio, loan-to-deposit ratio, and net interest margin simultaneously have a positive and significant effect on stock returns on commercial banks listed on the IDX. Partially, each capital adequacy ratio, loan deposit ratio, and net interest margin variables have a positive and significant effect on stock return at commercial banks listed on the IDX.

Recommendations

Banking companies must pay attention to the value of CAR because the increased value of it will provide an opportunity for banking companies to generate profits. The better the bank's performance, the more the stock return obtained by investors. Investors, on the other hand, must also pay attention to the CAR and NIM values because of the higher the values of the two variables, the greater the stock return provided by the bank to investors.

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