THE EFFECTS OF ROA, ROE, NPL, AND OPERATING EXPENSES TO OPERATING REVENUES ON STOCK RETURN AT COMMERCIAL BANKS IN INDONESIA

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Abstract: Stock return is one indicator to show the performance of banks in Indonesia. This study aimed to empirically examine the effect of return on assets (ROA), return on equity (ROE), non-performing loans (NPL), and operating expenses to operating revenues on stock returns on commercial banks listed on the Indonesia Stock Exchange (IDX) years 2016-2018. For this reason, as many as 15 banks that meet the criteria were taken as samples in this study. The collected data were then analyzed using multiple regression analysis to test the proposed hypotheses. Several findings in this study indicated that each element, namely returns on assets, return on equity, non-performing loans, and operating expenses to operating revenues, respectively, had a significant effect on stock returns. Based on these findings, it was recommended that banking companies could manage financial ratios optimally to maximize stock return.

Keywords: non-performing loan, return on equity, return on assets, operating expenses to operating revenues, stock return

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The world economy in the past three years, 2016-2018, experienced a slowdown indicated by the weakening of world trade and manufacturing activities. Besides, it was also evident from the occurrence of trade wars between America and China, the issue of Brexit, namely the withdrawal of the United Kingdom from the European Union, and also pressures from financial markets faced by some developing countries. The unstable and volatile global economic conditions impacted all countries unfavorably, especially those developing like Indonesia that were still experiencing difficulties in developing investment activities, such as financial institutions, especially banks. The instability of the world economy led Bank Indonesia as the central bank to continue to maintain financial system stability in Indonesia, by implementing monetary policies, and to regulate and maintain the smoothness of the payment system, especially for the sustainability of commercial bank activities.

According to Rosenberg (1985), a bank is a company that is in charge of providing loans, paying interest, receiving deposits and current accounts, and investing in securities. Perry (1984), stated that it is a business entity whose activities are related to money, providing funds for every customer who withdraws money, accepting deposits, and giving credit to the public.

Banking activities are strongly related to financial performance made by the entity. Banking financial condition is established by viewing its two main aspects, namely the collection and distribution of funds that can be measured by several indicators, such as capital adequacy, liquidity, and profitability (Jumingan, 2006). A company's financial performance shows its ability to control and manage its resources. Therefore, financial performance depicts results achieved by a company through its activities (Fahmi, 2012). The better the financial performance made a company, the more positive the impact on its investors. One indicator that is useful to see a company's financial performance is the stock return the company obtained. Stock return is the level of profit enjoyed by a company on an investment in shares made. Some factors that affect stock return include non-performing loans, return on equity, return on assets, and operating expenses to operating revenues.

Return on assets is the company's ability to use all assets it owns to generate profits after tax (Fahmi, 2012). In other words, it is a financial indicator that illustrates a company's ability to create a return on total assets owned. This ratio measures the rate of return on the investment made by a company when using all of its funds (assets). ROA shows the effectiveness of a company is using its assets to get profit. The higher the profit generated, the higher the ROA, which means that the bank is more effective in the use of its assets to generate profits. When ROA increases, the company's profitability will also increase, thus, as the final impact, increasing the shareholder profitability (Husnan, 1998). This statement is supported by the results of researches conducted by Joo et al. (2011), Prihantini (2009), and Sudiyatno and Suharmanto (2011), stating that ROA has a significant effect on stock returns. Meanwhile, researches conducted by Susilowati and Turyanto (2011) and Trisnawati (1999), reported that ROA has no significant impact on stock returns because of the decrease in corporate profitability, which is caused by the instability of the Indonesian economy.

Return on equity (ROE) is an indicator applicable to measure net income after tax with the company's capital. The high value of ROE shows the better performance of the company, thus directly leading the stock prices to rise. If the stock price increases, then the stock return will also increase. Theoretically, ROE may have a positive effect on stock returns. The results of researches by Natarsyah (2000) and Sudiyatno and Suharmanto (2011), who found that ROE has a significant effect on stock returns, supported this statement. Conversely, researchers conducted by Susilowati and Turyanto (2011) and Dianasari (2012), stated that ROE does not have a substantial impact on stock returns due to the decrease in profits received by the company, thereby affecting the company's performance and directly reducing stock returns obtained by investors.

Non-performing loan (NPL) represents the ability of bank management in managing non-performing loans provided by banks (Mulyono, 1999). The lower the NPL, the more the stock return. That is because the burden of credit risk borne by the bank is getting smaller, thereby increasing the profits earned and, in turn, increasing stock returns. A low NPL could be due to the ability of banks to selectively monitor credit usage and the ability and compliance of debtors to fulfill their obligations. With this monitoring, the bank can increase profits. These statements were confirmed by the results of researches by Rottke and Gentgen (2008), Boudriga et al. (2009), and Laryea et al. (2016), who found that the NPL value had a significant effect on stock returns obtained by banking companies. Meanwhile, researches conducted by Vithessonthi (2016), Dianasari (2012), and Haryetti (2011), stated that NPL does not have a significant effect on stock returns since the higher NPL, the greater the risks of the credit channeled, thus lowering income received by banks and, in turn, reducing stock returns.

The term operating expenses to operating revenues refers to the ratio between operating expenses to operating revenues (Siamat, 1995). Pahlevie (2009), also stated that operating expenses are those incurred by banks in the course of carrying out their activities while operating revenues are any form of revenue derived from bank activities. When a banking company can reduce its operating expenses and increase operating revenues, the profits derived will be more leverage and will directly improve stock return. Researchers conducted by Khaddafi and Syamni (2011), Wijaya et al. (2012), and Zulbetti (2011), found that operating expenses to operating revenues do not have a significant effect on stock returns because banks are less able to control their operational expenses, so operating revenues were reduced. This condition will lead to a decline in bank performance, thus leading to a reduction of stock returns obtained by investors.

Formulation of Hypotheses

Return on assets is the ability of a banking company to use all the assets it owned to generate profits after tax. Thus, a hypothesis was proposed to test the effect of ROA on stock returns as follows:

H_1: The higher the return on assets, the higher the stock return.

Return on equity is a ratio to measure net income after tax based on the capital owned. It can be stated that the higher ROE shows that the banking company's performance is also getting better and has an impact on stock returns to increase. The hypothesis proposed to test the effect of ROE on stock returns was as follows:

H_2: The higher the return on equity, the higher the stock return.

Non-performing loan (NPL) is the ability of the bank in managing non-performing loans it provided. The lower the NPL will directly increase the stock return. This is because the burden of credit risk borne by banks is getting smaller, thus increasing profits and directly increasing stock returns. Thus the hypothesis proposed to test the effect of NPL on stock returns was as follows:

H_3: The lower the non-performing loan, the higher the stock return.

Operating expenses to operating revenues require banking companies to pay attention to operational efficiency by taking into account the expenses incurred based on the income received (Kuspita, 2011). The ability of a bank to control its efficiency will reduce the value of operating expenses to operating revenues and will increase the profits, thereby increasing stock returns. Thus, the following hypothesis was proposed to examine the effect of operating expenses to operating revenues on stock returns:

H_4: The lower the ratio of operating expenses to operating revenues, the higher the stock return.

METHOD

This research was explanatory research that aimed to determine the relationship between variables through hypothesis testing. The data used in this study were secondary data in the form of annual financial reports, annual reports, and the Indonesian Capital Market Directory (ICMD) for banking companies in the period 2016 to 2018. The data were obtained from the Investment Gallery of Universitas Brawijaya, Malang.

The population in this study matched the target population with the following conditions: banks listed on the Indonesia Stock Exchange (IDX), bank financial statements from 31 December 2016 to 2018 (audited), banks with positive equity in 2016 to 2018, and banks that always had positive profits in 2016 to 2018.

Based on these population criteria, 15 sample banks were obtained for this study. The observation period was three years, namely 2016 to 2018, so the number of observations in this study was 45 ($15 \times 3 = 45$). The companies sampled in this study can be seen in the following Table 1:

Data analysis was performed to measure and determine the significance of the effects of the variables ROA, ROE, NPL, and operating expenses to operating revenues variables, respectively, on the variable stock return. For this reason, data analysis in this study used multiple linear regression to determine the effect of the independent variables on

Table 1 Research Sample

No	Code	Name of Commercial 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 dependent one. The multiple linear regression model in this study can be written as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e.$$

Note:
Y = stock return,
β_0 = constant,
$\beta_{1\text{-}4}$ = regression coefficient,
X_1 = return on asset,
X_2 = return on equity,
X_3 = non-performing loan,
X_4 = operating expenses to operating revenues,
e = error

Figure 1 below shows the relationship between the variables studied:

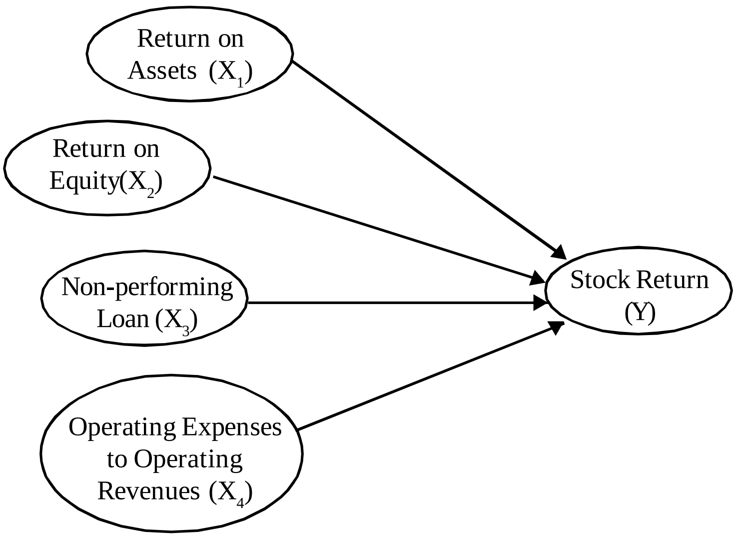

Figure 1 Relationship Between Variables

RESULTS AND DISCUSSION

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 the four independent variables (ROA, ROE, NPL, and operating expenses to operating revenues) on the dependent one (stock returns). Table 2 and Table 3 below show the results of the regression analysis conducted with the help of the SPSS program.

Table 2 ANOVA Output of Multiple Regression Analysis

ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.378	4	.595	14.322	.000[b]
	Residual	1.619	39	.042		
	Total	3.998	43			

a. Dependent Variable: Stock Return
b. Predictors: (Constant), OEOR, ROA, NPL, ROE

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)	13.441	5.311		2.531	.016		
	ROA	.464	.174	.402	2.671	.011	.460	2.176
	ROE	.195	.093	.319	2.089	.043	.444	2.252
	NPL	-.881	.342	-.368	-2.577	.014	.508	1.968
	OEOR	-7.150	2.870	-.363	-2.492	.017	.490	2.043

a. Dependent Variable: Stock Return

Effect of Return on Asset on Stock Return

Return on assets (ROA) has a positive and significant effect on stock returns. The results of the t-statistic test for the ROA variable showed 2.671 with a significance of 0.000 <0.05. It can be concluded that the variable ROA has a significant effect on stock returns. The findings in this study also supported researches conducted by Joo et al. (2011), Prihantini (2009), and Syauta and Widjaja (2009), about the effect of ROA on stock returns of bank companies listed on the IDX that ROA had a positive and significant impact on stock returns.

ROA is used to measure the company's ability to generate profits by utilizing its assets (Sudiyatno and Suharmanto, 2011). Besides, ROA is also used to find out how far the company can generate profits. It means that the more the profits are made, the better the company's performance (Natarsyah, 2000; Aryanti et al., 2016). Increased ROA implies that the company's performance is getting better, and, as a result, the price of the company's shares will also increase.

Effect of Return on Equity on Stock Return

The analysis showed that ROE has a positive and significant effect on stock returns. This statement was based on t-statistic testing for the variable return on equity, indicating a value of 2.089 with a significance of 0.000 <0.05. So, it could be concluded that the variable return on equity has a significant effect on stock returns. This conclusion supported the results of researches conducted by Sudiyatno and Suharmanto (2011), Trisnawati (1999), and Natarsyah (2000) that were used as initial predictions that ROE has a positive and significant effect on stock returns.

The results of the analysis in this study indicated that the rate of return is in accordance with share capital so that the profits obtained will also increase. Besides, the findings of this study also noted the behavior of investors at the IDX who responded positively to the ROE financial ratios to invest. According to Yanti et al. (2012), return on equity shows the company's ability to generate and provide net profit for shareholders; the higher the return on equity means the higher the company's ability to generate net income for shareholders.

Effect of Non-performing Loan on Stock Return

Non-performing loans have a negative and significant effect on stock returns. The results of the t-statistic test for the variable return on asset showed a value of -2.577 with a significance of 0.000 <0.05. It could be concluded that the variable return on assets has a significant effect on stock returns. This finding supported the results of researches conducted by Rottke and Gentgen (2008), Boudriga et al. (2009), Laryea et al. (2016), and Assibey and Asenso (2015).

Khadaffi and Syamni (2011), Syauta and Widjaja (2009), and Tan et al. (2017) stated that non-performing loans (NPL) would affect the company's endurance in the form of its liquidity, rentability, profitability, reliability, soundness, and working capital. Therefore, banking companies are always required to maintain credit in a low NPL position so that stock returns also remain in a healthy condition (high).

Effect of Operating Expenses to Operating Revenues on Stock Return

The results showed that operating expenses to operating revenues had a negative and significant effect on stock returns. This finding was demonstrated by the results of the t-statistic test for the variable operating expenses to operating revenues, showing a value of 2.089 with a significance of 0.000 <0.05. So, it could be concluded that the variable operating expenses to operating revenues had a significant influence on stock returns, supporting the results of researches conducted by Kuspita (2011) and Iskandar (2017).

The results of this study indicated that if a bank has a low ratio of operating expenses to operating revenues, then its stock returns will also increase, and vice versa. The high value of the ratio of operating expenses to operating revenues shows the low ability of bank management to control operating expenses to operating revenues. This, of course, will give a negative signal for investors to invest their capital in banks with high operating expenses to operating revenues (Iskandar, 2017).

Theoretical Implications

Return on assets, return on equity, non-performing loans, and operating expenses to operating revenues are financial ratios to assess the performance of banks in a period. Bank financial ratios have several objectives, namely to determine the ability of bank capital adequacy in its activities efficiently, measure its ability to settle short-term obligations, generate profits, and refute risks emerging from its operational activities. An improved condition of bank financial ratios can have a positive influence on its performance.

Practical Implications

The results of this study practically had a relationship with stock returns. Investors need to consider the condition of bank financial ratios as a basis for investing. This study proved the variable return on assets has a positive and significant effect on stock returns due to the increase in the ROA ratio, which, in turn, can increase stock return. The variable return on equity also has a positive and significant effect on stock returns, showing that an increase in the value of ROE will directly increase stock returns.

The results of the analysis showed that the variable non-performing loan (NPL) has a negative and significant effect on stock returns, indicating that a decrease in the value of NPL will directly increase stock return. The variable operating expenses to operating revenues also has a negative and significant effect on stock returns, showing that a decrease in operating expenses to operating revenues can directly increase stock return.

For banking companies, the results and findings of this study can be used as a basis for making policies related to the delivery of bank performance report information to investors. Besides, these results are useful as a basis for conducting similar studies, especially those related to stock returns at banks.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the results of the research and discussion described above, several conclusions can be drawn as follows: 1) Return on assets has a positive and significant effect on stock returns at commercial banks listed on the IDX; 2) Return on equity has a positive and significant effect on stock returns at commercial banks listed on the IDX; 3) Non-performing loans have a negative and significant effect on stock returns at commercial banks listed on the IDX, and; 4) Operating expenses to operating revenues have a negative and significant effect on stock returns at commercial banks listed on the IDX.

Recommendations

Some suggestions can be given as follows: 1) Banking companies must pay attention to the optimum NPL value since it can have a direct impact on their performance; the better the banks in managing their non-performing loans, the higher the stock returns provided to investors; and 2) Investors must pay attention to the values of ROA and ROE since the higher the values of ROA and ROE, the greater the return provided to investors.

REFERENCES

Aryanti, Mawardi, and Andesta, S. 2016. *Pengaruh ROA, ROE, NPM dan CR terhadap Return Saham Pada Perusahaan yang Terdaftar Di Jakarta Islamic Index (JII).* I-Finance Vol. 2. No. 2, 54-71.

Assibey, E. O. and Asenso, J. K. 2015. *Regulatory Capital and Its Effect on Credit Growth, Non Performing Loans and Bank Efficiency: Evidence from Ghana*. Journal of Financial Economic Policy Vol. 7 No. 4, 401-420.

Boudriga, A., Taktak, N. B., and Jellouli, S. 2009. *Banking supervision and nonperforming loans: a cross-country analysis*. Journal of Financial Economic Policy Vol. 1 No. 4, 286-318.

Dianasari, N. 2012. *Pengaruh CAR, ROE, LDR dan NPL Terhadap Return Saham Serta Pengaruh Saat Sebelum dan Sesudah Publikasi Laporan Keuangan Pada Bank Go Public di Bursa Efek Indonesia*. Unpublished Article Ekonomi, 1-13.

Fahmi, I. 2012. *Analisis Kinerja Keuangan*. Bandung: Alfabeta.

Haryetti. 2011. *Analisis Pengaruh Kinerja Terhadap Return Saham Pada Perusahaan Perbankan Yang Go Publik di BEI*. Jurnal Sosial Ekonomi Pembangunan Tahun 3, Nomer 7, 88-102.

Husnan, S. 1998. *Dasar - Dasar Manajemen Keuangan*. Yogyakarta : UPP AMP YKPN.

Iskandar, Y. 2017. *The Effect of Non Performing Loans, Operating Expenseto Operating Income, and Loan to Deposit Ratioon Stock Return at Conventional Banks*. Journal of Entrepreneur and Entrepreneurship, Vol. 6, No. 1, 25–30.

Joo, S. J., Nixon, D., and Stoeberl, P. A. 2011. *Benchmarking with data envelopment analysis: a return on asset perspective*. Benchmarking: An International Journal, Vol. 18 No. 4, pp. 529-542 © Emerald Group Publishing Limited 1463-5771.

Jumingan. 2006. *Analisis Laporan Keuangan*. Jakarta: PT. Bumi Aksara.

Khaddafi, M. and Syamni, G. 2011. *Hubungan rasio camel dengan return saham pada perusahaan perbankan di bursa efek Indonesia*. Jurnal Aplikasi Manajemen Vol. 9 No.3, 910-918.

Kuspita, M. 2011. *Pengaruh CAR, LDR, NPL, BOPO, ROA dan DPS Terhadap Return Saham Pada Perusahaan Perbankan Yang Terdaftar di Bursa Efek Indonesia*. Tesis. UPN Yogyakarta.

Laryea, E., Gyamfi, M. N., and Alu, A. A. 2016. *Nonperforming loans and bank profitability: evidence from an emerging market*. African Journal of Economic and Management Studies Vol. 7 No. 4, 462-481.

Mulyono, T. P. 1999. *Analisa Laporan Keuangan Untuk Perbankan*. Edisi revisi 1999, Cetakan 6, Jakarta.

Natarsyah, S. 2000. *Analisis Pengaruh Beberapa Faktor Fundamental dan Risiko Sistematis terhadap Return Saham pada bank*. Jurnal Ekonomi dan Bisnis Indonesia, Vol.15 No.3, 294-317.

Pahlevie. 2009. *Analisis Pengaruh CAR, NIM, LDR, NPL, BOPO dan EAQ Terhadap Perubahan Laba (Studi Empiris Pada Bank Umum di Indonesia Periode*

Laporan Keuangan Tahun 2004 - 2007). Tesis, Program Magister Akuntansi, Pascasarjana Fakultas Ekonomi Universitas Diponegoro.

Perry, F. E. 1984. *Sistem Perbankan Modern*. Hanindita, Yogyakarta.

Prihantini, R. 2009. *Analisis Pengaruh Inflasi, Nilai Tukar, ROA, DER dan CR Terhadap Return Saham.* Tesis, Program Magister Manajemen, Pascasarjana Fakultas Ekonomi Universitas Diponegoro.

Rosenberg, J. M. 1985. *Dictionary of Banking and Finance 2d ed*. New York : NY. John Wiley and Sons.

Rottke, N. B. and Gentgen, J. 2008. *Workout management of non-performing loans: A formal model based on transaction cost economics*. Journal of Property Investment & Finance Vol. 26 No. 1, 59-79.

Siamat, D. 1995. *Manajemen Lembaga Keuangan*. Jakarta : Intermedia.

Sudiyatno, B. and Suharmanto, T. 2011. *Kinerja Keuangan Konvensional, Economic Value Added, dan Return Saham*. Jurnal Dinamika Manajemen. Vol. 2, No. 2, 153-161.

Susilowati, Y. and Turyanto, T. 2011. *Reaksi Signal Rasio Profitabilitas Dan Rasio Solvabilitas Terhadap Return Saham Perusahaan Tahun 2006-2008*. Dinamika Keuangan dan Perbankan, Vol. 3, No. 1, 17-37.

Syauta and widjaja. 2009. *Analisis Pengaruh Rasio ROA, LDR, NIM dan NPL Terhadap Abnormal Return Saham Perbankan di Indonesia Pada Periode Sekitar Pengumuman Subprime Mortgage*. *Journal of Applied Finance and Accounting* Vol. 1 No. 2, 351 - 367.

Tan, Y., Floros, C., and Anchor, J. 2017. *The profitability of Chinese banks: impacts of risk, competition and efficiency*. Review of Accounting and Finance, Vol. 16 No. 1, 86-105.

Trisnawati, R. 1999. *Pengaruh Informasi Prospektus pada Return Saham di Pasar Modal. Simposium Nasional Akuntansi II dan Rapat Anggota II*. Ikatan Akuntan Indonesia, Kompartemen Akuntan Pendidik, 24-25.

Vithessonthi, C. 2016. *Deflation, bank credit growth, and non-performing loans: Evidence from Japan*. Journal International Review of Financial Analysis, 45, 295 -305.

Wijaya, R., Ihsan, M., and Solikhin, A. 2012. *Pengaruh Rasio CAMEL Terhadap Return Saham Pada Industry Perbankan di Bursa Efek Indonesia*. Jurnal Penelitian Universitas Jambi Seri Humaniora Vol. 14, No. 1, 01-08.

Yanti, M., Salim, U., Sudarma, M. and Djumahir. 2012. *Determinan Price Earning Ratio dan Stock Return (Studi pada Saham-Saham Syariah di Bursa Efek Indonesia)*. Jurnal Aplikasi Manajemen, Vol. 10, No. 2, 273-290.

Zulbetti, R. 2011. *Pengaruh Rasio-Rasio CAMEL dan Faktor-Faktor Makro ekonomi Terhadap Return Saham (Studi Empiris Pada Perusahaan Perbankan Yang Terdaftar di Bursa Efek Indonesia Periode 2000-2010)*. Banking and Management Review. Vol. 1, No. 1. 48-62.