DOES PRICE COMMODITY PALM OIL, RUBBER AND NON PERFORMING LOAN (NPL) AFFECT ON FINANCIAL PERFORMANCE?

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Abstract

The purpose of this study was to analyze the effect of commodity prices of rubber and palm oil, as well as Non Performing Loan (NPL) on financial performance (return on assets (ROA)) PT. Bank BRI Agro Tbk, either partially or simultaneously. Data used is secondary data, where data commodity prices of rubber and palm oil obtained from the Directorate General of Plantation while data on financial performance (return on assets (ROA)) obtained from the Annual report 2015 AGRO Bank BRI. The data were analyzed using multiple linear regression techniques. Results of statistical t test proves that partially price of rubber and palm oil does not significantly to influence of financial performance Bank BRI Agro Tbk, while NPL significant effect on financial performance Bank BRI Agro, Tbk. Results of statistical F test proves that simultaneously the price of rubber and palm oil as well as NPL has significant impact on financial performance. Bank BRI Agro, Tbk. The results of the study has implications for efforts to reduce the NPL ratio while maintaining the bank's function as intermediary (prudence) in extending credit, especially in the agricultural sector to reduce the high value of NPL (non-performing loans), considering the contribution of NPL sizeable influence on the financial performance of banks.

Keywords: Price of palm oil, Price of rubber, Non Performing Loan (NPL), financial performance

Introduction

The banking industry has the duty and obligation to hold a commitment as a driver of the economy or development agent. This can be seen when the economic sector in Indonesia has decreased, then one way to restore economic stability by rearranging the banking sector for the better. In addition, the bank also has a goal as a financial intermediary or financial intermediary of two parties. Where the bank as a financial institution to be an intermediary between parties who have excess funds and also parties who lack the funds. The party in need of funds will make a loan to the bank, where the loan is given in the form of credit to the debtor (party applying for loan).

In a bank, with the provision of credit is very useful, where the credit repayment can generate interest on the loan. The loan interest can be utilized to increase the income of a bank in the credit activity and continuity of its business. In lending to customers, the bank will be exposed to credit risk that can not be paid by the debtor causing problem loans. According to Ismail (2009: 224), problem loans are a situation where the customer is not able to pay part or all of his obligations to the bank as has been agreed. The risk of non-performing loans is measured based on a ratio showing the level of non-performing loans in a bank, which is known as NPL.

NPL (Non Performing Loan) is a credit in arrears exceeding 90 days, where NPL is divided into Substandard, Doubtful, and Loss Credits (Ismail, 2009: 226). The amount of NPLs allowed by Bank Indonesia is currently at a maximum of 5%. The greater the NPL level indicates that the bank is not professional in its credit management which will have an impact on bank losses. Therefore, the magnitude of the percentage of NPLs should be the attention of the management because of the increasingly problematic credit can endanger the health of the bank. If the credit repayment rate drops, it can cause the interest income and the resulting profit to decrease so that it can disrupt the bank's own operations. In addition, if the NPL continues to increase, it can cause the occurrence of cash circulation in the bank concerned. If it continues then the bank will no longer be able to provide credit to other customers in large amounts due to the bank itself is experiencing difficulties in the cash flow turnover caused by bad debts / problems.

In Indonesia, one of the lending banks is BRI Agro bank. BRI Agro was established by Dana Pensiun Perkebunan (Dapenbun) on September 27, 1989, AGRO Bank has an important and strategic role in the development of the Indonesian agribusiness sector. As a bank focusing on agribusiness financing, since its

establishment to date, AGRO Bank's loan portfolio is mostly (between 60% - 75%) disbursed in the agribusiness sector, both on farm and off farm, where oil palm and rubber are the main sectors in financing agribusiness, in addition to coffee.

In Indonesia, rubber and oil palm is the highest number of plantation crops (BPS, 2015). In developing the plantation, most farmers depend on micro-loans in banks. Based on data from the Central Bureau of Statistics listing the price fluctuations of oil palm and rubber commodities in the last five years. Symptoms of price fluctuations in both commodities are predicted to affect the performance of debtors, especially oil palm and rubber farmers in credit repayment in Indonesia. This is because rubber and palm oil are quite sectors financed by

banks, especially agribusiness banks.

Price fluctuations of oil palm and rubber commodities were also followed by fluctuations in NPL and Return On Asset (ROA) at PT. Bank BRI Agro, Tbk. Based on NPL data in the Annual Report published by Bank BRI Agro shows that the highest NPL rate occurred in 2006 that amounted to 10.41%, which is above the limit level of NPL set by Bank Indonesia, which is 5%. In addition, from the ROA data published by BRI Agro Bank shows that the lowest ROA also occurred in 2006 at -49%. Figures indicate that the company suffered a loss in which there was a decrease in earnings in the year, due to the NPL's soaring rate. This explains that the weakening prices of rubber and oil palm commodities, followed by an increase in NPL figures, has an impact on the company's ability to generate profits by using all its assets.

The results of a study by Bank Indonesia of Jambi Representative under the title "The Impact of Weakening of Rubber and Oil Palm Commodity Prices on the Performance of Rural Banks in Jambi Province in 2015" shows that the decline in agricultural commodity prices affects the performance of banks, especially BPRs by 2015 The performance of rural banks in Jambi province during 2015 shows a decrease compared to last year. This is indicated by the development of total assets which decreased by 1.86% per year from December 2014 position valued at Rp.759.00 Billion becomes Rp. 744.84 Billion in December 2015.

Reduced prices of palm oil and rubber have an impact on the decreasing ability of debtors in paying obligations, as well as reduced supply of BPRs in the supply of funds for fear that debtors can not afford to pay. The performance slowdown is primarily derived from loan disbursements in 2015. Loans disbursed in 2014 were recorded at Rp. 524.67 billion decreased in the year 2015 to Rp. 509.94 Billion. The decrease in the ability of rural banks to disburse loans is also reflected by the Loan Debt Ratio (LDR) which dropped to 1.42% in 2015 (KEKR Jambi, 2015).

The results of research on the effect of Non Performing Loan (NPL) on Return On Assets (ROA) showed different results. Research on credit risk was conducted by Wisnu M (2004) which stated that high Non Performing Loan (NPL) condition will increase the cost of both provisioning of earning assets and other costs, thus potentially causing losses to the bank, or in other words Non Performing Loans (NPLs) reduce bank profitability. This shows that Non Performing Loan (NPL) has a negative effect on profitability. The results of this study differs from the research Supatra (2007) which shows that Non Performing Loan (NPL) has a significant positive effect on Return On Assets (ROA).

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$$Y = B_0 + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Remark :
Y = Return On Asset (ROA)
X_1 = Price of oil palm
X2 = Rubber Price
X3 = Non Performing Loan (NPL)
B1 = Regression coefficient
B0 = Constant
e = Annoying Variables

To determine whether multiple linear regression models can be expressed as good models, the model must meet the BLUE (Best Linear Unbiased Estimator) criteria. To meet these criteria then the classical assumption test is performed. According Setyadharma (2010: 2) there are at least four classical assumption test that must be done on a multiple linear regression model, namely; normality test, autocorrelation test, multicollinearity test, and heteroscedasticity test.

Result and Discussion

Description of research variables

Based on secondary data obtained from the financial statements of PT Bank BRI Agro, Tbk and Directorate General of Plantation obtained information about the development of financial statements can be seen in Table 3.1 below:

Table 1.
Data Description of Research Variables Year 2011-2015

Variable	Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Palm oil (Rp/Kg)	616	1029	1181	1171	1215	1.253	828	1.102	1.638	800
Rubber (Rp/Kg)	12500	11583	6050	7720	13687	16.793	11.333	15.335	16.360	8.500
NPL (%)	10,41	4,67	3,36	4,47	1,84	0.77	1.57	0.95	1.32	1.32
ROA (%)	-49	-0,15	-0,11	0,18	0,67	1.39	1.63	1.66	1.47	1.55

Source: Annual Report Bank BRI Agro Year 2015 & Directorate General of Plantation Year2006-2015

Price of oil palm commodity

Based on data from Directorate General of Estate Crops report 2006 to year 2015, shows the price of fresh fruit bunches (FFB) tends to fluctuate, where the lowest price of oil palm fell in 2015 amounted to Rp. 838 / kg. In 2007-2008 the price of oil palm FFB increased, with an average price increase of Rp. 282,5 / Kg. However, in 2009 the price of oil palm FFB decreased by Rp. 10. In 2010-2011 the price of oil palm FFB has increased again, with an average price increase of Rp. 41. In the year 2012 CPS price of palm oil has decreased by Rp. 425 / kg, and increased again in 2013 and 2014 with each increase of Rp. 274 / kg (in 2013) and Rp. 536 / kg or 33% (in 2014). The low price of FFB is the impact of the weakening of world crude oil price which push the global CPO price weakening as one of crude substitution product.

Price of rubber commodities

From the data of the Directorate General of Estate Crops 2006-2015 report, the average annual price growth of natural rubber in the domestic market also experienced price fluctuations during the last five years, where the lowest price of natural rubber occurred in 2008 of Rp. 5,533 / kg. In 2007-2008 the price of natural rubber decreased, with the average price drop of Rp. 3.225 / Kg. However, in 2009-2011 increased, with an average price increase of Rp. 3.581 / Kg, and decreased again in 2012 as much as Rp. 5.460 / Kg. In the year 2013-2014 has increased again, with each increase value of Rp. 4.002 / kg (in 2013) and Rp. 1,025 / kg (in 2014). The increase is due to the high demand for imports of natural rubber from China caused by the development of the automotive

industry in the country, as well as the appreciation of the rupiah exchange rate against the foreign exchange rate of yuan (China).

Non Performing Loan (NPL)

Secondary data obtained from the financial statements of PT Bank BRI Agro, Tbk obtained information from 2006-2015 that the level of non performing loans (NPLs) tend to be stable and maintained at a set standard, in accordance with the provisions of Bank Indonedsia with SE NO. 6/23 / BPNP May 31, 2004, it is said that the NPL level is said to be good if less than 5% (<5%). This shows that the risk of non performing loans (NPLs) at Bank BRI Agro is still well maintained. has a tendency value ratio rose from the lift 0.77% to 1.32%. Data in the year 2006 shows the highest non-performing loans (NPLs) above the NPL level limit, as determined by Bank Indonesia. In 2007-2008, the company's management succeeded in reducing the NPL to below the established limit, with an average decrease of NPL of 3.52% per year. In 2009, however, it experienced an increase of 0.18%, but this increase is still below the set NPL limit. In 2010-2011 NPLs decreased, with an average NPL decrease of 1.85% annually. In 2012 there was an increase in NPL level by 0.8%, then decreased in the year 2013 by 62%, and increased again in 2014 by 37% and tend to remain until 2015. The increase in NPL level is due to the decrease in the performance of debtors, especially farmers or business actors in the field of agribusiness (oil palm and rubber) in fulfilling their obligations. This is due to the impact of weakening prices of rubber and palm oil commodities, as well as lending rates.

Return On Assets (ROA)

Secondary data is derived from information about the development of Return On Asset (ROA) PT. Bank BRI Agro, Tbk which can be explained that the movement of ROA during the year 2006-2015 tends to increase. In 2006-2013 there was an increase in ROA, with an average increase of 7.23% per year. This demonstrates good corporate management capability in managing all the resources (assets) owned to generate profit. In 2014 there was a 19% decline in ROA, but it rebounded in 2015 by 8%. Increase of ROA level at PT. Bank BRI Agro, Tbk due to the growth rate of third party funds, the growth rate of credit disbursed, as well as net interest income along which tend to increase over the last five years.

Statistical Analysis and Hypothesis Testing

Classical Assumption Testing

The calculation result of regression coefficient for each variable in equation model which has been formulated (Y = B0 + b1X1 + b2X2 + b3X3 + e), then obtained equation model is, Y = 3,586 + 0,206 X1 + 0,346 X2 - 0,915 X3. From the regression equation model, the financial performance (ROA) (Y) will increase if the price of oil palm (X1) and rubber price (X2) is increased, and will decrease if non-perfoming loan (NPL) (X3) is increased. The predictions of the relationship between variables within the model equation are as follows:

1. Constanta (a) = 3,586, meaning that if the price variable of oil palm (X1), rubber price (X2), and and non perfoming loan (NPL) (X3) is absent, then the financial performance (ROA) will increased or increased in value by 3,586.
2. Regression coefficient X1 (β1X1) = 0,206, meaning if there is increase of palm oil price equal to 1 rupiah, hence will improve financial performance (ROA) equal to 0,206%.
3. Regression coefficient X2 (β2X2) = 0.346, meaning that if there is an increase of rubber price by 1 rupiah, it will improve financial performance (ROA) equal to 0,346%.
4. Regression coefficient X3 (β3X3) = -0.915, meaning if there is an increase in non-performing loan by 1%, it will reduce the financial performance (ROA) of 0.915%.

The results of the classical assumption test get the decision that the multiple linear regression model that is obtained is Y = 3,586 + 0,206 X1 + 0,346 X2 - 0,915 X3, can be expressed as good model and have fulfilled BLUE (Best Linear Unbiased Estimator) criterion, did not experience symptoms of multicolinearity, autocorrelation, and heteroskedastity, and the data taken came from a normally distributed population. This is evidenced from the test results as follows:

Multicollinearity test

The results of this test indicate that each independent variable has a VIF value <10, which means that each variable is not correlated.

Table 2 Multicollinearity test

Model		Unstandardized Coefficients		Standardized Coefficients	Collinearity Statistics	
		B	Std. Error	Beta	Tolerance	VIF
1	(Constant)	3,586	1,915			
	Harga Sawit	,002	,001	,206	,719	1,390
	Harga Karet	,000	,000	,346	,814	1,229
	NPL	-2,619	,452	-,915	,714	1,400

Test autocorrelation

The results of autocellation testing using test run test showed that the model did not experience as sympton of autocorrelation, where the value of significance obtained> 0.05.

Table 2 Run Test

	Unstandardized Residual
Test Value[a]	,22472
Cases < Test Value	5
Cases >= Test Value	5
Total Cases	10
Number of Runs	7
Z	,335
Asymp. Sig. (2-tailed)	**,737**

Test autocorrelation

The results of autocellation testing using test run test showed that the model did not experience as sympton of autocorrelation, where the value of significance obtained> 0.05.

Table 3 Test heteroscedasticity

Model		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta			Tolerance	VIF
1	(Constant)		,429	,683		
	Harga Sawit	-,049	-,125	,905	,719	1,390
	Harga Karet	-,117	-,317	,762	,814	1,229
	NPL	,497	1,262	,254	,714	1,400

Normality test

The results of normality test data by using Kolmogorov-Smirnov test showed that the data in this study were taken from the normal distributed population, where the significance value obtained> 0,05.

Table 4. Normality Test Results

		Unstandardized Residual
N		10
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	,68175411
Most Extreme Differences	Absolute	,202
	Positive	,141
	Negative	-,202
Kolmogorov-Smirnov Z		,639
Asymp. Sig. (2-tailed)		,810

Hypothesis testing

Test of coefficient of determination (R2)

The test results show that the coefficient of determination (Adjusted R2) is equal to 0.840. This means that variations in the ups and downs of financial performance variables (ROA) can be explained by the price of palm oil, rubber prices, and NPLs by 84 percent, while the remaining 16 percent is explained by other variables not examined in this study.

Table 5. Test of coefficient of determination (R2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,945[a]	,893	**,840**	,83497

The statistical t test

The test results show that the price of oil palm (X1) and rubber price (X2) no effect on financial performance (ROA) (Y), while the NPL has an effect on financial performance (ROA) (Y). This is evidenced from the value of significance obtained for the NPL variable <0.05.

Table 6. t- test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3,586	1,915		-1,873	,110
	Harga Sawit	-,002	,001	-,206	-1,311	,238
	Harga Karet	,000	,000	,346	2,342	,058
	NPL	2,619	,452	,915	5,795	,001

Test F statistics

The test results show that simultaneously (oil) price of palm oil (X1), rubber price (X2), and non perfoming loan (X3) have significant effect on financial performance (ROA) (Y) in PT. Bank BRI Agro.Tbk. This is evidenced from the significance value obtained <0,05.

Table 7. f-test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34,996	3	11,665	16,732	,003[b]
	Residual	4,183	6	,697		
	Total	39,179	9			

Discussion

Symptoms of price fluctuations in oil palm and rubber, and NPL, based on the results of testing the hypothesis, shows that all three simultaneously predicted to affect the financial performance of PT. Bank BRI Agro, Tbk mainly from the aspect of the bank's ability to generate profit (ROA). This is in line with the results of a study by Bank Indonesia of Jambi Representative under the title "The Impact of Weak Rubber and Rubber Commodity Prices on BPR Performance in Jambi Province in 2015" shows that the weakening of agricultural commodity prices has an impact on the performance of banks, especially Rural Banks (BPRs) in 2015. This is because rubber and palm oil are quite sectors financed by Bank BRI Agro.

The decrease in the ability of debtors to pay their liabilities, as well as the reduced supply of BPRs in the supply of funds, is certainly at risk of increasing the NPL ratio, which ultimately affects the bank's profitability or the ability of banks to earn profits in the company's overall operations (ROA). The results of other studies indicate that the fluctuation of global crude palm oil prices and world rubber prices fluctuating trend, affect the level of credit risk, especially the quality of non-performing loans (NPL) for the sub-sector of oil palm and

rubber plantations. NPLs on credit in the palm oil plantation sub-sector could trigger inefficiency in the banking sector. The high level of NPL will erode the bank's profit because the bank should increase their PPAP (Bank Indonesia, 2014).

The result of subsequent hypothesis testing in this research shows that the price of oil palm and rubber commodities, partially no significant effect on bank performance measured from the ratio between profit generated with total assets (property) owned (ROA) PT. Bank BRI Agroniaga, Tbk. The test results explain that the price of oil palm and rubber is not a key factor affecting the profitability of banks, although the oil palm and rubber plantations sector is the largest share of credit in their lending.

Factors that can affect the financial performance of banks in general can be divided into two, namely internal factors and external factors. Internal factors are factors that specifically affect the performance of banks, which include liquidity, capital, and operational costs, which can be controlled by bank management through Asset liability management (ALMA). While external factors are factors that come from outside and can not be controlled management, such as macroeconomic factors and industry characteristics (Shahchera, M, 2012). Non performing loan (NPL) is one of the internal factors that affect the performance of the bank, but this factor includes factors that can be controlled by the company.

The results of hypothesis testing have proved that NPL has a significant and negative effect on financial performance of PT. Bank BRI Agroniaga, Tbk. This is in line with the study of Ulfawaty Adam (2013) who found that the PL significantly affect the financial performance of BNI banks. If the non performing loan (NPL) of a bank continues to increase it will affect the bank's capital as the bank must provide funds to meet the Provision for Earning Assets Loss (PAP), which is formed (Pauzi, 2010).

Bank capital that should be used for other investments is reduced due to the establishment of PPAP. This will certainly impact on the decline in the level of profit (profit) obtained by the bank. The same thing also revealed by Manuaba (2012) that banks that have non-performing loans that exceed the standards set by Bank Indonesia will lead to a decrease in profit obtained, because the higher non-performing loans the worse the quality of credit that causes the number of problem loans large, so the bank suffered losses in its operational activities that affect the decline in profits obtained by the bank, so it can be said that the NPL has a negative and significant impact on profitability.

According Dahlan (2001) there are 2 factors that affect a problem loans are internal factors and external factors. Internal factors consist of; expansionary credit policies, deviations in the implementation of credit procedures, weak administrative and credit monitoring systems, weak credit information systems, and no less good from the banks. While external factors include; decline in economic activity and high interest rates on credit, utilization of unfair banking competition climate by debtors, debtor business failure

Conclusions and Recommendation

Conclusions

Based on the results of research that has been obtained, it can be concluded as follows:

1. The price of rubber commodities partially has no effect on financial performance (ROA) PT. Bank BRI Agro, Tbk.
2. The price of palm oil commodities partially does not affect the financial performance (ROA) of PT. Bank BRI Agro, Tbk.
3. Non Performing Loan (NPL) partially affect the financial performance (ROA) PT. Bank BRI Agro, Tbk.
4. Prices of rubber, palm oil, and Non Performing Loans (NPL) simultaneously affect the financial performance (ROA) of PT. Bank BRI Agro, Tbk.

Recommendation

Based on the conclusion of the research, the following suggestions are presented:

For the Bank

1. Maintaining bank functions as intermediation (prudence) in distributing credit especially in agriculture sector to reduce high NPL (non performing loans), considering the contribution of influence of agriculture commodity price change which is big enough to risk of non performing loan.
2. Under conditions of global crisis, extra-tight surveillance and early detection ability for banks is increasingly important, especially for interest rates, real exchange rates, and inflation, to maintain profitability and liquidity levels.
3. In order for ROA to be improved, the banking company must be able improve the quality and quantity of credit. Use the principle of prudence and control the expansion in lending.

For the next researcher

1. For further research using panel data. It is recommended to increase the number of cross section and time series to produce panel models and better estimates, not just bank classification but analyze all existing banks in Indonesia. Using the components of financial ratios are more varied, because there are still many financial ratios that can be used outside this study. We recommend further research to test classical assumptions in providing assurance that the regression equation obtained has precision in estimation, unbiased and consistent as a proof. Although in the panel data regression is free from the problem.
2. A more in-depth study of internal and external factors (other than the one disclosed in this study) that will affect the financial performance of banks.

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