

## Financial Performance Analysis of Bank Rakyat Indonesia Using CAMEL Model

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### ABSTRACT

The assessment of financial performance is becoming increasingly important. The Regulation of the Central Bank of Indonesia No.13/24/DPNP/2011 provides the mandatory of measuring Health Level Assessment System of Commercial Banks in Indonesia. The purpose of this study is to measure financial performances of PT. Bank Rakyat Indonesia (Persero), Tbk (BRI) for the period 2011 to 2015, and to determine the strongest correlation among financial ratios in the component of CAMEL. The method used is a CAMEL model, which is divine to Capital (C), Assets Quality (A), Management (M), Earnings (E) and Liquidity (L), and also a statistical method, namely coefficient correlation calculation. The aspects of one another are interrelated and inseparable. The data is collected from the Audited Financial Reports of BRI for the periods of 2011-2015. The result of the study shows that over the last five years, the financial performance achieved by BRI was a healthy predicate respectively. All of the financial ratio performances have complied and achieved above the standards of the Central Bank of Indonesia. And based on coefficient correlation calculation among financial ratios in the CAMEL components, it reveals that between Return on Asset (ROA) and Operating Expense to Operating Income (BOPO) has a strong negative correlation. The five-year trend shows that if the BOPO decrease followed by the increase of ROA, and vice versa.

### ARTICLE INFO

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### INTRODUCTION

Since the economic crisis hit Indonesia in 1997, impact on banking industry leading to overall economic decrease and potentially cause bankruptcy for all Indonesia's business sectors. This forced Indonesian government to liquidate

the banks that considered inadequate and unhealthy to operate. Bankruptcy can be seen and measured by analyzing financial statements of the company. Financial statement analysis is a very important tool for obtaining information relating

to a company's financial position and results that have been achieved in relation to the company's strategy (Tuna, 2013).

The bank's financial statement intended to provide information of the assets, liabilities, and equity to the user of this information. Bank's financial information also provides information about the bank's business for a given period of time, as described in the bank's income statement, or profit and loss statement (Saiya & Pandowo, 2015). Based on that, management of a company should use the financial statement as a source of information to take actions and prevent wrong actions that can harm the company.

The financial condition of the company can be learned from its financial reports, such as a balance sheet, an income statement and the calculation of other financial statements. By conducting an analysis of the balance sheet items, such as liquidity and solvency ratios, it will be known and obtained a description of the financial positions. While the analysis of the income statement will give an overview of the profitability or developments of the relevant business. Then the results of the analysis can be used as component considerations in the determination of company policy.

The objectives of measuring financial performances are: 1) to determine the level of liquidity, which is the company's ability to meet its financial obligations at the time billed; 2) to assess the solvability, which is the ability of a company to meet its financial obligations both of short term and long term financial liabilities; 3) to determine the level of earnings (profitability), that indicates the company's ability to generate profits during certain periods. Financial performance measurement is a very important factor for the company. These measurements among other things can be used to assess the success of the company (Prasetyo, 2008).

This study focuses on a bank with the status of State-Owned Enterprise (SOE), PT. Bank Rakyat Indonesia (Persero), Tbk (BRI). The bank has total stocks of 56.75% which is managed by the Government of Indonesia (GOI) and the other

43.25% owned by the public, both individuals and institutions. The bank headquarters is located in Jakarta. The bank has the widest operational network and one of the largest banks that control most of the banking market in the country.

#### **LITERATURE REVIEW**

According to Saiya and Pandowo (2015), analysis of banking soundness using CAMEL method suggests that PT. Bank Mandiri (Persero) Tbk should have to pay more attention in the field of liquidity, where in the year 2014 the LDR scores decrease about 1% and to help raise the liquidity. In addition, the study of comparative analysis of CAMEL ratio between Bank Mandiri and Bank Negara Indonesia conducted by Tuna (2013) also supported that CAMEL ratio can assess the soundness of that two banks. Furthermore, the study of CAMEL rating method is used to choose important and effective indicators in each category and then calculated ratios are compared with an average of the banking industry (Rostami, 2015).

Rostami (2015) stated that the CAMEL model can help managers to control and analyze financial data and organizational position in an industry. In another study conducted by Kumar et. al (2012) in Indian Banking, the result shows that the private sector banks are at the top of the list with their performances in terms of soundness being the best. Public sector banks like Union Bank and SBI have taken back seat and display low economic soundness in comparison.

The previous research about financial performance has been discussed in many sectors such as a hospital, bank, and small business. Edmister (1972) stated that financial ratio is used to measure the performance of a small business and it can be used to predict the failure. Yulandita, C (2013) investigated the financial performance of state-owned banks with private banks during 2012-2013. The article employs CAMEL model for evaluating capital, asset quality, management, earning and liquidity. Then, the result was processed by using simple regression to provide a robust model and data. The finding shows significantly different of the financial performance between the states owned

banks and the private banks.

According to Megaladevi (2015), the financial ratio is a good evaluation method to measure the company performances. The company usually uses this method to compare their performance with other competitors. There are two methods to measure the financial performances which are accounting and market measurement. There are many researchers who prefer to use accounting measurement (Waddock and Graves 1997; Cochran and Wood 1984), rather than market measurement (Alexander and Buchholz, 1978; Vance, S. C., 1975), and some of them adopt both methods (McGuire, J. B., Sundgren, A., Schneeweis, T., 1988).

There are few differences between accounting and market measurement method. In accounting, the company uses the historical aspects to measure their financial performance (McGuire, Schneeweis, & Hill, 1986) and it contains a bias which leads to managerial manipulation. On the other hand, the market measurement method is straightforward, focus on performance and represent the ability of a company to generate future income (McGuire, J. B., A. Sundgren, and T. Schneeweis, 1988).

Although accounting data in financial statements is subject to manipulation and financial statements are backward looking, they are the only detailed information available on the company's overall activities (Sinkey, 2002). Furthermore, they are the only source of information for evaluating management's potential to generate satisfactory returns in the future (Mabwe Kumbirai, Robert Webb, 2010).

A financial ratio is considered as one of the good evaluation methods to measure company performances (Megaladevi, 2015). This method is usually employed by companies to compare their performances against competitors. A lot of empirical studies on financial ratio on different industries can be found and studied (Tarawneh, 2006; Halkos and Salamouris, 2004). On the banking industry, the financial ratio analysis has been applied to evaluate, examine, and rank based on their performance (Tarawneh, 2006). A study in

Oman Commercial Bank showed that the financial performance had a relationship with asset management, size, and operational efficiency.

Correlation analysis attempts to measure the strength of such relationship between two variables by means of a single number called a correlation coefficient (Walpole, 2011). Statistically, correlation is a relation between two variables. It can be directly proportional as well as inversely proportional. Coefficient correlation has value in the interval of -1 to 1. The nearer the value to 1 means that relation between both variables is stronger and directly proportional while the nearer the value to -1 means that relation between both variables is stronger but inversely proportional. However, if the value is near 0, it means that relation between both variables is almost nonexistent.

#### **RESEARCH METHOD AND THE VARIABLES**

The method that used in this study is CAMEL model, based on the Bank of Indonesia Regulation no.13/24/DPNP/2011, CAMEL model is divine to Capital (C), Assets Quality (A), Management (M), Earnings (E) and Liquidity (L).

#### **Capital Adequacy Ratio (CAR)**

Central Bank regulates every bank that operates in Indonesia to provide minimum 8% capital. The greater the percentage of the CAR, the healthier and stronger capital base of that bank. CAR is measured from total capital (tier 1 capital + tier 2 capital) divided by risk weight exposure. If there is an increase of risk weight exposure and acquisition or obtaining non-current assets, it will result in a decrease in productivity. This will impact as well to profit of the bank, that a component from the capital itself. If the required capital not achieves, it will decrease the performance of credit expansion and affect bank health level (Darmawi, 2012). Also, the reason why minimum CAR is critical because this is to make sure that banks have enough cushion to absorb losses before insolvent and consequently lose depositors funds.

$$\text{Capital Adequacy Ratio} = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weight Exposures}}$$

**Non-Performing Loan (NPL)**

Central Bank regulates every bank that operates in Indonesia, must have NPL 5% and below. The lower NPL percentage of a bank shows the healthier bank business activities. NPL shows the quality of managing and distribution of bank loan. The more loan distributes, the more greater profit from loan sector. In practice amount of loan must consider the quality of the loan, it means the better the quality of loan or the more feasible will reduce the risk of possibility that the loan is not performing. In this case, the bank must be cautious in approving the loan and need to evaluate the quality of the loan. Because a big amount of loan will impact losses if the loan that been distribute is not qualified and inflict the loan not performing (Bank Indonesia, 2011).

$$\text{Non-Performing Loan} = \frac{\text{Total Non-Performing Loan}}{\text{Total Loan}}$$

**Operating Expense to Operating Income (BOPO)**

This ratio uses to measure efficiency level and bank performance in doing operation activity. The lower percentage of BOPO ratio, the more efficient operation expense that been uses by the bank. Operation expense and income dominated by interest expense and revenue. Central Bank regulates BOPO ratio in the range of 94%-96%.

$$\text{BOPO} = \frac{\text{Operating Expense}}{\text{Operating income}}$$

**Return on Asset (ROA)**

This ratio uses to measure overall bank management performance in gain profit. The higher ROA of a bank, the greater profit earned by the bank, from the perspective of assets usability. Central Bank regulates standard from range of 0,5% - 1,25% (Bank Indonesia, 2011).

$$\text{Return On Asset} = \frac{\text{Income Before Taxes}}{\text{Total Assets}}$$

**Loan to Deposit Ratio (LDR)**

This ratio uses to find out bank performance in payback their liabilities to customer or client, who've been put funds with loans that given from their debtor (third party). The higher LDR percentage shows that if a bank lends or distribute all funds, the more illiquid a bank, otherwise lower

LDR percentage shows that the bank is liquid and have funds capacity that prepared to be distributed as a loan. LDR is an important indicator in establish minimum reserve ratio (Bank Indonesia, 2011). Central Bank regulates a range of LDR 78% - 100%.

$$\text{Loan to Deposit Rattio} = \frac{\text{Total Loan}}{\text{Third Party Funds}}$$

**Table 1.** Summary of CAMEL Ratios Standards

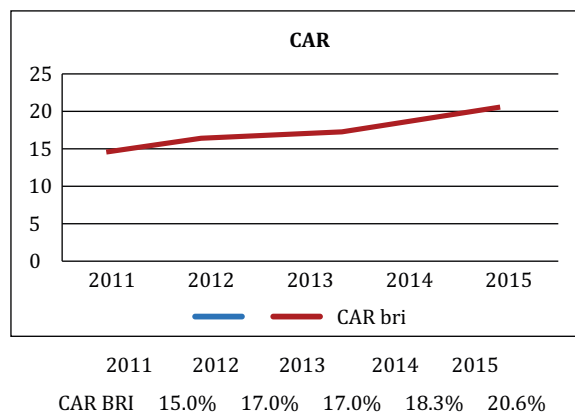
Ratio	Standards
CAR	8% minimum
NPL	5% maximum
BOPO	94% - 96%
ROA	0,5 - 1,25%
LDR	78% - 100%

Source: Bank Indonesia (2011).

**RESULT AND DISCUSSION**

**Capital Adequacy Ratio (CAR)**

Figure 1. shows the CAR trend for 2011 to 2015. The CAR in 2011 was 15%, it means that each IDR 1.00 of financing and capital was guaranteed by securities owned by PT. Bank Rakyat Indonesia (Persero), Tbk of IDR 0.15. In 2012 and 2013, the CAR increased by 2% to 17% respectively. In 2014 the value of CAR became 18.3% or increased 1.3% compared to 2013. In 2015, the CAR of PT. Bank Rakyat Indonesia (Persero), Tbk increased to 20.66%. Judging from the development of the CAR of PT. Bank Rakyat Indonesia (Persero), Tbk from 2011 to 2015, it can be concluded that the CAR of PT. Bank Rakyat Indonesia (Persero), Tbk was above the Bank Indonesia regulation that is ≥ 8% and in the category of healthy (Table 1).



**Figure 1.** Capital Adequacy Ratio Trend for 2011 - 2015 (in %)

### Asset Quality

In conducting the asset quality, the type of ratio used is the ratio of NPL. This ratio is the ratio of earning assets to total earning assets. Figure 2 shows the NPL ratio of PT. Bank Rakyat Indonesia (Persero), Tbk for 2011 to 2015. The NPL ratio in 2011 was 1.85%, and it decreased by 0.39% to 1.46% in 2012. In 2013, the value of NPL of PT. Bank Rakyat Indonesia (Persero), Tbk was 0.18% decreased from 2012 to 1.28%. In 2014, the value of NPL at 1.26% decreased of 0,02% from 1.28% in 2013. In 2015, the value of NPL PT. Bank Rakyat Indonesia (Persero), Tbk was 1.57%, or increased 0.31% from the year 2014, amounted to 1.26%.

Judging from the development of the NPL of PT. Bank Rakyat Indonesia (Persero), Tbk for five years analyzed, it can be concluded PT. Bank Rakyat Indonesia (Persero), Tbk has been operating under the Bank Indonesia regulation, which is the NPL ratio of  $\leq 5\%$ , and therefore, in the category of healthy (Table 1).

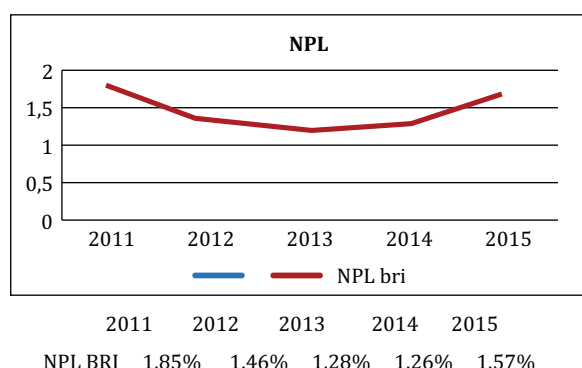


Figure 2. Non-Performing Loan Trend for 2011-2015 (in %)

### Management Analysis

Operational Efficiency Ratio (OER), or it is very famous with BOPO (Biaya Operasional terhadap Pendapatan Operasional) ratio is used to measure the level of efficiency and ability of banks to carry out its operations (Kuncoro and Suhardjono, 2002). Figure 3 shows the fluctuation of operating expenses to operating income trends from 2011 to 2015 with a huge decline in 2011 to 2012 and big bubbles from 2013 to 2015. The BOPO ratio of BRI declined from 66.7% in 2011 to 59.9% in 2012 and was facing a slow development around 60.6% in 2013 then bubbling to 65.4% in 2014 and 68% in 2015. The bubbles happened due to the rising

number of operating income above 10% for 4 periods in a row with a fantastic number starts in 2012 around 27% of 2011 operating incomes. Judging from the Bank Indonesia standards in Table 1, regarding the amount of the ratio of Operational Efficiency Ratio  $\leq 94\%$ , it means that PT. Bank Rakyat Indonesia (Persero), Tbk's management had complied with the provisions of Bank Indonesia. It can be concluded that basically BRI managements were performed too well besides generated both profit from main activities and aiming the other income to increase their total profits. Still, as the state-owned banks need to adapt their management effort to maximize their operating incomes and to satisfy their shareholders and company values.

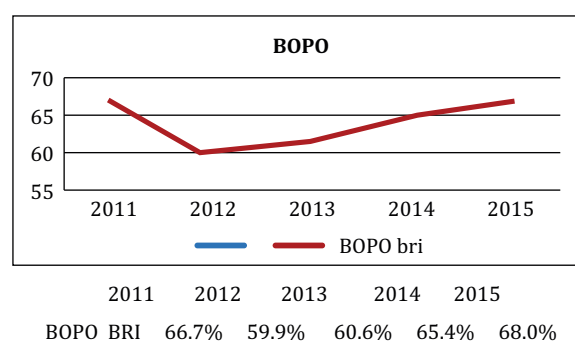


Figure 3. Operating Expenses to Operating Income Trends for 2011 - 2015 (in %)

### Earning Analysis

Bank profitability ratio analysis is a tool to analyze and to measure the level of business efficiency and profitability achieved by the bank concerned. The profitability ratio used in this study is Return on Assets (ROA), it is used to measure the ability of bank management in generating profit before tax. The larger the ROA, the greater the profit level achieved the bank, so the ability of a bank in a financially troubled condition is getting smaller. Figure 4. shows declining ROA trends from 2011 to 2015 with small raises in 2011 to 2012 and continued to decline from 2013 to 2015. PT BRI ROAs are inversely proportional to BOPO, since BOPO increased in 2013 to 2015, but ROAs were declining on those periods. It started from 4.9% in 2011 to 5.2% in 2012, and then started declining around 5% in 2013, and continued to 4.7% in 2014 and 4.2% in 2015. The declines happened due to the imbalance growth of PT BRI total assets to

their incomes, with a detail total asset year by year growth above 10% during the four periods respectively in rows, and by a great number in 2014 around 28% of the 2013 total assets.

The downward trend is correlated with an increasing number of non-performing loan year by year and advances to customers as well as an increase of credit impairments owing to defaults which negatively impact to the profitability. Earning factors of PT. Bank Rakyat Indonesia (Persero), Tbk years 2011-2015 in this case by using the formula of ROA were consistency above the minimum limit that has been set by the Bank Indonesia as shown in Table 1, with a standard minimum of 0.5% - 1.25%.

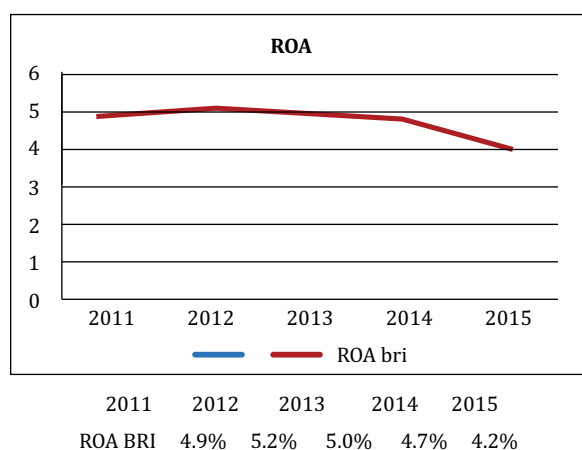


Figure 4. Return on Assets Trends for 2011-2015 (in %)

### Liquidity Analysis

An analysis of the liquidity component of the bank's ability to meet its short-term obligations or liability that is due. Based on the provisions that have been issued by Bank Indonesia, the component of bank liquidity is measured by using Loan to Deposit Ratio (LDR), which is the ratio between the total amounts of loans to funds provided by the bank. Liquidity performance measures the ability to meet financial obligations as they become due and it is crucial to the sustained viability of banking institutions (Dendawijaya, 2000).

Figure 5. shows BRI liquidity measured by loan to debt ratio. The trends of LDR increased from 2011

to 2013, slipped in 2014 and continued to rise in 2015. The BRI LDR increased from 76.2% in 2011 to 79.8% in 2012, and continued to 88.5% in 2013, then slipped to 81.68% and increased to 86.88% in 2015. The slips happened due to a sudden increase of new credits, such as savings and deposits due to the effect of presidential election and fall of the oil prices. It can be concluded that BRI managed well their LDR since the ratios were lower than the standard of Bank Indonesia, shown in Table 1, which is between 78% - 100%. A low ratio indicates that the bank is liquid with overcapacity funds ready for credit.

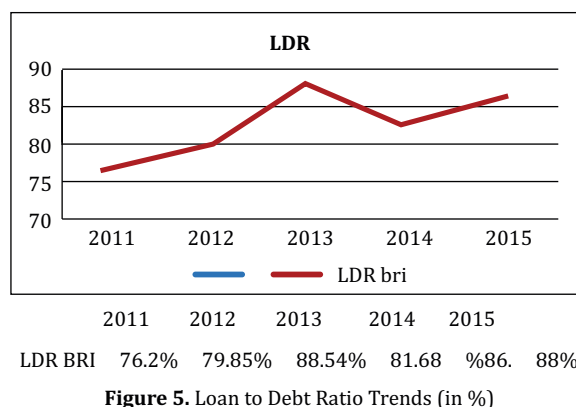


Figure 5. Loan to Debt Ratio Trends (in %)

### Summary of CAMEL Ratios of PT. Bank Rakyat Indonesia (Persero), Tbk

Table 2. shows the summary of calculation of financial ratios of BRI for the periods of 2011 to 2015 by using CAMEL Model. The result of the calculation then can be used to determine the predicate of the bank healthy level respectively.

### Coefficient Correlation of Financial Ratios of CAMEL Components

Table 3. shows that based on coefficient correlation calculation among financial ratios figures in Table 2, it reveals that between Return on Asset (ROA) and Operating Expense to Operating Income (BOPO) has a strong negative correlation, or - 0.8236203, which is close to -1. And this is also proven by both financial ratios figures, that the five-year trend, 2011-2015 shows the negative relationship, if the BOPO decrease followed by the increase of ROA, and vice versa, as shown in Table 4.

**Table 2.** Summary of CAMEL Ratios of PT. Bank Rakyat Indonesia (Persero), Tbk

NO	Ratio 100%	Indicator	2011	2012	2013	2014	2015	Predicate
1	Capital	CAR	14,96%	16,95%	16,99%	18,31%	20,59%	Healthy
2	Asset Quality	NPL	1,85%	1,46%	1,28%	1,26%	1,57%	Healthy
3	Management	BOPO	66,69%	59,93%	60,58%	65,42%	67,96%	Healthy
4	Earning	ROA	4,93%	5,15%	5,03%	4,73%	4,19%	Healthy
5	Liquidity	LDR	76,20%	79,85%	88,54%	81,68%	86,88%	Healthy

**Table 3.** Calculation of Coefficient Correlation of Financial Ratios of CAMEL Components of PT. Bank Rakyat Indonesia (Persero), Tbk. for Periods 2011 - 2015

	CAR	NPL	BOPO	ROA	LDR
CAR	1				
NPL	- 0.3583369	1			
BOPO	0.34741029	0.51180314	1		
ROA	- 0.7937249	- 0.1167902	- 0.8236203	1	
LDR	0.64415832	- 0.5940101	- 0.1398849	- 0.3918268	1

**Table 4.** Negative Relationship Between Financial Ratios of ROA and BOPO of CAMEL Components of PT. Bank Rakyat Indonesia (Persero), Tbk. for Periods 2011 - 2015

	2011	2012	2013	2014	2015
ROA	4.90%	5.20%	5.00%	4.70%	4.20%
BOPO	66.70%	59.90%	60.60%	65.40%	68.00%

## CONCLUSION, LIMITATION AND FUTURE RESEARCH

The CAR of BRI experienced positive growth, where each year continued to increase for the periods of 2011 to 2015 BRI. Positive growth in CAR reflects that banks are quite capable of improving its capital, and vice versa negative growth reflects the banks are less able to repair its capital.

The NPL ratio for BRI showed experiencing positive growths, where the NPLs continued to decline for the periods of 2011 – 2014, except for 2015. BRI experienced negative growth which thus shows that the banks are less efficient in 2015. Judging from the development of the NPL of PT. Bank Rakyat Indonesia (Persero), Tbk for five years analyzed, it can be concluded PT. Bank Rakyat Indonesia (Persero), Tbk has been operating under the Bank Indonesia regulation, which is the NPL ratio of  $\leq 5\%$ , and therefore, in the category of healthy.

Based on management analysis, it can be concluded that basically BRI managements were performed too well. They generated profit from both main activities and aiming the other income to increase

their profits. Still, as the state-owned banks need to maintain their performances to maximize their operating incomes and to satisfy their shareholders and company values.

On the ROA ratios, the growth of BRI experienced positive growth from 2011-2013. Positive growth indicates that the greater the level of profit achieved, the better the bank and the bank's position in terms of the use of assets and vice versa negative growth. The lowest ROA incurred in 2015. In terms of liquidity, it can be concluded that BRI managed well their LDR since the ratios were lower than the average of the state-owned banks. A low ratio indicates that the banks liquid with overcapacity funds ready for credit.

The result of the study shows that over the last five years, the financial performance achieved by BRI was at a healthy predicate respectively. All of the financial ratio performances have complied and achieved above the Bank Central standards. It is recommended that BRI should maintain and improve its financial performances achievements in the future. And to increase the profitability

ratio or ROA, it is recommended that the company should manage the expenses efficiently, or by decreasing the BOPO ratio.

This study is focused on Bank Rakyat Indonesia (BRI), which is one of the largest government-owned banks in Indonesia. And the study has expanded the literature about financial performance measurement in the banking industry by using CAMEL model. Data are taken from BRI annual reports and audited banks financial reports. Since the focus is on one industry, it is worth to explore it on a wider scale and find out if different industry yields the same result.

In near future, it is suggested to carry out research with many banks to get a more general result. For future research and study, it is suggested to expand literature about financial performance with model and standards that eligible for the current condition of future study. Also, it is suggested to observe the current condition of the banking industry and overall economic trends and situation that might affect and related to the study.

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