 

# An Analysis of Factors Influencing Bank Financial Performance in Indonesia

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**Abstract**
This study aims to analyze the factors that influence bank financial performance in Indonesia consisting of earning asset quality, net interest margin, non-performing loan and efficiency factors. The samples were chosen by using purposive sampling method and the data of this study were quantitative analyzed by using multiple linear regression analysis with SPSS .17 software. The results of this study: 1) earning asset quality has no significant influence on financial performance; 2) net interest margin has significant but small influence on financial performance; 3) non-performing loan does not have a significant influence on financial performance; and 4) efficiency factors have a significant influence on financial performance .
**Keywords:** Earning Assets Quality, Net Interest Margin, Non-Performing Loans, Efficiency Factors, Financial Performance.

## 1. Introduction

Banks are established with the aim of being a business entity or financial institution that collects funds from community and to community who need the funds. As a business entity, banks also experience many challenges in carrying out their business operations. Throughout history, the economy in Indonesia has experienced the financial crisis several times, which also shook the banks' operations. The financial crisis that occurred in 1999 caused some Conventional Commercial Banks or so-called *Bank Umum Konvensional (BUK)* went bankrupt and even worse some banks were forced to be dissolved, but not so with the Sharia Commercial Banks or *Bank Umum Syariah (BUS)*.

In contrast to the situation during the 1999 financial crisis, when the global financial crisis occured in 2008, despite having difficulties in operations, banks in Indonesia had to be decreased but not dissolved. Thus, BUK preferred to do merger but not for BUS as they were more secure in facing the global financial crisis. The fact is when the global financial crisis hit Indonesia, BUK did not have sufficient liquid funds available for operating activities besides they apply the capitalist economic system as their basis with its principle is based on the interest rate. At that time, BUK had to be decreased due to the crisis, but BUS experienced a rapid development after the financial crisis struck Indonesia.

To predict the health of banks, an analysis of bank financial performance can be one action should be taken. Several studies have been done to analyze the financial performance of banks as disclosed by Willison and Yılmaz (2009) that the financial crisis in 2008 brought difficulties for conventional banks around the world. However, most of Sharia (Islamic) banks were safe from the crisis. In a company, particularly in banking, a good or bad financial performance may influence investors' trust on the company. The financial performance of a bank would be good if it can maintain its liquidity in order to fulfill the obligations when customers want to withdraw or cash their savings. The financial management theories provide various indexes to measure the financial performance of banks. One of them is by analyzing the financial ratios.

A number of studies have examined bank financial performance. One conducted by Widiyanti (2010) that examined the factors that influenced the profitability of banking in 2000-2002 period. The data analysis result showed that capital adequacy ratio, Loan to Deposit ratio, efficiency factor and equity ratio were partially significant on return on equity of commercial banks in Indonesia. Sujan Chandra Paul et all (2013) evaluated the profitability and liquidity by using financial ratios such as asset returns, return on equity, return cost ratio, net interest margin, profit per share, profit per branch, profit per employee used to evaluate the probability and Loan to Deposit ratio, loan to asset ratio were used to assess the liquidity. In addition, Indyarwati, Emmy and Nur; (2017) conducted research on the impact of CAMEL ratio on BUS financial performance in 2013 - 2015 by using multiple regression analysis. The results showed that the capital adequacy ratio, efficiency factors, financial ratio of deposits had a negative and significant impact on asset returns, although net interest margin had a positive and significant impact.

The purpose of this study is to analyze the factors that influence bank financial performance which consist of earning asset quality, net interest margin, non-performance loan and efficiency factors. This research is important in analyzing the factors related to financial performance in Indonesia, both for banking, government and public who need information about bank financial performance in Indonesia during 2007-2016.

## 2. Literature Review and Hypotheses

In general, performance means the achievement reached by a person or group of people in a community. According to Rudianto (2013), the meaning of financial performance namely "the results or achievements that have been achieved by a company's management in carrying out its function of managing the company's assets effectively for a certain period". Meanwhile, according to Irham Fahmi (2012), financial performance is "an analysis conducted to see how far the company has applied the proper implementation of financial regulations such as in making a balance sheet that has met the financial accounting standards".

*2.1 The Relationship of Earning Asset Quality and Financial Performance*

In accordance with Law of Bank of Indonesia No. 14/15 / PBI / 2012, earning asset is the provision of money in bank to generate income in the forms of debts, securities, receivable, reverse repurchase agreements, derivative receivables, and other forms of the provision of mutual funds. When the earning asset quality ratio increases the number of troubled earning assets, there are much less current assets and even loss that indicate bank operations are not well-performed. If there are many troubled earning assets, the banking management will face obstacles since many earning assets cannot be used in banking operations. This will result low revenues of bank and subsequently indicate that the bank financial performance is declining. Based on the description above, the first hypothesis in this study:
H1: Earning asset quality has significant influence on financial performance

*2.2 The Relationship of Net Interest Margin and Financial Performance*

Net interest margin is the ratio of net interest income on the average productive assets. Net interest income is derived from interest income minus interest costs. The recognized productive assets are ones that result interest bearing assets. Banks need to be careful in providing debt so that the earning asset quality remains safe. A good quality of debt can increase net interest income that affects bank profitability. Besides, high net interest margins will also cause the increasing profit leading to higher return on asset. The greater the net interest margin of a company, the greater the return on asset. This indicates the financial performance of a bank is good or better. The above statements are also supported by the results of the study by Widayanti (2010) indicating that net interest margin had a significant influence on financial performance. Every increase of net interest margin will result in improved financial performance. Based on the description above, the second hypothesis in this study is as follows:
H2 : Net interest margin has significant influence on financial performance

*2.3 The Relationship of Non-performing Loan on Financial Performance*

Kasmir (2014) delineates non-performing loan is "the risk of loss of a bank due to credit payments granted by the bank to the debtor." Higher problem loans create higher loan interest arrears that, subsequently, can potentially create lower interest income and lower income changes. Likewise, the lower the bad credits, the higher the profitability. In other words, more bad credits indicate the performance of bank declines and vice versa. Wijayanti (2010) states that non-performing asset has a significant influence on financial performance.
Based on the description above, the third hypothesis in this study is as follows:
H3 : Non-performing loan has significant influence on financial performance

*2.4 The Relationship of Efficiency Factors and Financial Performance*

According to Veithzal (2013), the ratio of efficiency is the ratio used to measure the level of efficiency and ability of a bank in carrying out its operations. Malayu Hasibuan (2011) adds that an efficiency factor is the ratio of operating costs over the last 12 months to operating income over the same period. Efficiency of banks can be achieved by generating operating income and reducing operating costs. If operating costs remain the same but operating income can be increased, at the same time it will increase the profitability of banks which ultimately can improve bank financial performance. The smaller the efficiency factor indicates the savings in the bank financial management. The efficiency factor decreases means less expenditure, and the bank is more efficient in managing the bank's assets to gain or increase profits. The increased profits shows the good level of the bank's health as well as its financial performance. Therefore, the efficiency factor has a relationship with financial performance.

The research by Widayanti (2010) found that efficiency factors had significant correlation on financial performance and it also corresponds the findings from Satria Hardianto (2016) which showed that the efficiency factors also had a significant relationship with financial performance.
H4: Efficiency factors have significant influence on financial performance
Based on the above framework, here is the research model:

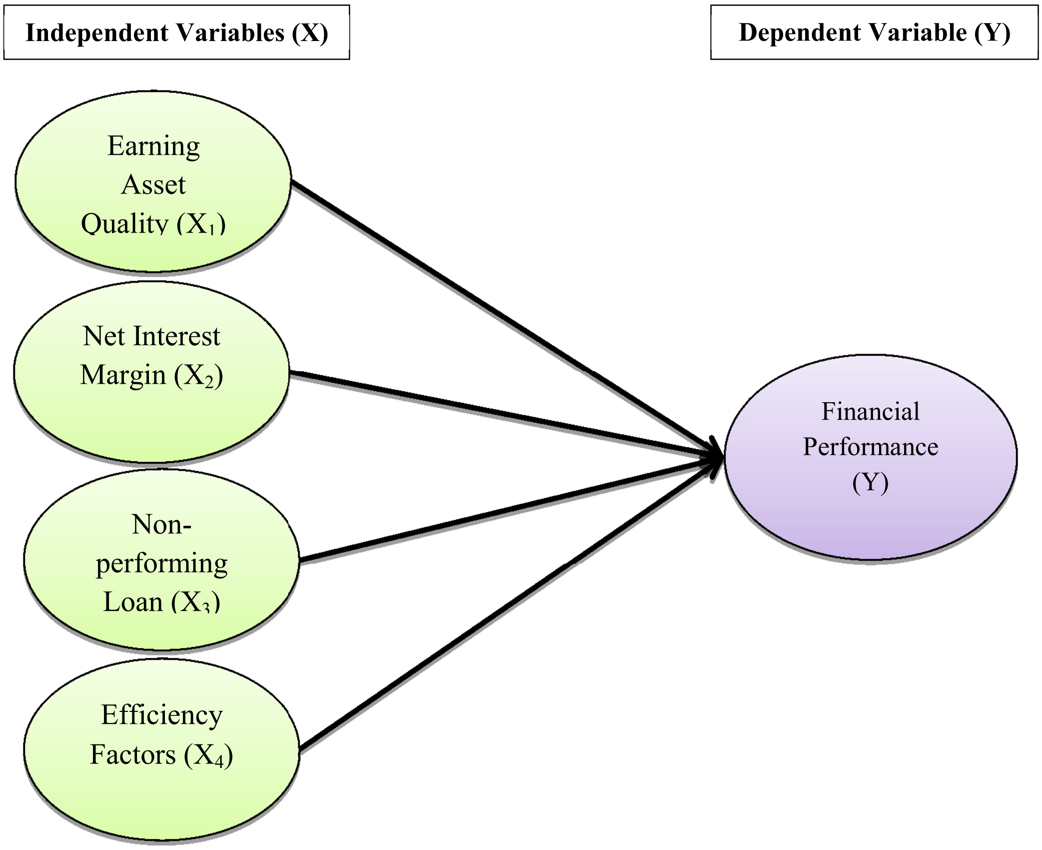


**Figure 1. The Research Model**

Source: processed, 2018

**3. Research Method**

The research design used was the cause and effect relationship. This situation is related to the relationship between events. A causality study explores the possible causality between two unknown variables. Its usefulness is to help formulate the problem more precisely. The method used to study this causality in this study was by using SPSS software. 17.

In this study, all banks in Indonesia were the research population, namely Conventional Commercial Banks (BUK) and Sharia Commercial Banks (BUS) consisted of 109 Banks. The sampling technique used was purposive sampling. According to Sugiyono (2012), it is the sampling by specifying criteria. The criteria set forth in this study were:

- BUK and BUS, still active from 2007 to 2016
- Having accessible comprehensive financial reports

Based on the data obtained, the number of samples in this study was 31 banks consisting of 26 BUK and 5 BUS within 10 years of observations from 2007 to 2016 that qualified for being the samples of this study.

The data used in this study were quantitative data measured in numerical scale. The data required was the ratio. Ratio data are data measured by a part. In this study, the ratio data used were earning asset quality, net interest margin, non-performing loan, and efficiency. The data in this research were from secondary data, obtained from Indonesia Stock Exchange *(BEI),* Financial Services Authority *(OJK)*, and Bank Indonesia *(BI).*

*3.1 The Operational Definition of Variables*

The independent variables used in this research were financial performance indicators consisting of earning quality, net interest margin, non-performing loan, and efficiency factors while the dependent variable was financial performance. The following describes the operational definition of each independent variable:

- Earning asset quality

Earning asset quality is earnong assets with good, doubted, or poor quality. This ratio can be formulated as follows (Circular Letter of Bank Indonesia Number 13/24 / DPNP October 25, 2011) :

$$\text{Earning aset qualit y} = \frac{\text{Earning asset}}{\text{Total of earning assets}} \times 100\%$$

- Net Interest margin

Net Interest margin is used to assess bank management in managing its earning assets to obtain net margin method. The net method of margin is derived from income minus expenses. This ratio is formulated as follows (Circular Letter of Bank Indonesia Number 13/24 / DPNP October 25, 2011) :

$$\text{Net Interest Margin} = \frac{\text{Net Earnings}}{\text{Earning assets}} \times 100\%$$

- Non-performing Loan

This ratio indicates bank management capability in managing non-performing loans provided by banks. Kasmir (2014) points out that bad debts or debt riskis "the risk of bank losses that may arise from the payment of debt granted by the bank to the debtor." This ratio is formulated as follows (Circular Letter of Bank Indonesia Number 13/24 / DPNP October 25, 2011):

$$\text{Non-performing Loan} = \frac{\text{Bad credit}}{\text{Amount of debt}}$$

- Efficiency Factors

Efficiency factor are used to measure how productive a company uses its assets. In the banking sector, the efficiency factor used is usually the ratio between operating costs and operating income. The efficiency factor, in accordance with Circular Letter of Bank Indonesia Number 13/24 / DPNP October 25, 2011, is calculated as follows:

$$\text{Efficiency Ratio} = \frac{\text{Operating Expense}}{\text{Operating Income}} \times 100\%$$

Meanwhile, the dependent variable in this study was financial performance. The financial performance was measured by Return on Equity (ROE) ratio. Return on equity is the ratio of bank net income and its own capital. The increase of ratio means an increase in net income of a bank. Return on Equity (Circular Letter of Bank Indonesia Number 13/24 / DPNP dated October 25, 2011) is calculated

**4. Results and Discussion**

There were 310 data used in this study. However, 108 data were eliminated because the data were larger and caused 'outliers' data as well as heteroskedasticity. Hence, the amount of data analyzed were 178. The descriptive statistics of the research variables can be seen in Table 1.

**Table 1. Descriptive Statistics of Research Variables**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| EAQ | 178 | .01 | 7.99 | 2.3705 | 1.71231 |
| NIM | 178 | .20 | 13.04 | 5.3399 | 2.30127 |
| NPL | 178 | .20 | 6.94 | 2.1907 | 1.50443 |
| OEOI | 178 | 37.54 | 114.63 | 84.8451 | 12.88363 |
| ROE | 178 | -16.31 | 44.58 | 12.6744 | 9.97082 |
| Valid N ( listwise ) | 178 | | | | |

Source: Processed Data of SPSS 17.0, 201 8

Legend:

EAQ - Earning asset quality

NIM - Net Interest margin

NPL - Non-performing loan

OEOI - Operating expenses over Operating Income (Efficiency factors)

ROE _ Return on equity (Financial performance)

From the results obtained, the answers from respondents fairly vary with the answer scores for earning asset quality variable ranging from 0.01 to 7.99 from all respondent data of 2.3705 with the standard deviation ($\sigma$) of 1.71231. Related to net interest margin, the answer scores range from 0.20 to 13.04 , from all respondent data of 5.3399 with the standard deviation ( $\sigma$) of 2.30127. Whereas non-performing loan had the answer scores ranging from 0.20 to 6.94, from all respondent data for of 2.1907 with the standard deviation ($\sigma$) of 1.50443.

 

Additionally, the answer scores for efficiency factors range from 37.54 to 114.63 , from all respondent data of 84.8451 with the standard deviation ($\sigma$) of 12.88363.Lastly, the answer scores for financial performance range from -16.31 to 44.58, from all respondent data of 12.6744 with the standard deviation ($\sigma$) of 9.97082.

*4.1 Data Analysis*

Before testing the hypotheses using multiple regression analysis, the classical assumption testing was needed. Classical assumption test consisted of data normality test, multi correlation test, heteroskedasticity test and autocorrelation test. Besides, to test the hypotheses, this research applied multiple linear regression analysis.

*4.2 Results and Discussion*

The test results showed that the data in this study were normally distributed and there was no problems in multicolinearity, heteroskedasticity and autocorrelation, so that the data further could be analyzed by using multiple linear regression analysis. Multiple linear regression analysis was used to analyze the influence of independent variables which consisted of earning asset quality, net interest margin, non-performing loan and efficiency factors on financial performance.

*4.2.1 Results of Multiple Linear Regression Analysis*

The purpose of this study was to analyze the factors influencing bank financial performance in Indonesia during 2007-2016. The factors consisted of earning asset quality, net interest margin, non-performing loan, and efficiency factors. The hypotheses testing used SPSS software .17, and the results are shown in the following Table 2.

**Table 2. Results of Hypotheses Testing**

| | **Unstandardized Coefficients** | | **Standardized Coefficients** | | | **Description** |
|---|---|---|---|---|---|---|
| **Model** | **B** | **Std. Error** | **Beta** | **T** | **Sig.** | |
| 1 (Constant) | 44.261 | 4.349 | | 10.177 | .000 | |
| EAQ | -570 | .397 | -.098 | -1.437 | .152 | **No influence** |
| NIM | 1.163 | .246 | .268 | 4,728 | .000 | **Have influence** |
| NPL | .008 | .478 | .001 | .016 | .987 | **No influence** |
| OEOI | -430 | .049 | -.555 | -8.747 | .000 | **Have influence** |

a. Dependent Variable: ROE

Legend:
EAQ - Earning asset quality
NIM - Net Interest margin
NPL - Non-performing loan
OEOI - Operating expenses over Operating Income

From Table 2. above, the result of multiple regression equation can be determined as follows:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + e$$

Financial performance = 44.261 – 0.571 earning asset quality + 1.163 net interest margin + 0.008 nonperforming loan - 0.430 efficiency factors + *e*

Based on Table 2, here are the explanations of the hypotheses testing results.

Hypothesis 1 testing: Earning asset quality (EAQ) has influence on financial performance.

The first hypothesis in this study is earning asset quality (EAQ) has significant influence on financial performance. Based on table 1.2, the value of P = 0. 152 (not significant), it means that earning asset quality does not influence the financial performance (the hypothesis is rejected). This might bacause of the number of troubled earning assets followed by high bank profitability from its operational activities, which indirectly affect bank financial position.

Hypothesis 2 testing: Net interest margin (NIM) has influence on financial performance.

The second hypothesis is net interest margin (NIM) has influence on financial performance. Based on Table 2, the value of P = 0.00 (significant) meaning that net interest margin has influence on financial performance (hypothesis is accepted). This shows that bank ability to manage its earning assets to generate net profits. Banks need to be careful in giving credits so that the earning asset quality is maintained. Good credit quality can increase net interest margin so that ultimately it also affect bank profitability. High net interest margin will result an increase in profit before tax. Thus, the greater the net interest margin, bank financial performance is improving. This confirms the results of research by Widayanti (2010) which showed that net interest margin had a significant correlation with financial performance.

Hypothesis 3 testing: Non performing loan (NPL) has influence on financial performance.

The third hypothesis is non-performing loan (NPL) has influence on financial performance. As shown in Table 2, the value of P = 0. 987 (not significant) indicating that non-performing loan has no influence on financial performance (hypothesis is rejected). In this study, non-performing loan do not affect the financial performance since in several years of observation, the financial performance in some banks in Indonesia are still healthy while the data from the Financial Services Authority shows that bad credits are high. However, in accordance with the health assessment criteria of Bank Indonesia, both BUK and BUS are placed in a group of healthy banks. Hence, this study is not in line with Widayanti's research (2010) which showed that bad loans have a negative influence on financial performance, which in other words, any increase in the number of non-performing loans will cause financial performance decreases.

Hypothesis 4 testing: Efficiency factors have influence on financial performance.

The last hypothesis of this study is the efficiency has influence on financial performance. Table 2 records the value of P = 0.00 (significant), meaning that there is influence of efficiency on financial performance (hypothesis is accepted). This is because banking efficiency factor also has a big impact in measuring the level of efficiency and ability of banks in operating their operations. Therefore, banks have to make a comparison between the total operating costs and the operating income they earn. Good risk management in banking can be a reflection that a bank has been able to perform efficiently to reduce its operating costs and finally to increase the company's revenue. Banks which are less effective in managing their business can be seen from their declining profit growth. This study aligns the result of Widayanti’s (2010) that found efficiency factor significantly influenced financial performance as well as Satria Hardianto’s (2016) stating that efficiency factor had a significant correlation on financial performance.

*4.2.2 Results of Coefficient Determination Test ($R^2$)*

Coefficient determination test ($R^2$) is used to measure how big the ability of all independent variables can explain dependent variables. This test concerns the value of Adjusted R Square contained in the summary model table. The following table is the coefficient determination test result.

**Table. 3 Result of Coefficient Determination Test**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .694 [a] | .481 | .469 | 7.26352 |

a. Predictors: (Constant), OEOI, NIM, EAQ, NPL

b. Dependent Variable: ROE

In Table 3., it is recorded that the value of Adjusted R Square is 0.469 (46.9%). This number means that the contribution of every independent variable namely ROE along with other variables, ie EAQ, NIM, NPL, and OEOI are only able to explain the dependent variable as much as 46.9% whereas the rest 53.1% is explained by other variables excluded in this research method. The value of Std. Error of the Estimate is 3.33932. The smaller the value of Std. Error of the Estimate means the more exact the regression model in predicting dependent variable.

## 5. Conclusion and Sugesstion

Of the four hypotheses proposed in this study, the results show that earning asset quality and non-performing loan has no significant influence on financial performance (hypotheses 1 and 3 are rejected) while net interest margin and efficiency factors have significant influence on financial performance (hypotheses 2 and 4 are accepted).

### *5.1 Implications*

For the government, by knowing the analysis results of the financial performance of BUS and BUK, the government can make the information as an input into the decision making process to determine whether one bank financial performance is very healthy, healthy, or unhealthy, so that the warning can be given soon to the banks with less-healthy and unhealthy financial performance to improve their financial performance. For public, this research results can be helpful information too as an input in the decision-making process they make in investing their assets.

### *5.2 Limitations*

The study only analyzed the financial performance of banks before and after the global economic crisis during 2007-2016. The samples of this study were BUS and BUK in Indonesia. This study used the secondary data obtained from Indonesia Stock Exchange (BEI), Financial Services Authority (OJK) and Bank Indonesia (BI) based in Jakarta. The data used were the financial data during ten year observation from 2007 until 2016. Moreover, this study only analyzed the financial performance of BUS and BUK throughout the years in quantitative observations by analyzing the influence of financial performance indicators such as earnings asset quality, net interest margin, non-performing loan on financial performance.

*5.3 Suggestions for Upcoming Research*
For future research, it is suggested that besides doing an analysis with quantitative method, it may be also followed with qualitative analysis. Qualitative approach is expected to find the most powerful financial performance indicators that influence financial performance and will also find other things that influence bank financial performance and financial performance indicators besides what have been examined in this study. It is also advisable to analyze financial performance using other indicators such as CAR, loan to deposit, revenue, total assets and others as well as to expand the research samples and observation year.

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