Bank Health Analysis Using Camels Ratio on Company Value in the Banking Sector Are Registered in Sri Kehati Index Period of 2012-2017

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This research was conducted on the banking sector that was registered in the Sri Kehati index from 2012 to 2017, because the banking sector was included in the category of Sustainable and Responsible Investment (SRI) index, so researchers were interested in conducting research on the performance of the bank sector. The analysis uses CAMELS ratio. Data are obtained from annual reports issued by the banking sector that is listed on Sri Kehati index and then processed by using EViews 8. The analysis is carried out partially or simultaneously. From the results of data processing, it is obtained that simultaneously the CAMELS ratio has a value that is very influential on the value of the company as measured by Price to Book Value (PBV) of 87.43%, while the remaining 22.57% are other factors not examined. Partially, only three ratios have an effect on Company Value, namely Capital at 1.93%, Assets at 58.06%, and Liquidity at 67.57%, while other ratios, namely Management (non-performing loans (NPL)) and Earnings (Return on Assets (ROA)) and Operating Expenses to Operating Income (OEOI)) have no effect on Value Company. Then, it can be concluded that the banking sector has a CAMELS ratio value that has a positive influence on Company Value, while partially the management must pay attention to Management ratios as measured by NPL and Earnings as measured by ROA and OEOI according to regulations issued by Bank Indonesia. In this research period, the banking sector is improving its performance related to NPL and its earnings; therefore, a negative influence on Company Value occurs. It is expected that all ratios in CAMELS will have a positive effect and the following year will be better.

Keywords: CAMELS, PBV, capital adequacy ratio (CAR), NPL, net profit margin (NPM), ROA, OEOI, loan to deposit ratio (LDR)

Research Background

In the economy of a country, the banking sector has a very strategic and important role, because the banking sector connects trade transactions throughout the world through the role of banks in each country by using the latest information technology, so that transactions can be completed immediately. Therefore, the
banking sector must be maintained at the level of trust from entrepreneurs and also the community. In addition, banking has a very important role in supporting real sector activities, in which it functions as a mediator between parties who have excess funds and those who need funds. So that the real sector can grow, the impact of a healthy bank is that the inflation rate will be depressed and gross domestic product (GDP) will increase.

In addition, the role of banks in the economy of a nation is very important, namely, as an indicator of the economy of a country, a healthy bank will strengthen the economic activities of a nation. Conversely, economic activities will be unhealthy if the banking sector is not healthy.

According to Law No. 10 of 1998 Article 1 concerning banking, it states:

That banks are business entities that collect funds from the public in the form of deposits and distribute them to the public in the form of loans and/or other forms in order to improve the lives of many people. (Presiden Republik Indonesia, 1998)

According to Abdurahman (1999, p. 2), “a bank is a type of financial institution that carries out various types of services, such as providing loans, distributing currencies, controlling currencies, acting as a place to store valuables, financing business enterprises and etc.”.

Based on the description above, the main activity of the bank is to receive deposits from the public that have excess funds in the form of demand deposits, savings, and time deposits and provide credit to those who need funds. The bank functions as a financial intermediary for parties with excess funds with parties who need funds other than that the bank also functions as an agent of trust.

The agent of trust is that the community believes that the customer’s money will not be misused by the bank, the customer’s money will be managed properly, and the bank will not go bankrupt (Triandaru & Budi Santoso, 2008, p. 9, as cited in Abdurahman, 1999).

The banking sector listed on the Indonesia Stock Exchange (IDX) is 90 issuers (as of 2017). Throughout 2017, the performance of the banking sector recorded a net profit of IDR 115.98 trillion, with an average growth of net profit of 5.42% (Kontan.co.id, Friday 06 April 2018/21:04 WIB) profit the biggest net was recorded by large issuers, namely, BBRI, BBCA, BMRI, and BBNI. According to Bisnis.com (February 26 2018/15:14 WIB), net income after tax from 2015 to 2017 is as follows:

| Year | Net profit after tax | Growth (%) |
|------|---------------------|------------|
| 2015 | 112.21 trillion      |            |
| 2016 | 104.63 trillion      | (6.755)    |
| 2017 | 131.15 trillion      | 23.099     |

Note. Source: Bisnis.com February 26, 2018/15:14 WIB.

The increase in net income was the highest in the last five years. The increase in profit was the effect of efforts to improve efficiency and clean-up of non-performing loans (NPLs) carried out by bankers over the past few years (Bisines.com February 26, 2018-15:14 WIB).

According to Josua Pardede, an economist at PT Bank Permata, Tbk who said:

Banking profitability in 2017 is still growing even though the trend of net interest margin (net interest margin (NIM)) tends to decline to 5.32% from the position of 5.63% at the end of 2016. …Overall, banking profitability tends to improve due to a decrease in the value-loss loss reserve (CKPN), which slowed to 2.8% at the end of 2017 from the previous year which still grew by 34%. (Kontan.co.id, Jumat 06 April 2018/21:04 WIB)
“So one of the things that explains big profits is the restructuring of bad loans and the assignment of SOEs to support government strategic projects, especially infrastructure”, according to Bhima Yudhistira Adhinegara, an economist of the Institute for Development of Economics and Finance (INDEF) (Kontan.co.id, Friday, 06 April 2018/21:04 WIB).

In this study, the performance of the banking sector listed in the sustainable and responsible investment (SRI) stock index—Kehati (Indonesian Biodiversity Foundation), abbreviated as Sri Kehati, is an index that is an indicator of stock price movements on the Indonesia Stock Exchange (IDX), and can be a benchmark for investors or investment managers in determining which public companies have good performance in carrying out their business in terms of financial, social, and environmental management in a sustainable manner (https://www.kehati.or.id).

The Sri Kehati index is the first green index of investment in Association of Southeast Asian Nations (ASEAN) and the second in Asia based on the data of Exchange and Sustainable Investment (http://www.world-exchange.or). This index falls into the category of Socially Responsible Investing (SRI) or ethical investing, an investment strategy that considers both financial and social benefits that bring change. Some types of indexes that fall into the SRI index category include:

Table 2

| No. | Index name                              | Number of member (constituents) |
|-----|----------------------------------------|---------------------------------|
| 1   | Dow Jones Sustainability World Index   | 340 constituents                |
| 2   | Ethical Europe Equity Index            | 30 constituents                 |
| 3   | FTSE4 Good Global Index                | 883 constituents                |
| 4   | MSCI World SRI Index                   | 401 constituents                |
| 5   | Sri Kehati Index                       | 25 constituents                 |
| 6   | Shanghai Stock Exchange (SSE) Social Responsibility Index | 100 constituents       |
| 7   | S & P ESG India Index                  | 50 constituents                 |

Note. Source: https://www.kehati.or.id accessed on September 14, 2017.

Sri Kehati’s performance has a performance that is consistent with an average value of 10 percent above other indices, like the LQ45 index and the Composite Stock Price index (CSPI) and Jakarta Composite index (JCI). This indicates that there is a positive response from investors who are willing to pay premium prices from the stock prices of listed companies that are sustainable and responsible. There are six indicators that are used as a basis for assessment, including: (1) concern for the environment; (2) community development; (3) good governance; (4) business behavior; (5) labor practices; and (6) rights human rights. As of April 2017, there are 25 selected issuers as follows:

Table 3

| No. | Companies That Are Included in the Sri Kehati Index per 2017 |
|-----|-------------------------------------------------------------|
| 1   | AALI PT Astra Argo Lestari Tbk                              |
| 2   | ADHI PT Adhi Karya (Persero) Tbk                            |
| 3   | ASII PT Astra International Tbk                             |
| 4   | BBCA PT Bank Central Asia Tbk                               |
| 5   | BBNI PT Bank Negara Indonesia (Persero) Tbk                  |
| 6   | BBRI PT Bank Rakyat Indonesia (Persero) Tbk                  |
|     | KLBF PT KALBE Farma Indonesia Tbk                            |
|     | LSIP PT PP London Sumatera Indonesia Tbk                     |
|     | PGAS PT Perusahaan Gas Negara (Persero) Tbk                  |
|     | PJAA PT Pembangunan Jaya Ancol Tbk                           |
|     | SMGR PT Semen Indonesia (Persero) Tbk                        |
|     | TINS PT Timah (Persero) Tbk                                  |

Note. Source: https://www.kehati.or.id accessed on September 14, 2017.
Table 3 to be continued

| No. | Code  | Name of issuer                                          |
|-----|-------|--------------------------------------------------------|
| 7   | BDMN  | PT Bank Danamon Indonesia                               |
| 8   | BMRI  | PT Bank Mandiri (Persero) Tbk                           |
| 9   | BSDE  | PT Bumi Serpong Damai Tbk                               |
| 10  | GIAA  | PT Garuda Indonesia (Persero) Tbk                        |
| 11  | INDF  | PT Indofood Sukses Makmur Tbk                            |
| 12  | JAPFA | PT Japfa Comfeed Indonesia Tbk                           |
| 13  | JSMR  | PT Jasa Marga (Persero) Tbk                              |
| 20  | TLKM  | PT Telekomunikasi Indonesia (Persero) Tbk                |
| 21  | UNTR  | PT United Tractor Tbk                                    |
| 22  | UNVR  | PT Unilever Indonesia Tbk                                |
| 23  | WSKT  | PT Waskita karya (Persero) Tbk                           |
| 24  | WIKA  | PT Wijaya Karya (Persero) Tbk                            |
| 25  | WTON  | PT Wijaya Karya Beton Tbk                                |

Note. Source: https://www.kehati.or.id accessed on September 14, 2017.

Based on Table 3, the researchers chose the banking sector listed in the Sri Kehati index, namely:

Table 4
Banking Companies That Are Included in the Sri Kehati Index per 2017

| No. | Code  | Name of issuer                                          |
|-----|-------|--------------------------------------------------------|
| 1   | BBCA  | PT Bank Central Asia Tbk                                |
| 2   | BBNI  | PT Bank Negara Indonesia (Persero) Tbk                  |
| 3   | BBRI  | PT Bank Rakyat Indonesia (Persero) Tbk                  |
| 4   | BDMN  | PT Bank Danamon Indonesia Tbk                           |
| 5   | BMRI  | PT Bank Mandiri (Persero) Tbk                           |

Note. Source: https://www.kehati.or.id accessed on September 14, 2017.

To improve the performance of Bank Indonesia, issuing three relaxation regulations in 2018 are:

1. Expansion of averaging Statutory Reserves (GWM) contained in Bank Indonesia Regulation (PBI) No. 19/6/PBI/2017 (Bank Indonesia, 2017) concerning the fifth amendment to PBI No. 15/15/PBI/2013 (Bank Indonesia, 2013) concerning statutory reserves of commercial banks in Rupiah and foreign exchange for conventional commercial banks, to 6.50%.

2. Calculation of liquidity is added by corporate bonds with a certain rating included in the financing element so that Financing to Funding ratio (FFR) becomes a range of 80% to 92%.

3. The LTV ratio is adjusted to the conditions of each region. The LTV regulation will be issued in July 2018.

The third relaxation is actually already contained in the CAMELS analysis, therefore, in this study, researchers want to know: How much influence the bank’s health is measured using the CAMELS ratio on the value of companies registered at Sri Kehati index 2012-2017 period simultaneously and partially.

Theoretical Basis

Bank Health

A healthy bank is a bank that performs its functions well, among others: maintaining public trust, carrying out the intermediary function, smooth payment traffic, and implementing government policies, especially in the monetary sector.

According to Bank Indonesia, “Regulation of the Indonesia Central Bank” No. 13/I/2011, regarding the assessment of the soundness of commercial banks, banks are required to conduct self-assessments using a risk-based bank rating approach on an individual or consolidated basis.
According to Bank Indonesia Directors’ Circular No. 6/10/PBI/2004 (Bank Indonesia, 2004) dated 12 April 2004 concerning the evaluation of the general bank soundness level and Bank Indonesia Regulation, “the soundness of the bank is an assessment of a condition of a bank’s financial statements in a certain period and time in accordance with Bank Indonesia Standards” Indonesia No. 10/1/PBI/2004\(^1\) Article 1 Paragraph 4 and Circular Letter of Bank Indonesia No. 13/24/DPNP\(^2\) dated October 25, 2011 concerning procedures for evaluating the soundness of commercial banks, assessed by a qualitative approach to factors that affect the condition and development of banks in this case Capital factors, Earning Assets, Management factors, Profitability factors, Liquidity factors, and Sensitivity factors are known as CAMELS which can be seen in Table 5.

Table 5
**Bank Soundness According to CAMELS**

| Credit value CAMELS | Predicate |
|---------------------|-----------|
| 81%-100%            | Healthy   |
| 66% ≤ 81%           | Quite healthy |
| 55% ≤ 66%           | Unwell    |
| 0% ≤ 55%            | Not healthy |

Note. Source: SE BI No. 13/24/DPNP 25 October 25, 2011.

**Scope of CAMELS**

Bank health assessments include: (1) Capital; (2) Assets Quality; (3) Management; (4) Earnings; and (5) Liquidity.

**Capital.** The ability of banks to provide capital in accordance with the minimum capital obligations of a bank is called solvency. The bank solvency level is measured by the Capital Adequacy ratio (CAR) based on Bank Indonesia rules with a minimum of 8% CAR; CAR calculation is as follows:

\[
\text{CAR} = \frac{\text{Capital}}{\text{Total Risk - Weighted Assets}} \times 100
\]

\[
\text{Credit Value} = \frac{\text{CAR}}{0.1\%} + 1
\]

Table 6
**CAR Assessment Criteria**

| Weight | CAR ratio (%) | Credit Value (%) | Predicate |
|--------|---------------|------------------|-----------|
| 8      | 6.5 ≤ 8       | 66 < 81          | Quite healthy |
| 30%    | ≤ 6.5         | < 51             | Not healthy |
|        | 81-100        |                  | Healthy    |

Note. Source: Taswan (2006, p. 363).

**Assets Quality.** Asset quality measures the strength of a financial institution against loss of value in these assets. Asset quality with non-performing loans (NPL) measures the ability of banks to manage non-performing loans channeled by banks. According to Bank Indonesia NPL rules, it is no more than 5%, namely:

Ratio of earning assets classified to earning assets.

\(^1\) Bank Indonesia, Regulations of the Indonesia Central Bank, 2004, No. 10/1/PBI/2004.

\(^2\) Bank Indonesia, Circular letter of the Indonesia Central Bank, 2013, No. 13/24/DPNP.
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\[
\text{NPL} = \frac{\text{Total Problem Loan}}{\text{Total Credit}} \times 100
\]

\[
\text{Credit Value} = \frac{15.5\% - \text{NPL}}{0.15\%} \times 100
\]

Table 7
NPL Assessment Criteria

| Weight | NPL ratio (%) | Credit Value (%) | Predicate |
|--------|---------------|-----------------|-----------|
| 25%    | 0-10.35       | 81-100          | Healthy   |
|        | 10.35-12.60   | 66 < 81         | Quite healthy |
|        | 12.60-14.50   | 51 < 66         | Unwell    |
|        | 14.50         | 0 < 51          | Not healthy |

Note. Source: Taswan (2006, p. 363).

Management. Management quality demonstrates management’s ability to identify, measure, monitor, and control risks that arise through the bank’s business policies and strategies to achieve targets. The success of management can be classified as healthy if at least it has fulfilled 81% of all aspects of measurement of management capability. The Net Profit Margin (NPM) or Net Interest Margin (NIM) approach is used, namely the company’s ability to generate net profits. The greater the NPM value is, the more optimal the bank is in forming net income.

\[
\text{NPM (NIM)} = \frac{\text{Net profit}}{\text{Operational profit}} \times 100
\]

In accordance with Bank Indonesia Regulations No. 6/23/DPNP in 2004, the bank was said to be healthy when the NPM ratio is greater than 81%.

Credit Value = NPM Value Weight 20%

Earnings. Measured using rentability, a measure of a bank’s ability to increase profits or measure management’s level of efficiency and effectiveness in carrying out its business and the ability of banks to support current and future operations. Based on Bank Indonesia Regulation No. 9/I/PBI/2007 components of profitability are as follows:

a. The ability to generate profits, earnings ability supports expansion and closes risks, and the level of efficiency (ROA).

\[
\text{Return on Assets (ROA)} = \frac{\text{Profit before Tax}}{\text{Total Assets}} \times 100
\]

\[
\text{Credit Value} = \frac{\text{ROA}}{0.015\%} \times 100
\]

b. Income diversification includes the ability of banks to obtain fee-based income, and diversification of fund investments, and the application of accounting principles in recognition of income and costs (Operating Expenses to Operating Income (OEOI)).

\[
\text{OEOI} = \frac{\text{Operating Expenses}}{\text{Operating Income}} \times 100
\]

\[
\text{Credit Value} = \frac{100\% - \text{OEOI}}{0.08\%} + 1
\]
Table 8

**ROA Assessment Criteria**

| Weight | ROA ratio (%) | Credit Value (%) | Predicate |
|--------|---------------|------------------|-----------|
| 5%     | 1.21          | 81-100           | Healthy   |
|        | 0.99 < 1.21   | 66 < 81          | Quite healthy |
|        | 0.77 < 0.99   | 51 < 66          | Unwell    |
|        | 0.76          | 0-51             | Not healthy |

*Note.* Source: Taswan (2006, p. 363).

Table 9

**OEOI Assessment Criteria**

| Weight | OEOI ratio (%) | Credit Value (%) | Predicate |
|--------|----------------|------------------|-----------|
| 5%     | < 93.52        | 81-100           | Healthy   |
|        | 93.52-94.73    | 66 < 81          | Quite healthy |
|        | 94.73-95.92    | 51 < 66          | Unwell    |

*Note.* Source: Taswan (2006, p. 363).

**Liquidity.** Liquidity shows the ability of banks to pay off short-term liabilities on time. According to Bank Indonesia, the criteria liquidity at Rank 1 is 50% < ratio < 75%.

\[
\text{LDR} = \frac{\text{Loans given}}{\text{Third Party Funds}} \times 100
\]

\[
\text{Credit Value} = 1 + \frac{115\% - \text{LDR}}{1.00\%} \times 4
\]

Table 10

**LDR Assessment Criteria**

| Weight | LDR ratio (%) | Credit Value (%) | Predicate |
|--------|---------------|------------------|-----------|
| 10%    | < 94.75       | 81-100           | Healthy   |
|        | 94.75-98.50   | 66 < 81          | Quite healthy |
|        | 98.50-102.25  | 51 < 66          | Unwell    |
|        | 102.25        | 0-51             | Not healthy |

*Note.* Source: Taswan (2006, p. 363).

**Company Value**

Company Value is the investor’s perception of the level of success of the company that is often associated with stock prices. High stock prices make the value of the company also high, and increase market confidence not only in the company’s current performance but also in the company’s prospects in the future.

Maximizing Company Value also means maximizing the company’s main goals. Increasing the value of the company is an achievement that is in accordance with the wishes of the owners, because with the increase in the value of the company, the welfare of the owners will also increase. In this study, Company Value is measured by Price to Book Value (PBV).

Price to Book Value is a ratio that indicates whether the traded stock price is overvalued (above) or undervalued (below) the stock book value (Fakhruddin & Sopian Hadianto, 2001).

According to Gitman (2015, p. 352), Company Value is the actual value per share that will be received if the company’s assets are sold according to the stock price. So, Price to Book Value describes how much the
market values the book value of a company’s stock. PBV shows how far a company is able to create Company Value relative to the amount of capital invested.

\[
PBV = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}
\]

**Research Methodology**

**Table 1**

| Variable Operationalization |
|-----------------------------|
| **Variable** | **Indicator** | **Scale** | **Instrument** |
| Capital \((X_1)\) | \(\text{CAR} = \frac{\text{Capital}}{\text{Total risk - weighted assets}} \times 100\) | Ratio | Financial statement |
| Assets \((X_2)\) | \(\text{NPL} = \frac{\text{Total Problem Loan}}{\text{Total Credit}} \times 100\) | Ratio | Financial statement |
| Management \((X_3)\) | \(\text{NPM} = \frac{\text{Net Profit}}{\text{Operating Profit}} \times 100\) | Ratio | Financial statement |
| Earnings \((X_4)\) | \(\text{ROA} = \frac{\text{Profit before tax}}{\text{Total Assets}} \times 100\) | Ratio | Financial statement |
| Liquidity \((X_5)\) | \(\text{LDR} = \frac{\text{Loans Given}}{\text{Third Party Funds}} \times 100\) | Ratio | Financial statement |

**CAMELS ratio (Source: PBI No. 30/12/KEP/DIR/1992)**

| Credit value CAMELS | Predicate |
|---------------------|-----------|
| 81%-100%            | Healthy   |
| 66%<81%             | Quite healthy |
| 55%< 66%            | Unwell    |
| 0%<55%              | Not healthy |

**Company Value \((Y)\)**

\[
\text{PBV} = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}
\]

**Figure 1.** Research paradigm.
Hypothesis Testing

H₀: CAMEL ratio simultaneously does not affect Company Value.
H₁: CAMEL ratio simultaneously affects the value of the company.

H₀: CAMEL ratio which consists of CAR, NPL, NPM, ROA, OEOI, and LDR partially does not affect Company Value.
H₁: CAMEL ratio consisting of CAR, NPL, NPM, ROA, OEOI, and LDR partially affects the Firm Value.

Results and Discussion

Based on the financial statements that the researcher obtained, all banks meet the requirements to be processed to publish financial statements from 2012 to 2017. Based on processing data through EViews 8, the results are as follows:

Table 12

| Code | Name of issuer       | CAMEL (%) | Criteria |
|------|----------------------|-----------|----------|
| BMRI | Bank Mandiri         | 87.200    | Healthy  |
| BBRI | Bank Rakyat Indonesia| 95.140    | Healthy  |
| BBCA | Bank Central Asia    | 98.420    | Healthy  |
| BBNI | Bank Bni 46          | 86.000    | Healthy  |
| BDMN | Bank Danamon         | 88.900    | Healthy  |
| Average |                  | 91.132    | Healthy  |
| Maximum |                 | 98.420    | Healthy  |
| Minimum |                  | 86.000    |          |

Note. Source: EViews 8 (processed).

From Table 12, it is found that all banks listed on the Sri Kehati index are in the healthy category with an average value of 91.132% in intervals 81%-100%. The highest value was obtained by BBCA with a score of 98.42% and the lowest was BBNI with a score of 86%.

Based on data processing by using EViews 8, the following results are obtained: The method used to detect whether the regression model is normally distributed using Jarque Berra test is shown in Table 13:

Table 13

| Jarque-Berra test | Prob. Jb | Finding |
|-------------------|----------|---------|
| 2.690             | 0.2605   | Normal  |

Note. Source: Output EViews 8 (processed).

From the results of Table 13, it can be seen that the probability is greater than 5% (significance level) which is 0.2605 > 0.05, then the data are normally distributed.

The method used to detect whether the regression model contains multicollinearity or not by calculating tolerance value and the variance inflation factor is shown in Table 14:

The results of the calculation of the multicollinearity test using the Variance Inflation Factor (VIF) value approach show that there is no strong correlation between the independent variables used in the regression equation. This is shown by the VIF value (1.000 < 10) in the independent variable to see whether there is a heteroscedasticity problem in the regression model in this study used White Test.
Table 14

Variance Inflation Factor

| Variable | Centered VIF |
|----------|--------------|
| CAMELS  | 1.000        |

*Note.* Source: Output EViews 8 (processed).

Table 15

Test White

| White Test         | F-statistic | Prob. F(1,28) | Prob. Chi-Square(1) |
|--------------------|-------------|---------------|---------------------|
| F                  | 0.223162492 | 0.640302      |                     |
| Obs*R-squared      | 0.237212069 | 0.626227      |                     |

*Note.* Source: Output EViews 8 (processed).

The test results of heteroscedasticity show that the variance of residuals is homogeneous (there is no heteroscedasticity). This is indicated by a probability greater than the level of 0.05% (0.626 > 0.05).

The auto correlation test is used to test whether there is a relationship between errors that arise in time series data to test the existence of auto correlation in this study used the Durbin-Watson (DW) test with criteria $-2 < DW < 2$ (Singgih, 2002).

Table 16

Durbin-Waston Test

| Durbin-Waston Test | Criteria | Finding                  |
|--------------------|----------|--------------------------|
| 1.790              | -2 < DW < 2 | No auto correlation occurs |

*Note.* Source: Output EViews 8 (processed).

From the results of Table 16, it can be seen that the DW value shows the number 1.790 ($-2 < 1.790 < 2$). It can be concluded that the data do not occur symptoms of auto correlation.

The Chow Test was conducted to determine the regression estimation model selected between pooled least square or Fixed Effect Model (FEM). The hypothesis in the Chow Test is as follows:

$H_0$: Pooled Least Square (PLS).
$H_1$: Fixed Effect Model (FEM).

Table 17

Chow Test Results

| F-statistic | Prob. F | Finding             |
|-------------|---------|---------------------|
| 29.387      | 0.000   | Fixed Effect Model  |

*Note.* Source: Output EViews 8 (processed).

Chi-square is significant ($p$-value = 0.0000 smaller than 5%) then the test results reject $H_0$, so it can be concluded that the model used is the Fixed Effect Model (FEM).

After the results of the Chow Test stage show the Fixed Effect Model is better than pooled least square, a test is performed to determine the Fixed Effect Model (FEM) or random effect model (REM) which is more appropriate. To determine this, the Hausman Test is used. The hypothesis in the Hausman Test is as follows:

$H_0$: Random Effect Model.
$H_1$: Fixed Effect Model.
Based on the results of the calculation, it obtained that a \( p \)-value of 0.5070 is smaller than 5\%. This means that the Hausman Test shows significant. Then, the decision made from the test results does not reject \( H_1 \), so that the Fixed Effect Model method is used.

From Table 19, the regression equation can be made as follows:

\[
Y = \beta_0 + \beta_1 X_1 + e
\]

\[
PBV = 0.0219 + 8.43567CAMEL + e
\]

\[
CAMEL = 8.43567
\]

\[
R^2 = 0.874368
\]

\[
F = 33.40680263
\]

\[
Prob(F-statistic) = 0.000000
\]

From Table 20, the results of the partial test, Capital shows the probability value under alpha (0.0007 < 0.05), seen from the value of \( t \)-count get the value above \( t \)-table (3.862 > 2.045), so that it can be concluded partially that Capital has a positive and significant effect on PBV. The value of \( R^2 \) on Capital shows 1.93\%, which means that the contribution of Capital to PBV is 1.93\%.

Assets show probability values under alpha (0.001 < 0.05), seen from the value of \( t \) count get values above \( t \)-table (3.762 > 2.045), so that it can be concluded partially that Assets have a positive and significant effect on PBV. The value of \( R^2 \) in Assets shows the number 58.06\%, which means that the contribution of Assets to PBV is 58.06\%.
Management shows a probability value greater than alpha (0.7174 > 0.05), seen from the value of $t$-count getting a value below $t$-table (0.366 < 2.045), so that it can be concluded partially that Management has no effect and is not significant towards PBV. The value of $R^2$ in Management is 1.66%, meaning that the contribution of Management to PBV is 1.66%.

Earning shows a probability value greater than alpha (0.5589 > 0.05), seen from the value of $t$-count getting a value below $t$-table (0.592 < 2.045), so that it can be concluded partially that Earnings do not influence and are not significant to PBV. The value of $R^2$ in Earning shows 34.11%, meaning that the contribution of Earning to PBV is 34.11%.

Liquidity shows the probability value under alpha (0.0000 < 0.05), seen from the value of $t$-count get the value above $t$-table (6.569 > 2.045), so that it can be concluded partially that Liquidity has a positive and significant effect on PBV. The value of $R^2$ on Liquidity shows 67.57%, which means that the contribution of Liquidity to PBV is 67.57%.

### Simultaneous

| Simultaneous Test Results |
|---------------------------|
| $F$-statistic             | 33.40680263 |
| $\text{Prob}(F$-statistic$)$ | 0.000000 |
| $R$-squared               | 0.874368   |

Note. Source: Output EViews 8 (processed).

The results of the $F$-test on Table 21 can be seen as a probability value under alpha (0.000 < 0.05), meaning that the CAMEL ratio has a significant effect, judging from the calculated $F$-value, the number is greater than $F$-table (33.406 > 4.17). Ratio has no effect on Company Value $H_a$ is rejected. The magnitude of the effect of the independent variables on the dependent variable is 87.43%, while the remaining 12.57% is influenced by other variables outside the variables studied.

### Conclusions

1. CAMEL ratio determined by PBI, based on the results of calculations from 2012 to 2017, it can be concluded that the five banks obtain a healthy predicate.

2. Partially from the CAMEL ratio, there are several ratios the results do not have an influence on Company Values as measured by Price Book Value ratios, namely, (1) management ratio; and (2) earnings ratio. Other ratios are: (1) Capital; (2) Assets; and (3) Liquidity affect the value of the company.

3. This is in line with what was stated by: (a) Bisnis.com the increase in net profit was an effect of efforts to clean net non-performing loans (NPLs) not from the main banking activities; (b) Josua Pardede that banking profitability decreased which would later improve because the decrease in the allowance for impairment losses (CKPN) has slowed; and (c) the large profit INDEF is bad credit restructuring.

### Suggestions

1. With the weakness of the CAMEL ratio, namely: (1) management ratio measured by NPM; and (2) Earning measured by ROA and OEOI is expected to have special attention for bank managers in order to increase revenue from the main activities.
(2) Capital Ratio, Assets, and Liquidity must be maintained or increased, so that the overall CAMEL ratio shows a positive effect on the value of the company.

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