FINANCIAL SOUNDNESS EVALUATION OF SELECTED COMMERCIAL BANKS IN INDONESIA: AN APPLICATION OF BANKOMETER MODEL

Xenia I. S. Landjang and Johan Tumiwa

International Business Administration Faculty of Economics and Business
Universitas Sam Ratulangi, Manado 95119, Indonesia
email: xenialandjang@gmail.com, johantumiwa@gmail.com

ABSTRACT
Derived from the public concern about which bank to choose to be work with because of many kinds of banks are available right now in the banking industry in Indonesia also because of the Asean Economic Community (AEC) era nowadays which is establishing a system of free-trading among ASEAN country, author wants to give a recommendation which banks are good to be work with also as a reference for the investors who are looking to invest especially in banking industry in Indonesia, using the new model developed by IMF in 2000 called Bankometer. It is using the 6 parameters of financial ratios which are; capital to asset; equity to asset; CAR; NPL; cost to income and loans to assets. This study examined 19 private owned banks with the criteria private owned bank with total assets Rp 50 trillion because of the availability of the bank and the published financial statements. The result shows all the 19 banks are termed into super sound bank for the last three years. The top three banks are: Bank of Tokyo Mitsubishi stood at the peak, followed by Citibank and BTPN.

Keywords: Bankometer, Financial Soundness, Private-owned banks

INTRODUCTION
Research Background
Financial institutions, especially bank plays a vital role as a financing vehicle to the economy movement of a country. A well-developed banking system is considered as the backbone of financial system of a country. It ensures the sustainable economic development and welfare by forming adequate capital and allocating funds efficiently for investment projects, payment services, healthy and robust financial systems (Rahman, 2017).

According to Kasmir (2010), bank is a financial institution with main core activity is gathering funds from the society and distribute the funds back to the society also provides other bank services. The other services provided by a bank are; remittances, making payments and billing.

In order to do these activities, bank needs customer which is the public, and for the public to entrust their money to the bank, bank must show the public that they are a trusted bank to be entrusted with the funds. To gain public especially customers trust, bank needs to
do the financial performance evaluation for every certain period. By doing the financial performance evaluation, public have the knowledge of how is the situation within the bank performance. So regarding to the ASEAN Economic Community (AEC), by this financial performance evaluation also could help the investors as a reference of which banks are good to invest with.

One of the method or model to evaluate financial soundness of a bank according to Peraturan Bank Indonesia No. 13/1/PBI/2011 regarding Penilaian Tingkat Kesehatan Bank Umum stated Risk Profile, Good Corporate Governance (GCG), Earnings, and Capital are the assessment factors within the Risk-Based Bank Rating (RBBR) as a method to evaluate the financial soundness of a bank in Indonesia. The previous model to evaluate financial soundness of bank in Indonesia is CAMELS.

There are 118 of commercial banks who are competing to win the market listed in Bank Indonesia. Among the 118 listed bank there are top 10 banks which are; BRI; Bank Mandiri; BCA; BNI; CIMB Niaga; BTN; Panin Bank; Permata Bank; Maybank; and Danamon that have high market share based on asset in Indonesian banking industry according to Info Bank News (2017).

Table 1. List of banks in Indonesia with high market share based on Asset (Consolidation)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Bank Name</th>
<th>Total Assets</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank Mandiri</td>
<td>Rp 1.038,706,000,000,000</td>
<td>15.43 %</td>
</tr>
<tr>
<td>2</td>
<td>BRI</td>
<td>Rp 1.003,644,000,000,000</td>
<td>14.91 %</td>
</tr>
<tr>
<td>3</td>
<td>BCA</td>
<td>Rp 676,739,000,000,000</td>
<td>10.05 %</td>
</tr>
<tr>
<td>4</td>
<td>BNI</td>
<td>Rp 603,032,000,000,000</td>
<td>8.96 %</td>
</tr>
<tr>
<td>5</td>
<td>CIMB-Niaga</td>
<td>Rp 241,571,728,000,000</td>
<td>3.58 %</td>
</tr>
<tr>
<td>6</td>
<td>BTN</td>
<td>Rp 214,168,479,000,000</td>
<td>3.18 %</td>
</tr>
<tr>
<td>7</td>
<td>Panin Bank</td>
<td>Rp 199,175,000,000,000</td>
<td>2.95 %</td>
</tr>
<tr>
<td>8</td>
<td>Danamon</td>
<td>Rp 174,086,730,000,000</td>
<td>2.58 %</td>
</tr>
<tr>
<td>9</td>
<td>Maybank</td>
<td>Rp 166,678,902,000,000</td>
<td>2.47 %</td>
</tr>
<tr>
<td>10</td>
<td>Permata Bank</td>
<td>Rp 165,527,512,000,000</td>
<td>2.45 %</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Rp 4,483,329,351,000,000</td>
<td>66.56 %</td>
</tr>
</tbody>
</table>

Source: Company Annual Report, 2016

Because of the many kinds of banks that are available right now, public or the society tends to be confused which bank to choose whether to deposit or borrow funds. The competition within state-owned and private owned bank to win over customers to proof that they are trusted bank to be invested with is getting intense. Basically, the difference between the state-owned and private-owned bank is the ownership structure. State-owned banks shares are fully or majority owned by the governance. Where, private owned banks shares are owned by private party. So in order to proof and show to the public or society that
private owned commercial banks are also trusted banks for the public, author wants to rate the financial soundness of private owned commercial banks in Indonesia, using the Bankometer model.

Therefore, by rating the financial soundness of private owned commercial banks in Indonesia using Bankometer model, the author aims to answer the public concerns about where to allocate their funds also as a reference to an investors which banks are good to invest with.

**Research Objectives**

1. To compare financial soundness among selected commercial banks in Indonesia using Bankometer model (Solvency score).

**THEORETICAL FRAMEWORK**

**Bank**

According to UU No. 10 Tahun 1998 bank is a business entity that collects funds from the society in the form of savings and distributes it to the society in the form of credit and / or other forms in order to improve the standard of living of the society.

**Financial Statements**

According to Kasmir (2010), financial statements are the report that shows financial situation of an institution in a certain period of time. The income statement and the balance sheet are the basic reports that a firm constructs for use by management and for distribution to stockholders, regulatory bodies, and the general public.

**Bankometer**

Bankometer model is a model to evaluate the soundness of a bank with the parameter uses Solvency (S-score). This bankometer is a new developed model by the recommendation of IMF in Shar (2010) which are combining of both CAMEL and CLSA-stress test.

The formula of Bankometer is such as follows:

$$S = 1,5*CA + 1,2*EA + 3,5*CAR + 0,6*NPL + 0,3*CI + 0,4*LA$$

Where,

“S” stands for solvency is a dependent variable. The independent variables under this model are:
$X_1=$ Capital to Asset ratio (CA) : $\geq 4\%$

$X_2=$ Equity to Asset ratio (EA) : $\geq 2\%$

$X_3=$ Capital Adequacy Ratio (CAR) : $40\% \leq \text{CAR} \geq 8\%$

$X_4=$ Non-Performing Loans to Loans Ratio (NPL) : $\leq 15\%$

$X_5=$ Cost to Income ratio (CI) : $\leq 40\%$

$X_6=$ Loans to Asset ratio (LA) : $\leq 65\%$

These percentages explain a bank that:

1. Has more than 4% capital to assets ratio
2. Has equity to assets ratio greater than 2%
3. Has capital adequacy ratio between 8% and 40%
4. Has controlled non-performing loans (NPL) ratio below 15%
5. Has maintained cost to income ratio less than 40%
6. Has maintained liquidity by controlling loans to assets ratio below 65%

May be classified as “super sound bank” under this Bankometer model.

The criteria to determine the soundness of a bank according to Altman in Rahman (2017) are as follows:

1. The banks having S score greater than 70 are solvent and termed as “Super sound bank”, holding favorable financial status.
2. The banks having S score less than 50 are termed as “Insolvent”, experiencing high risk of financial distress.
3. Last, the banks having S score between 50 and 70 are in moderate position and can be classified into “Gray Zone”, because of the susceptibility to error classification.

Financial Ratios

Financial ratios are used to evaluate the company management financial performance. Each ratio serves different purposes, depends on the objective a certain ratio is to be evaluated. According to Fraser and Ormiston (2004), the objectives will vary depending on the perspective of the financial statement user and the specific that are addressed by the analysis of the financial statement data. According to Dendawijaya in Said (2012) the following types of financial ratios are namely:

1. Liquidity ratio
   a. Cash ratio
   \[
   \text{Cash Ratio} = \frac{\text{Cash}}{\text{Current Liabilities}} \times 100\% 
   \]
b. Reserve Requirement

Reserve requirement is a requirement set to each commercial banks to sorted out some of their third party funds collected, to bank Indonesia. The percentage of RR has undergone several changes since 1997. Now the set percentage is 5% (Said, 2012).

c. Loans to Deposit (LDR)

\[ LDR = \frac{Total\ Loans}{Total\ Deposits} \times 100\% \]

d. Loans to Asset (LAR)

\[ LAR = \frac{Total\ Loans}{Total\ Assets} \times 100\% \]

2. Profitability ratio

a. Return on Asset (ROA)

\[ ROA = \frac{Net\ Income}{Total\ Assets} \times 100\% \]

b. Return on Equity (ROE)

\[ ROE = \frac{Net\ Income}{Total\ Equity} \times 100\% \]

c. Operating Expense to Operating Income (OEOI)

\[ OEOI = \frac{Operating\ Expense}{Operating\ Income} \times 100\% \]

d. Net Profit Margin (NPM)

\[ NPM = \frac{Net\ Income}{Operating\ Income} \times 100\% \]

3. Solvency ratio

a. Capital Adequacy Ratio (CAR)

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

b. Debt to Equity (DER)

\[ DER = \frac{Total\ Debt}{Total\ Equity} \times 100\% \]

c. Long-term debt to Asset Ratio

\[ LTD - AR = \frac{Long - term\ debt}{Total\ Assets} \times 100\% \]
Previous Research

Amir Hussain Shar (2010) is studied about Performance Evaluation of Banking Sectors in Pakistan: An Application of Bankometer. In order to verify the Bankometer model, they also used the CLSA stress test to test the authenticate result from bankometer. And the result shows that, the banks that are categorized under stress from stress test are categorized as insolvent using Bankometer. And the banks categorized as sound bank also found solvent in Bankometer model as well. But there are also banks that are sound under stress but found insolvent for bankometer criteria. This is because, even the Bankometer is method came from CAMEL and CLSA stress test but there is an adjustment for the percentages. The big 5 banks already sound under CLSA stress test, but could not fulfill the Bankometer solvency requirements.

Md. Zahidur Rahman (2017) is studied about Financial Soundness Evaluation of Selected Commercial Banks in Bangladesh: An Application of Bankometer Model. The calculation solvency score (s-score) shows that the selected private commercial banks in Pakistan for the year 2015 are all the banks attained the solvency score on bankometer procedure. So, all the banks are classified as “super sound bank” and have not experienced any financial distress during the year 2015. The top three banks with the highest s-score are; Al-Arafa Islami Bank Limited (s-score = 125,78%); City Bank Limited (s-score = 124,57%); and NCC Bank Limited (s-score = 123,38%).

Dr. Ismail Younes Yameen and Mr. Mohammad Sami Ali (2016) are studied about Evaluating the Financial Soundness of the Jordanian Commercial Banks by Applying BankoMeter’s Model. The result shows all the Jordanian commercial banks are financially sound, and none of them are has solvency score under the standard percentage. And they also find by using the bankometer would help the Jordanian banks to gauge the solvency problems.

RESEARCH METHOD

Type of Research

This research is a quantitative research with descriptive study that involves a numeric or statistical approach to the research design that examines the situation, as it exists in its current state. This descriptive study will examine the current financial soundness of the selected commercial banks in Indonesia with Bankometer (6 Solvency ratios).
Place and Time of Research

This research was conducted for all the selected commercial banks in Indonesia with the criteria Private Owned Banks with total assets more than Rp 50 trillion in 2016 with the time of the research for 2 months (July-August 2017).

Research Procedure

The procedures of conducting this research are as follows:

1. Define the problem
2. Determine the samples within the bank population
3. Determine the data for conducting the research
4. Input the data into the Bankometer formula
5. Comparing and rating the banks
6. Give recommendation

Population and Sample

Polit and Hungler (1999:37) referred the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this research the population was the 114 listed private-owned banks at Bank Indonesia. Sample is a subset of the population (Sekaran and Bougie, 2010). This research was conducted using purposive sampling with the criteria, private-owned bank listed in Bank Indonesia with the total assets more than Rp 50 trillion in 2016 numbered 19 banks as a sample of this research.

Data Collection Method

This study entirely depends on secondary data sources. In this research, 3 years financial data (2014-2016) have been used for the analysis purpose and these data are publicly available on their website.

Data Analysis Method

Bankometer model is a model to evaluate the soundness of a bank with the parameter uses Solvency (S-score). This bankometer is a new developed model by the recommendation of IMF in Shar (2010) which are combining of both CAMEL and CLSA-stress test.

The formula of Bankometer is such as follows:

\[ S = 1.5*CA + 1.2*EA + 3.5*CAR + 0.6*NPL + 0.3*CI + 0.4*LA \]

Where,
“S” stands for solvency is a dependent variable. The independent variables under this model are:

- **X1**: Capital to Asset ratio (CA): $\geq 4\%$
- **X2**: Equity to Asset ratio (EA): $\geq 2\%$
- **X3**: Capital Adequacy Ratio (CAR): $40\% \leq \text{CAR} \leq 8\%$
- **X4**: Non-Performing Loans to Loans Ratio (NPL): $\leq 15\%$
- **X5**: Cost to Income ratio (CI): $\leq 40\%$
- **X6**: Loans to Asset ratio (LA): $\leq 65\%$

These percentages explain a bank that:
1. Has more than 4% capital to assets ratio
2. Has equity to assets ratio greater than 2%
3. Has capital adequacy ratio between 8% and 40%
4. Has controlled non-performing loans (NPL) ratio below 15%
5. Has maintained cost to income ratio less than 40%
6. Has maintained liquidity by controlling loans to assets ratio below 65%

May be classified as “super sound bank” under this Bankometer model.

The criteria to determine the soundness of a bank according to Altman in Rahman (2017) are as follows:
1. The banks having S score greater than 70 are solvent and termed as “Super sound bank”, holding favorable financial status.
2. The banks having S score less than 50 are termed as “Insolvent”, experiencing high risk of financial distress.

Last, the banks having S score between 50 and 70 are in moderate position and can be classified into “Gray Zone”, because of the susceptibility to error classification.

**RESULT AND DISCUSSION**

**Result**

**Table 2. S-score calculation for the year 2016**

<table>
<thead>
<tr>
<th>Variables</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>S-Score</th>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>S=(1.5<em>CA)+(1.2</em>EA)+(3.5<em>CAR)+(0.6</em>NPL)+(0.3<em>CI)+(0.4</em>LA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Name</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCA</td>
<td>17</td>
<td>16.66</td>
<td>21.9</td>
<td>1.3</td>
<td>60.4</td>
<td>61.46</td>
<td>165.626</td>
<td>Super sound</td>
<td>7</td>
</tr>
</tbody>
</table>
### Table 3. S-score calculation for the year 2015

<table>
<thead>
<tr>
<th>No</th>
<th>Bank Name</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>S-Score</th>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCA</td>
<td>15.47</td>
<td>15.08</td>
<td>18.7</td>
<td>0.7</td>
<td>63.2</td>
<td>65.22</td>
<td>152.219</td>
<td>Super sound 10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CIMB Niaga</td>
<td>13.25</td>
<td>12.01</td>
<td>16.28</td>
<td>3.74</td>
<td>97.38</td>
<td>74.25</td>
<td>152.425</td>
<td>Super sound 9</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Panin Bank</td>
<td>17.18</td>
<td>16.82</td>
<td>20.13</td>
<td>2.44</td>
<td>86.66</td>
<td>64.3</td>
<td>169.591</td>
<td>Super sound 5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Bank Danamon</td>
<td>16.61</td>
<td>18.19</td>
<td>19.7</td>
<td>3</td>
<td>52</td>
<td>68.79</td>
<td>160.609</td>
<td>Super sound 8</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Maybank</td>
<td>11.44</td>
<td>9.99</td>
<td>15.17</td>
<td>3.67</td>
<td>89.18</td>
<td>71.39</td>
<td>139.755</td>
<td>Super sound 14</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bank Permata</td>
<td>11.89</td>
<td>10.3</td>
<td>15</td>
<td>2.7</td>
<td>98.8</td>
<td>68.9</td>
<td>141.515</td>
<td>Super sound 13</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processed, 2017
\[ S = (1.5 \times CA) + (1.2 \times EA) + (3.5 \times CAR) + (0.6 \times NPL) + (0.3 \times CI) + (0.4 \times LA) \]

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Bank Name</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>S-Score</th>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>CA ≥ 4%</td>
<td>Bank of Tokyo Mitsubishi</td>
<td>68.15</td>
<td>9.24</td>
<td>81.16</td>
<td>0.72</td>
<td>88.04</td>
<td>67.49</td>
<td>451.213</td>
<td>Super sound 1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>EA ≥ 2%</td>
<td>OCBC NISP</td>
<td>14.52</td>
<td>13.62</td>
<td>17.32</td>
<td>1.3</td>
<td>80.14</td>
<td>71.28</td>
<td>152.078</td>
<td>Super sound 11</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>CAR ≥ 8%</td>
<td>Bank Bukopin</td>
<td>8.88</td>
<td>7.98</td>
<td>13.56</td>
<td>2.83</td>
<td>87.56</td>
<td>69.99</td>
<td>126.318</td>
<td>Super sound 17</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>NPL ≤ 15%</td>
<td>UOB</td>
<td>13.64</td>
<td>11.85</td>
<td>16.2</td>
<td>2.68</td>
<td>96.46</td>
<td>70.81</td>
<td>150.25</td>
<td>Super sound 12</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>CI ≤ 40%</td>
<td>BTPN</td>
<td>16.3</td>
<td>16.75</td>
<td>23.8</td>
<td>0.7</td>
<td>82</td>
<td>72.29</td>
<td>181.786</td>
<td>Super sound 3</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>LA ≤ 65%</td>
<td>Bank Syariah Mandiri</td>
<td>8.79</td>
<td>7.98</td>
<td>12.85</td>
<td>6.06</td>
<td>94.78</td>
<td>72.6</td>
<td>128.846</td>
<td>Super sound 15</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>CA ≥ 4%</td>
<td>Bank Sumitomo Mitsubishi</td>
<td>17.58</td>
<td>12.4</td>
<td>24.76</td>
<td>0.43</td>
<td>72.23</td>
<td>79.2</td>
<td>181.517</td>
<td>Super sound 4</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>EA ≥ 2%</td>
<td>Citibank</td>
<td>20.61</td>
<td>11.81</td>
<td>28.2</td>
<td>2.3</td>
<td>89.2</td>
<td>53.03</td>
<td>193.139</td>
<td>Super sound 2</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>CAR ≥ 8%</td>
<td>Bank Mega</td>
<td>15.07</td>
<td>16.88</td>
<td>22.85</td>
<td>2.81</td>
<td>85.72</td>
<td>47.49</td>
<td>169.234</td>
<td>Super sound 6</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>NPL ≤ 15%</td>
<td>DBS</td>
<td>15.73</td>
<td>11.82</td>
<td>19.44</td>
<td>4.16</td>
<td>95.28</td>
<td>65.54</td>
<td>163.115</td>
<td>Super sound 7</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>CI ≤ 40%</td>
<td>Standard Chartered Bank</td>
<td>11.24</td>
<td>0.63</td>
<td>16.06</td>
<td>4.78</td>
<td>101.14</td>
<td>41.82</td>
<td>123.764</td>
<td>Super sound 19</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>LA ≤ 65%</td>
<td>Bank Mayapada</td>
<td>10.29</td>
<td>9.7</td>
<td>12.97</td>
<td>2.52</td>
<td>82.62</td>
<td>72.38</td>
<td>127.72</td>
<td>Super sound 16</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>CI ≤ 40%</td>
<td>Bank Muamalat</td>
<td>9.05</td>
<td>6.21</td>
<td>12.36</td>
<td>7.11</td>
<td>97.41</td>
<td>71.25</td>
<td>126.276</td>
<td>Super sound 18</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processed, 2017

**Table 4.** S-score calculation for the year 2014
### Discussion

The results of calculating 6 Bankomoter ratios for the last three years are all the banks termed into super sound banks for having s-score above the standard which is 70. Means, those banks were solvent and not prone to financial distress according to bankometer model (Laila and Widihadnanto, 2017). The average s-score for the last three years are as follow; Bank of Tokyo Mitsubishi with highest s-score of 453,798; Citibank with 193,882; BTPN with 180,461; Bank Sumitomo Mitsui with 174,066; Panin Bank with 162,759; Bank Danamon with 161,012; Bank Mega with 158,846; DBS with 155,588; OCBC NISP with 154,544; CIMB Niaga with 153,85; BCA with 152,269; UOB with 149,142; Maybank with 144,009; Bank Permata with 143,718; Bank Syariah Mandiri with 131,164; Bank Bukopin with 129,704; Bank Muamalat with 127,965; Bank Mayapada with 125,123 and Standard Chartered Bank with 124,94.

### CONCLUSION AND RECOMMENDATION

Conclusion
There are banks that have the ratios above the limit set by IMF in terms of Cost to Income ratio (CI) and Loans to Assets ratio (LA). Based on the results and discussions in the previous chapter, all of the 19 banks have consistently maintain their financial soundness as the solvency scores and have the s-score higher than the limit of 70 over the period of 2014-2016 and termed into super sound banks.

**Recommendation**

Based on the conclusion above, the recommendation that suggested in this research is to maintain the soundness as the solvency scores of all the banks in the future. Also for the banks that have CI ratio and LA ratio above the limit set by IMF, are to minimize their CI ratio below 40% because all the 19 banks in the last three years have not made into the standard and for Bank Permata, DBS, BCA, Panin Bank, Bank of Tokyo Mitsubishi, OCBC NISP, Bank Bukopin, BTPN, Maybank, UOB, Bank Danamon, Bank Syariah Mandiri, Bank Muamalat, CIMB Niaga, Bank Mayapada and Bank Sumitomo Mitsui to minimize their LA ratio below 65%.

**REFERENCES**


