

MEASURING AND EVALUATING STATE-OWNED BANKING INDUSTRY IN INDONESIA USING RISK BASED BANK RATING (RBBR)

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ABSTRACT

The measurement and evaluating of financial performances are becoming important due to the economic crisis of 1997/1998 which hit Asia and slower economic growth in Indonesia. The regulation of Otorisasi Jasa Keuangan (OJK), or Financial Service Authority provides a mandatory of Measuring Health Level Assessment System of Banking Industries in Indonesia by Circular Letter, SE No.14/SEOJK.03/2017. This study aims to measure and evaluate financial performances of four state-owned banks and one private bank in Indonesia for the period of 2012– 2016, by using the Risk Based Bank Rating (RBBR), which is a method framework of Risk Profile Factor, Good Corporate Governance, Earning and Capital. The finding shows that over the last five years, the financial performances achieved by the five banks seem increasing of non-performing loan and gave impact on declining of Return on Assets (ROA) performances, even though the measurement was validated as healthy predicate status respectively based on OJK standard rating. The finding was also proven by using multivariate regression, which shows that there was a significant indication that Non-Performing Loan (NPL) affected their ROA performances. The research suggests that all the tasks required by a credit analyst must be handed to professional employees, according to Five C's of credit concept to improve the effectiveness in approving a credit loan. DuPont analysis is also suggested to be conducted to show how is the effectiveness towards the ROA Performance.

Keywords: Financial performance, Risk Based Bank Rating, Risk Profile Factor, Earning, Good Corporate Governance, Capital State-Owned-Company banks.

INTRODUCTION

Economic Overview

The Economic Crisis of 1997/1998 hit Asia country and it was very serious lessons for the Banking Industry. Banks liquidity difficulties, asset quality was getting worse, unable to create earnings and lead capital drained, those were the primary factors that led banking crisis occurred at that time (Chitya, 2015). It is important for Financial Authority Services namely Otorisasi Jasa Keuangan (OJK) to learn about every aspect related to bank, in order to prepare the solution if Indonesia facing an economic crisis in the future.

State-Owned Banks (SOBS) are the most influential group of banks in the Indonesian banking industry. The four state-owned banks, PT Bank Rakyat Indonesia (Persero) Tbk (BRI), PT Bank Mandiri (Persero) Tbk (Mandiri), PT Bank Negara Indonesia (Persero) Tbk (BNI), and PT Bank Tabungan Negara (Persero) Tbk (BTN) are the largest banks of the ten top rank of 118 banks in Indonesia. Due to its position as a market leader with a large market share, so the performance of state-owned banks greatly affects the performance of national banking (Marta, 2016). If the performance of SOB is good, then the performance of the whole banking industry will also be good. Vice versa. Observing deeply on their financial performances will be beneficial instead of the four major banks. Looking forward on the financial health each SOB in Indonesia, OJK which has given a mandate from Bank Central of Indonesia (BI) to take responsibility for maintain and evaluate all the sectors of financial industry in Indonesia. Issuing the policy and regulation by its own will be indicated as government to support all financial industry in achieving their goals.

Financial Service Authority (OJK)

The Financial Services Authority (OJK) was established with the aim that all activities within the financial services sector, organized on a regular, fair, transparent and accountable basis, able to realize a sustainable and stable financial system, and able to protect the interests of consumers and society. OJK has the task of regulating and supervising financial services activities in the Banking and Capital Market sectors (OJK, 2017).

This transition of supervision is marked by the handover of prudential micro regulatory and supervisory functions by the Governor of Bank Indonesia (BI), or the Central Bank to delegate the mandate of the bank regulatory and supervisory functions from BI to OJK. It is a milestone and a foundation by OJK itself in facing of a strong financial system. OJK will oversee banking from the micro prudential aspect. While BI will oversee the macro aspect. Micro aspects that are under OJK authority includes institutional, bank health, prudential aspects and bank checks. (BI, 2013)

The regulation No.13/24/DPNP/2011 that made by Bank Indonesia will be proceeded by OJK through SE No.14/SEOJK.03/2017 to provide the mandatory of measuring Health Level Assessment System of Commercial Banks in Indonesia. Below this, the author attached the some part circular letter that issued by OJK to measure health level assessment to review the financial condition of bank in Indonesia in facing global financial economic and local economic situation. (SEOJK, 2017)

Company Profile

- **PT Bank Mandiri (Persero), Tbk**

As the largest bank in Indonesia, Bank Mandiri cannot be separated from the long journey with full of historical value. He has a dark history, as it established on October 2, 1998. In that year the monetary crisis shook the Indonesian economy. Banking became the most affected sector. Government banks even get caught up in political intervention because of bad governance. Looking at corporate information and comparing into the largest bank in Indonesia.

Bank Mandiri changed its status into a public company (listed company) and that lead 60% market share that owned by government and 40 % owned by public by offering 4,000,000,000 (four billion) ordinary at first place. With 78.132 total served employees in service (including outsourcing), Rp 918, 21 Billion total assets and high capability of the IT Infrastructure, makes Bank Mandiri leads to second ranking of bank Indonesia

Focusing on key segments such as corporate business, commercial, micro, retail and leasing - with diversified strategies for each business that synergies across these different market segments. Bank Mandiri emerged as a Domestic Multi specialist Bank in Indonesia, and entered on specific initiatives that enable us to grow and achieve dominant market share of revenue in bank's focus segments.

- **PT Bank Negara Indonesia (Persero), Tbk**

PT Bank Negara Indonesia, Tbk was established in 1946, BNI is always taking part of Indonesia's economic development over time. Covering by 50 years old establishment, BNI has grown to become a cooperative bank that continuously grows and sustained. BNI as a State Owned Enterprise was the first to become a public company after listing its shares on the Jakarta Stock Exchange and the Surabaya Stock Exchange in 1996. To strengthen its financial structure and competitiveness in the national banking industry, BNI conducted a number of corporate actions, including being recapitalized by the Government in 1999, Government share divestment in 2007, and a limited public offering in 2010. BNI now focuses on eight major, high potential industries: Oil, Gas & Mining, Telecommunication, Chemicals, Agribusiness, Food & Beverages, Wholesale & Retail Trading, Electricity and Construction. Providing products and services to customers' needs in all segments, BNI now is ahead to become the Bank with provided a multi financial product solution through diversified customer segmentation.

NPL ratio is PT Bank Negara Indonesia (Persero) from 2012 - 2016, Tbk has loss higher provision and gotten lower profitability on each year because increasing NPL ratio up to 3%. This due increase of new credits and non-performing loan. Those factors lead the performance of ROA tend decreased in 5 years covered.

- **PT Bank Rakyat Indonesia (Persero), Tbk**

PT Bank Rakyat Indonesia (BRI) was established in 1895 in Purwokerto who formed by Raden Aria Wiriadmaja. The purpose of the establishment of Bank Rakyat Indonesia was originally come from to manage mosques' cash that can be distributed to the public using a simple scheme. BRI changed its legal status in 1992, to PT Bank Rakyat Indonesia (Persero) and publicly listed stock on the Jakarta Stock Exchange, or namely Indonesia Stock Exchange, on 10 November 2003, with code BBRI. To address the growing market and the diverse needs of the community on product banking and services, BRI elaborated its business segments into: Micro Business and Program, Retail Business, Corporate Business, International Business, Treasury and Capital Market Supporting Services, as well as subsidiaries that focus on the business of Sharia Banking, Agribusiness, Remittance, Insurance and Financing. BRI is the first rank of bank Indonesia with the highest total asset as driven result from their key success business, serving 93,333 employees on service and shareholder composition 56,75 % owned by Indonesia government and 43, 25 % owned by public.

- **PT Bank Tabungan Negara (Persero), Tbk**

PT Bank Tabungan Negara (Persero) Tbk. commonly known as Bank BTN has a long history in the banking industry in Indonesia. Bank BTN was established since 1897 under the name Postspaar bank. In the independence era, precisely in February 9, 1950, the Government of the Republic of Indonesia changed Postspaar bank into Bank Tabungan Pos, which finally changed into Bank Tabungan Negara on June 22, 1963.

Comparing into the largest bank in Indonesia. BTN changed its status into a public company (listed company) and lead 60% market share that owned by the government, 29,57 % owned by foreign investment and 14. 03 % domestic public. With 9.832 total served employees in service, makes Bank BTN leads to sixth ranking bank in Indonesia because of their competitive advantage in the market with 214 billion rupiah total assets accumulated in 2016. As a Bank focuses on housing finance, the Company has also succeeded elevating it is positioned into the tenth biggest bank in Indonesia in terms of assets and loan disbursement. With the aim to deliver the best result for the stakeholders, the Company consistently puts the focus on being the leader in housing finance, and aspires to be The Leading Housing Bank in Indonesia with World Class Service.

- **PT Bank Central Asia, Tbk**

BCA or namely Bank Central Indonesia, commenced operations on 21st February 1957 with Head Office located in Jakarta. Previously BCA is named as NV Perseroan Dagang Dan Industrie Semarang Knitting Factory and changed to PT Bank Central Indonesia in 1975. BCA aggressively expanded its branch network in line with the deregulation of the Indonesian banking sector. Establishing an online system for its branch office network, and launches new products and services its first strategy they used to push the mutual growth performance through various business unit and their target segment. There are a few bad memories is still remained by BCA while running the business since the bank was founded, the most significant memory when the monetary crisis hits in Indonesia at 1997. The crisis had an impact on the overall banking system in Indonesia, including BCA. It was affected on

BCA's cash flow performances. Many clients withdrew their cash. As a result, the bank forced to ask for help from the government in order to improve their performances after crisis. (Wikipedia, Bank Central Asia, 2016).

Implemented new strategy business, finally BCA successfully recovered in the same year. In 1998, BCA's fund returned to the value before the crisis hit. BCA's assets Rp 67.93 trillion in 1998, whereas in last year, they were only Rp 53.36 trillion. Following the current BCA performance reverse back to a previous point, the public was believed that BCA has fully recovered. (Wikipedia, Bank Central Asia, 2016)

PREVIOUS RESEARCH

The previous research about financial performance has been discussed in many sectors such as hospital, bank, and small business. Edmister (1972) stated that financial ratio is useful 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 a CAMEL model for evaluating capital, asset quality, managements, earnings and liquidity. Then, the result was processed by using simple regression to provide a robust model and data. The finding shows significance 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 straight forward, 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 (Kumbirai, M & Webb, R, 2010). Financial ratio is considered as one of 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 relationship with asset management, size, and operational efficiency.

According to *Analysis of Banking Soundness Using CAMEL Method (Study of PT. Bank Mandiri-Persero Tbk. for 2012-2014)* suggests that PT. Bank Mandiri (Persero) Tbk should have to pay more attention in the field of liquidity, where in year 2014 the LDR scores decrease about 1% and to help raise the liquidity (Saiya & Pandowo, 2015). Comparison Analysis of CAMEL Ratio Between Bank Mandiri and Bank Negara Indonesia Period 2008-2012: The results of this research proved that method of CAMEL Ratio can assess soundness of bank at Bank Mandiri and Bank Negara Indonesia (Tuna, 2013). According to CAMELS Analysis in Banking Industry: In this study CAMELS rating method is used to choose important and effective indicators in each category and then calculated ratios are compared with average of banking industry. "CAMELS" model can help managers to control and analyze financial data and organizational position in an industry (Rostami, 2015). (Kumar, Harsha, Anand, & Dhruva, 2012) *Analyzing Soundness In Indian Banking: A CAMEL Approach*, the result shows that that 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 a backseat and display low economic soundness in comparison.

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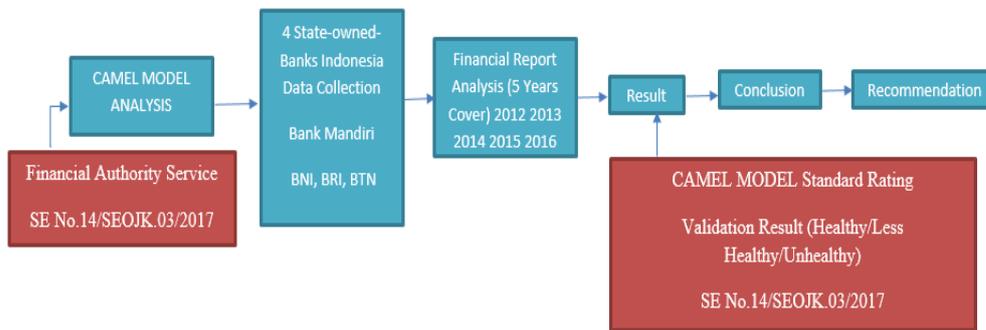
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METHODOLOGY

OJK as financial service authority in Indonesia has to conduct an assessment financial health condition to observe their performance. This study aims to measure financial condition of SOB by providing an overview health level category based on company financial performance condition based on SE No.14/SEOJK.03/2017 issued by OJK. The rating of the healthy or unhealthy condition will refer to Risk Based Bank Rating (RBBR) standard. Figure 1 shows the conceptual framework of the research.

Figure 1 - Conceptual Framework



(Source: Author Analysis, 2017)

Risk Profile Factor

A nonperforming loan (NPL) is the amount of lend money, which the creditor has not made his payment schedule time. The definition of nonperforming loan is in default or close to being in default. (Investopedia, Nonperforming Loan - NPL, 2017). OJK regulates every bank that operates in Indonesia and must have NPL maximum of 5% and below, as shown in Table 1. The lower NPL percentage represents the healthier bank performance in term of credit. The higher of NPL mean the higher loss of provision and the lower of profitability.

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Table 1 - NPL Parameter Criteria

Rank	Criteria	Category
1	NPL < 2%	Very Healthy
2	2% ≤ NPL < 5%	Healthy
3	5% ≤ NPL < 8%	Quite Healthy
4	8% ≤ NPL < 12%	Less Healthy
5	NPL ≥ 12%	Unhealthy

Source: SE OJK No.14/SEOJK.03/2017

LDR ratio can be used internally by the company or investors to determine the bank’s short term viability. This ratio also can be used to find out bank performance to pay back their liabilities to customers. Regarding this ratio, OJK applies the regulation of LDR ideal ratio is range from 75% to 85%, as shown in Table 2.

Table 2 - LDR Parameter Criteria

Rank	Criteria	Category	Additional Information
1	$LDR \leq 75\%$	Not Ideal	Over of third parties' funds expansion or lack of credit expansion
2	$75\% < LDR \leq 85\%$	Ideal	Financial intermediary function runs well
3	$85\% < LDR \leq 100\%$	Quite Ideal	Financial intermediary function still runs well
4	$100\% < LDR \leq 120\%$	Not Ideal	Quite over credit expansion

Source: SE OJK No.14/SEOJK.03/2017

Good Corporate Governance (GCG)

The GCG factor assessment is an assessment of the Bank's management quality on the applicability of GCG principles. Implementation of GCG principles must refer to the OJK's circular letter. The Bank in assessing the GCG factor uses parameters or indicators as shown in Table 3.

Table 3 - GCG Parameter Criteria

Assessment Good Corporate Governance	Description
Parameter/assessment indicators GCG factor is the rating of the Bank's management on the implementation of corporate governance principles refer to Bank Indonesia provisions concerning GCG for Commercial Banks by taking into account the characteristics and complexity of the Bank	The results of the implementation of corporate governance principles of the Bank as stipulated in Bank Indonesia provisions concerning GCG for Commercial Banks is only one source of votes GCG Bank peringkat factor in the assessment of the Bank

Source: SE OJK No.14/SEOJK.03/2017

Earnings

Analysis of the profitability ratio is a tool to identify or quantify the level of business efficiency and profitability achieved by the bank concerned. An assessment of profitability or earning factors include evaluation of earnings performance, earnings sources, earnings sustainability, and profitability management. According to OJK regulation No.14/SEOJK.03/2017, Earnings Factor can be measured by using Return on Asset (ROA), as shown in Table 4.

Table 4 - ROA Parameter Criteria

Rank	Criteria	Category
1	$ROA > 1,5\%$	Very Healthy
2	$1.25\% < ROA \leq 1,5\%$	Healthy
3	$0,5\% < ROA \leq 1,25\%$	Quite Healthy
4	$0\% < ROA \leq 0,5\%$	Less Healthy
5	$ROA \leq 0\%$	Unhealthy

(Source: SE OJK No.14/SEOJK.03/2017)

Capital

According to SE OJK No.14/SEOJK.03/2017, assessment of capital factor includes evaluation on capital adequacy and adequacy of capital management. In performing the calculation of capital, the Bank refers to the provisions of the Financial Services Authority regulating the Minimum Capital Requirement for Commercial Banks. The higher the Bank's risk, the greater the capital that must be provided to anticipate the Risk. The greater the ratio, the better the dining capital position.

Currently Indonesia has four categories based on the core capital that owned by the banks:

1. BUKU 1, banks with total core capital (Tier 1) less than IDR 1 Trillion.
2. BUKU 2, banks with total core capital (Tier 1) between IDR 1 Trillion to less than IDR 5 Trillion.
3. BUKU 3, banks with total core capital (Tier 1) between IDR 5 Trillion to less than IDR 30 Trillion; and
4. BUKU 4, banks with total core capital (Tier 1) between above IDR 30 Trillion

Table 5 - CAR Parameter Criteria

Rank	Criteria	Category
1	CAR > 12%	Very Healthy
2	9% ≤ CAR < 12%	Healthy
3	8% ≤ CAR < 9%	Quite Healthy
4	6% < CAR < 8%	Less Healthy
5	CAR ≤ 6%	Unhealthy

(Source: SE OJK No.14/SEOJK.03/2017)

The capital adequacy ratio (CAR) is a formula measurement of a bank's capital to identify bank's risk weighted credit exposures. It is usually expressed as the percentage result (Investopedia, Capital Adequacy Ratio - CAR, 2017). It is shown in Table 5. This study only uses selected banks that included on BUKU 4 which can represents 50% of national banking industry, starting from the loans, total third parties fund, total equity, and etc.

Multivariate Regression

Multiple Linear Regression Analysis is a multivariate technique used to estimate the relationship between a dependent variable metric with a set of independent variables. By using the multiple regression analysis, the researcher can estimates and predicts the average value of one dependent variable based on two or more independent variables. Regression analysis will produce an equation / regression model. (Prima, 2015).

The basic model of this technique of multiple regression analysis is shown in Figure 2.

Figure 2 - Basic Model Technic of Multiple Regression Analysis

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_i X_i$$

with

- \hat{Y} :: Predicted value of the dependent variable
- β_0 : Constants (*intercept*)
- β_i : Weight (coefficient) regression for the i-
- X_i independent variable: The independent variable i

(Source: SE OJK No.14/SEOJK.03/2017)

To find the end result of multivariate regression, this research use Microsoft Excel Analytic tool to ease it works. this concept can be used as guidelines for determining significance in the model: (Prima, 2015)

5C of Credit

The five C's of credit is a framework that used by moneylenders to check the reliability of potential borrowers. The 5C credit are Character, Capacity, Capital, Collateral, and Conditions.

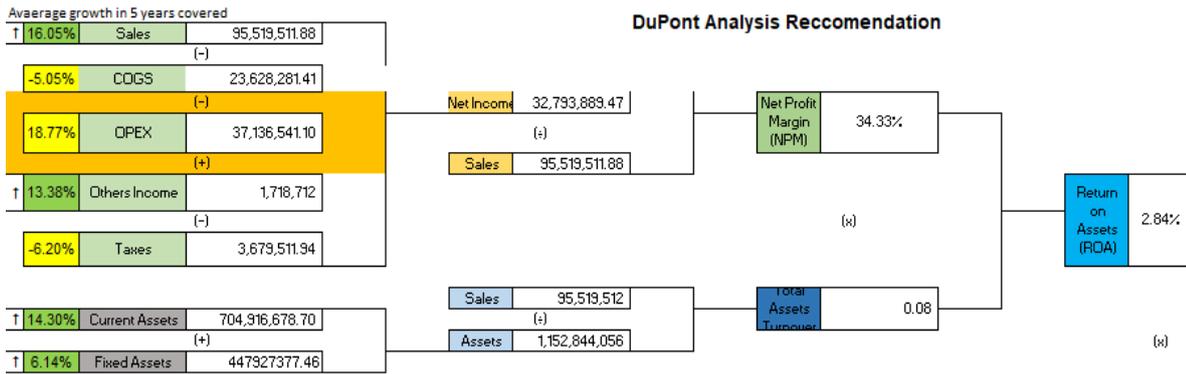
DuPont Analysis

DuPont Analysis is the kind of expression which breaks ROE (return on equity) to find out the root of the source of value comes in. DuPont Analysis is a method of measurement that assess and identify where the business strengths and weaknesses potentially where management time may optimally be spent. The DuPont system can optimally figure out the profit-making from categorizing such as efficient and effective. (Bernhardt, 2013). The return on assets (ROA) ratio developed by DuPont that to evaluate how effectively assets are used. It measures the combined effects of profit margins and asset turnover. The formula is shown below:

Formula:

$$ROA = \frac{\text{Net Income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Average Total Assets}} = \frac{\text{Net income}}{\text{Average Total Assets}}$$

Figure 3 - DuPont Analyst ROA

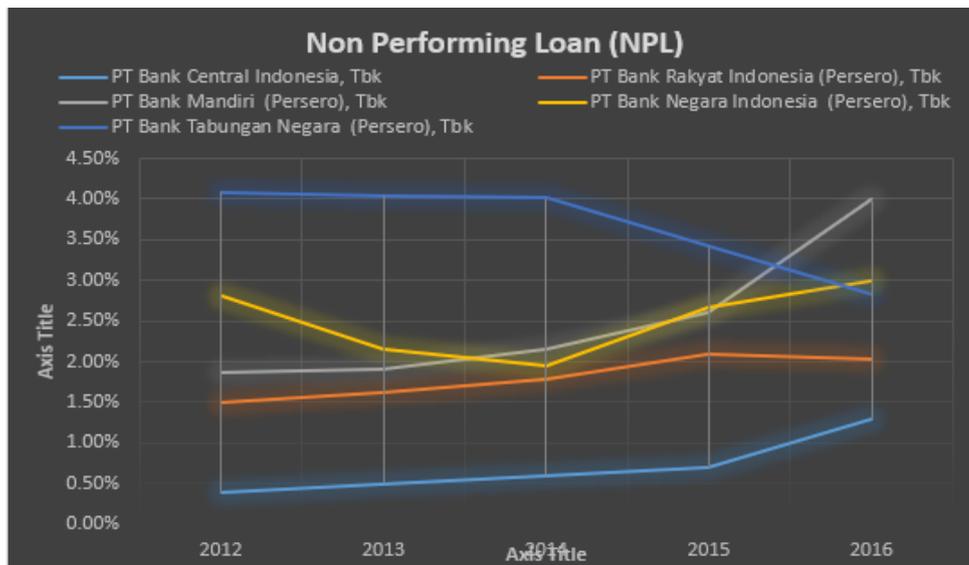


(Source: Author analysis, 2017)

RESULTS AND DISCUSSION

State-Owned Bank Risk Profile Factor Performances

Figure 4 - NPL State-Owned and Private Bank in the 5 years Covered



Healthy Target Indicator NPL Gross Comparison Target (2% - 5%)								
Name of Bank	2012	2013	2014	2015	2016	Averaged	Condition Rating	Ranking
PT Bank Central Indonesia, Tbk	0.40%	0.50%	0.60%	0.70%	1.30%	0.70%	Very Healthy	1
PT Bank Rakyat Indonesia (Persero), Tbk	1.49%	1.62%	1.78%	2.10%	2.03%	1.80%	Healthy	2
PT Bank Mandiri (Persero), Tbk	1.88%	1.91%	2.15%	2.61%	4.00%	2.51%	Healthy	3
PT Bank Negara Indonesia (Persero), Tbk	2.81%	2.16%	1.96%	2.67%	3.00%	2.52%	Healthy	4
PT Bank Tabungan Negara (Persero), Tbk	4.09%	4.05%	4.01%	3.42%	2.84%	3.68%	Healthy	5
Average Total	2.13%	2.05%	2.10%	2.30%	2.63%			

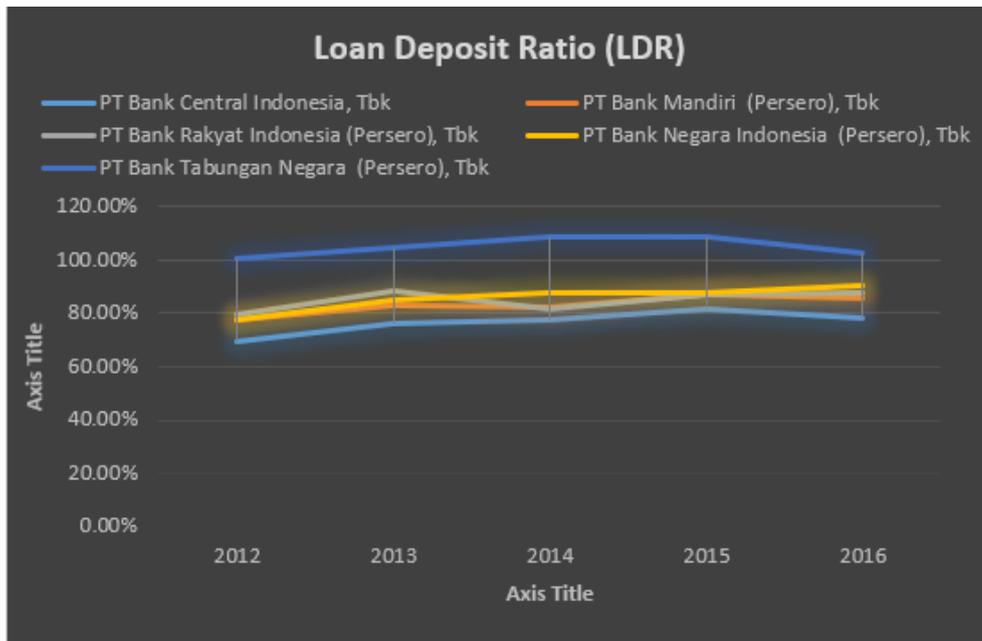
(Source: Annual Report Mandiri, BRI, BNI, BTN 2012 – 2016)

Figure 4 shows that NPL performance among state-owned banks and private bank in Indonesia from 2012 until 2016. In 2012, BRI, Mandiri, BCA have made their performance on very healthy condition which NPL shown under 2% and the rest of the banks remain as health predicate condition. In 2013, everything was changed. NPL of Mandiri BRI and BCA started increasing due to economic downturn that effected on export commodity price. Higher non-performing loan shows that those banks were found difficulties of their loan collectability. The same thing happened to BNI, in 2014. In 2012, NPL's BNI performance showing the declining level of NPL ratio. In 2015 NPL's ratio increased. It was due to an increase of the substandard category of loan collectability that reached 5943% and followed by a 44 % increase of loss category of loan collectability in 2016. As a bank that has a specialty focus on property credit sector, BTN has managed their performance in terms non-performing loan condition. It

shows above that their performance from 2012 – 2016 remains declined, which they have less non-performing loans in their market segment.

As an overall condition showing at figure 4, in the the 5 years covered, Indonesia’s state-owned bank has shown the healthy performances which under 2 - 5 % of NPL based on OJK Measurement Standard. Predicate rating is given for those banks who lead NPL the lowest one. As result BCA has rated as the first ranked with averaged NPL 0.70 % in the 5 years covered and followed by BRI in the second position with averaged 1.80 %. The third position is Bank Mandiri with average total NPL score is 2.51% and fourth position was handed to BNI with the total average score 2.52 % and the last is BTN with Average NPL in the 5 years is 3.63%. All banks indicate to be categorized as healthy condition.

Figure 5 - LDR State-Owned Bank in the 5 years Covered



Healthy Target Indicator Loan Deposit Ratio Target (75% - 85%)								
Name of Bank	2012	2013	2014	2015	2016	Averaged	Condition	Rating
PT Bank Central Indonesia, Tbk	69.35%	76.26%	77.37%	81.84%	78.45%	76.66%	Ideal	1
PT Bank Mandiri (Persero), Tbk	77.66%	82.97%	82.02%	87.05%	85.86%	83.11%	Ideal	2
PT Bank Rakyat Indonesia (Persero), Tbk	79.85%	88.54%	81.68%	86.88%	87.93%	84.98%	Ideal	3
PT Bank Negara Indonesia (Persero), Tbk	77.50%	85.30%	87.80%	87.80%	90.30%	85.74%	Quite Ideal	4
PT Bank Tabungan Negara (Persero), Tbk	100.90%	104.42%	108.86%	108.78%	102.66%	105.12%	Not Ideal	5
Average Total	81.05%	87.50%	87.55%	90.47%	89.04%			

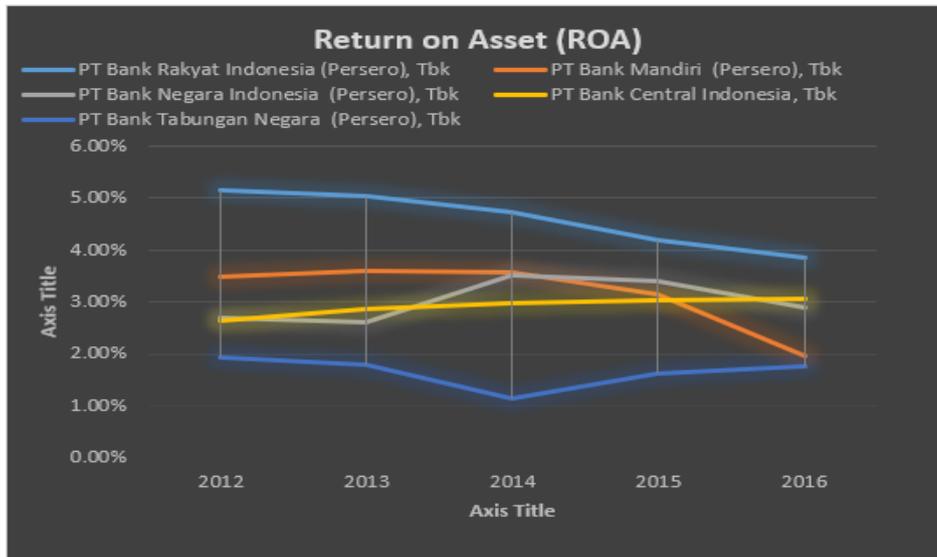
(Source: Annual Report Mandiri, BRI, BNI, BTN 2012 – 2016)

Figure 5, shows that the LDR ratio of among state-owned banks in Indonesia from 2012 until 2016. The LDR ratio in 2012 shows that all the stated-owned bank in Indonesia has in *ideal condition* in range 75 % to 85%, except BTN has the NPL to 100.90% which is categorize are not quite ideal. It caused by the loan were increased from their primary market segment. In 2013 all the LDR Performance was started to increase until 2016 and lead all the banks is may not have enough liquidity to cover any unforeseen fund.

Look at figure 5, in the 5 years covered, Indonesia’s state-owned bank and private bank have shown the ideal performances which range between of LDR in the 75% - 85% based on OJK Measurement Standard. Predicate rating is given to those banks who lead LDR meet and close to criteria ideal. As a result BCA has rated as the first ranked with average LDR 76.66 % in the 5 years covered, second ranked is PT Bank Mandiri with average LDR 85.86 % in the 5 years covered and followed by BRI in the third position with average 87.93%. The fourth position is BNI with average total LDR score is 90.30% and last position was handed to BTN with total average score 102.66%.

State-Owned Bank Earning Performances

Figure 6 - ROA Performances of State-Owned Bank in the 5 years Covered



Healthy Target Indicator Return on Asset Ratio Target (1.25% - 1.5%)								
Name of Bank	2012	2013	2014	2015	2016	Averaged	Condition	Rating
PT Bank Rakyat Indonesia (Persero), Tbk	5.15%	5.03%	4.73%	4.19%	3.84%	4.59%	Very Healthy	1
PT Bank Mandiri (Persero), Tbk	3.50%	3.60%	3.57%	3.15%	1.95%	3.15%	Very Healthy	2
PT Bank Negara Indonesia (Persero), Tbk	2.70%	2.60%	3.50%	3.40%	2.90%	3.02%	Very Healthy	3
PT Bank Central Indonesia, Tbk	2.65%	2.87%	2.99%	3.03%	3.05%	2.92%	Very Healthy	4
PT Bank Tabungan Negara (Persero), Tbk	1.94%	1.79%	1.14%	1.61%	1.76%	1.65%	Very Healthy	5
Average Total	3.19%	3.18%	3.19%	3.08%	2.70%			

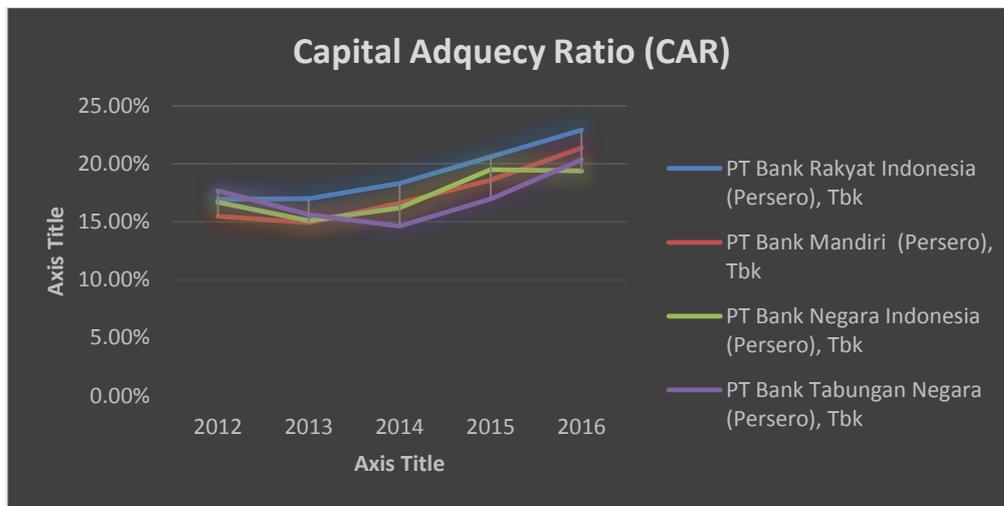
(Source: Annual Report Mandiri, BRI, BNI, BTN 2012 – 2016)

ROA ratio analysis is an analysis tool to measure the efficiency, profitability that achieved by the company and measuring how far the capability of bank management in generating profit before tax by using total assets. According to figure 6, shows that ROA of state-owned and private banks in Indonesia from 2012 to 2016 were declined. BRI, Mandiri, BNI banks ROA were declined due to NPL ratio was getting higher and the net profit was used to cover non-performing loan that impacting decreasing of profit before tax at those periods. ROA of BCA and BTN seems good due to lower NPL that lead their ROA performance tend raising. As overall, the performance of ROA's state-owned bank was still remain as very healthy category refer to OJK level Measurement standard.

As overall performance showing at figure 6, in the 5 years covered, Indonesia's state-owned bank has shown the healthy performances which range between of ROA in 1.25% - 1.5% based on OJK Measurement Standard. Predicate rating is given to those banks who lead ROA with highest one. As result BRI has rated as the first ranked with average ROA 4.59% in the 5 years covered and followed by Mandiri in the second position with average 3.15%. The third position is BNI with average total LDR score is 3.02%. The fourth position is BCA with ROA growth in 5 years 2.92%. last position was handed to BTN with total average score 1.65% of ROA in the 5 years covered.

State-Owned Bank Capital Performances

Figure 7 - CAR's Performances of State-Owned Bank in the 5 years covered



Healthy Target Indicator of Capital Adequacy Ratio (CAR) (9%-12%)								
Name of Bank	2012	2013	2014	2015	2016	Averaged	Condition	Rating
PT Bank Rakyat Indonesia (Persero), Tbk	16.95%	16.99%	18.31%	20.59%	22.91%	19.15%	Very Healthy	1
PT Bank Central Indonesia, Tbk	14.20%	15.70%	16.90%	18.70%	21.90%	17.48%	Very Healthy	2
PT Bank Mandiri (Persero), Tbk	15.48%	14.93%	16.60%	18.60%	21.36%	17.39%	Very Healthy	3
PT Bank Negara Indonesia (Persero), Tbk	16.70%	15.10%	16.20%	19.50%	19.40%	17.38%	Very Healthy	4
PT Bank Tabungan Negara (Persero), Tbk	17.69%	15.62%	14.64%	16.97%	20.34%	17.05%	Very Healthy	5
Average Total	16.20%	15.67%	16.73%	18.87%	20.04%			

(Source: Annual Report Mandiri, BRI, BNI, BTN 2012 – 2016)

The figure 7 above shows the percentage of the level of capital adequacy and capital management performance of state-owned banks in Indonesia. Look at the CAR trend at figure 7 from 2012 to 2016. The CAR in 2012 decreased to 2013 and increased by 2016. The CAR was increased in all banks due to increasing weight risk exposure from market risk and operational risk. One indicator of increasing operational risk from loan expansion. It shows that LDR is increasing in all banks. Over credit expansion is higher risk. To anticipate non-performing loans, the bank must be increasing their capital value to anticipate the risk as the last option to cover the loss. According to a circular letter from OJK is mentioned about the measurement health performance about car adequacy ratio, 4 Indonesia's state-owned banks and BCA is categorized as a very healthy performance, because their CAR already exceeded the very health category

As overall performance showing at figure 7, in the 5 years covered, Indonesia's stated-owned bank has shown the healthy performances which range between of CAR at 9% - 12%. Predicate rating is given to those banks who lead ROA with highest one. As result BRI has rated as the first ranked with average CAR 19.15% in the 5 years covered and followed by BCA with 17.48% and Mandiri in the third position with average 17.39%. the fourth position is BNI with average total LDR score is 17.38% and last position was handed to BTN with total average score 17.05%

CONCLUSIONS

There are several problems that can be considered as a primary concern for those banks to be rated as unhealthy categorized in the future towards health performance of state-owned and private bank in Indonesia. For those banks that NPL's trend of banks was consistently increased. Banks with higher non-performing loans show difficulties on their loan collectability.

Table 6 - Proven Research Findings

Multivariate Regression Statistics	
Multiple R	0.948174108
R Square	0.89903414
Adjusted R Square	0.596136558
Standard Error	0.007321061
Observations	5

	Coefficients	Standard Error	t Stat	Sig.
Intercept	-0.091680156	0.224487715	-0.40839721	
NPL (%)	-1.074145583	2.265768776	-0.47407555	0.3
LDR	0.02524145	0.068371812	0.369179184	0.7
CAR	0.706671199	1.268439253	0.557118677	0.02

ANOVA					
	df	SS	MS	F	Significance F
Regression	3	0.000477254	0.000159085	2.968112638	0.397658428
Residual	1	5.35979E-05	5.35979E-05		
Total	4	0.000530852			

To prove the research findings, multivariate regression analysis is conducted to observe how NPL ratio will give impact to ROA performance. The result analysis will be as details below:

- **Examine F**

Based on output excel analytics tool, show that the variable measurements that conducted in this study is given affected to ROA performance such as NPL, CAR, and LDR. It's clarified by F value that showing in table 6 is 2.96 bigger than F table value which is 1.96. because significant value is 0.39 smaller than 5 so this hypothesis is accepted and there is significant variable that effected towards ROA performances.

- **R Square (R2)**

Rectangle Square or R2 is variable to see how far the prediction of Independent Variable is affected to dependent variable of 5 observants. On the **table** above show that Adjusted R2 is 0.59 (59%) which means that 59% of ROA performance can be explained by variation of NPL, LDR, and CAR and the rest 41% is affected by another variable. This argument is very strong because R Square is close to 1, means that the model is suited to measure the goodness of fit.

- **Examine T value**

Meanwhile, partially the effect of three independent variables (NPL, LDR, CAR) on ROA is shown on table that can be composed to make a multivariate regression equation as follows:

1. CAR has a positive impact to ROA Performances. It clarified by the result of test on the table, t value is 0.55 followed by significance is 0.02, because of significant value is less than 5% and t value (0.55) is higher than 1.96% so hypothesis is accepted. It means there is positive significant that influence between CAR and ROA performances.
2. LDR has a positive impact to ROA Performances. It clarified by the result of test on the table, t value is 0.36 followed by significance is 0.7, because of significant value is less than 5% and t value (0.36) is higher than 1.96% so that there is a big significant variable that LDR performances is affected as positive impact towards ROA performances.
3. NPL has a negative impact to ROA Performances. It clarified by the result of test on the table, t value is -0.04 followed by significance is -0.3, because of significant value is less than 5% and t value is bigger than t table (1.96) so that there is a big indication that NPL performances affected to ROA performance to be decreased. Over credit expansion to market will tend to be higher on NPL percentage that affected to ROA performance. Those factors can be influenced by systemization of poor credit analyst and procedures so that the ratio of non-performing loan is tend to be high.

RECOMMENDATION

In order to prevent risen creditors who do not perform loans, needs NPL strategy to evaluate a whole flow process that conduct in the credit business in order to generate more profit from total assets. The following actions have to be taken.

Improving the quality of credit analyst

Improving the quality of credit analysis is based on 5C of credit to check the reliability of potential creditor to:

- Based on Character
Credit analyst must take a look carefully and deep analyze towards customer's willingness to repay a loan obligation. From a banks perspective, this is probably the single most important component to identify the customer's character information such as lifestyle, education background, habits, and attitude.
- Based on Capacity
Credit analyst must ask carefully and analyze what personal investment that creditor plan to make in the business. The bank lender will need to know precisely how the customer to reimburse the credit. As credit analyst will likewise consider the installment history as a pointer of future payment potential. Do not think that collateral is a

primary source of repayment, but think as a tool to generate enough excess cash. So cash flow is the primary source of repayment to prevent non-performing loan.

- Based on Collateral
Bank must fully concern about the debtor overall condition, many creditors are not allowed to lend money unless there are certain assets are pledged as collateral. So collateral is an important consideration as substitute cash. The value of collateral must be considered on how much money that creditor lends. Collateral provides the bank as a secondary source of repayment if the the primary source of repayment is not available. If repayment is unperformed so in order to repay a loan, collateral must be turned on cash. So every bank must strong and firm in facing non-performing loans by gaining liquid collateral to prevent loss loan collectability.
- Based on Capital
Credit analyst must look deeply observed about creditor expectation for lending money towards their personal investment plan to make in the business. This is an indicator as the credit analyst to research how far the creditor is in business, how much capital and contribution they spend to run their business before approve their credit loan. The primary considerations in evaluating capital investment are how much amount of capital the owners have invested in the business, how much amount of future funds available from creditors and owners and how effectively total capital is employed.

To increase the return on assets (ROA)

Researcher expects that by improving the quality of credit performances will be effected on the revenue growth in a year. In order to make a ratio of net profit margin is higher, the researcher uses Dupont Analysis tool to identify and analyze the root of sources of profit margin in making some efficiency to encourage ROA ratio to be increased.

Based on Dupont analysis researcher can conclude there are several points that can be made to improve the quality performance of banks based on ROA analysis. The several points are:

1. Preventing loss Non performing loans by increasing the revenue growth in a year
2. Improve the productivity stream to encourage revenue growth through diversified products. (Product Diversification)
3. Reducing operating expenses will lead to an efficient management in term of cash used in operation. (Cash Efficiency).

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