

## TREND RATIO ANALYSIS ON BANKING COMPANIES LISTED IN LQ45 PERIOD OF 2009-2013

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**Abstract.** Every company needs a strategy designed to achieve the vision and objectives of the company, which must be appropriated to the demands of the existing business environment. One of the strategy that must be considered by company is the effort to attract investors. This research focuses on the trend of each financial ratio analysis, calculation of financial ratios investors processed in accordance with existing formulations, i.e: capital adequacy ratio (CAR), cost to income (CIR), net income margin (NIM), non performing loan (NPL), loan to deposit ratio (LDR), and return on asset (ROA). Making conclusion taken from the result of the analysis, based on the analysis, conclusion be obtained from testing expert's theory with researcher allegation along with facts on the field. Each of the financial ratios that have been calculated will determine the year base as basis of comparison and given the index number 100. Population of this research are all banking companies listed in Indonesia Stock Exchange. Purposive sampling used as the sampling technique, using random type of sample selection with certain consideration to be sample. As of the consideration, the company must be listed in Indonesia Stock Exchange period of 2009 – 2013, and listed five years respectively in LQ45 index. With the result are Bank Central Asia, Tbk, Bank Rakyat Indonesia (Persero), Tbk, Bank Danamon Indonesia, Tbk, and Bank Mandiri (Persero), Tbk. After forecasting using trend analysis (time series analysis) then the result are as follows, in 2014 and 2015 company with highest CAR prediction is Bank Rakyat Indonesia. While the highest CIR, NIM, and LDR prediction is Bank Central Asia, Tbk. For the highest ROA and NPL prediction is Bank Danamon Indonesia, Tbk.

**Keywords :** Banking, Financial Ratio Analysis

### Introduction

Managerial finance is concerned with the duties of financial manager in the business firm. Financial managers actively manage the financial affairs of any type of businesses-financial and nonfinancial, private and public, large and small, profit-seeking and not-for-profit. They perform such varied financial tasks as planning, extending credit to customers, evaluation proposed large expenditures, and raising money to fund the firm's operations. (Gitman, 2009). Every company needs a strategy designed to achieve the vision and objectives of the company, which must be appropriated to the demands of the existing business environment. One of strategy that must be considered by company is the effort to attract investor. Financial market means that suppliers of funds and demanders of fund can transact business directly. (Gitman, 2009). Stockholder is the owner of a corporation, whose ownership, or equity, is evidenced by either common stock or preferred stock (Gitman, 2009). Where companies use financial statements as the information which can be used by investors as the information in making decision.

Ratios are used to compare a firm's past and present performance and its industry performance. Comparing a ratio for one year with the same ratio for other years is known as trend analysis (Gallagher & Andrew, 2007). Trend analysis helps financial managers and analyst see whether a company's current financial situation is improving or deteriorating. To prepare a trend analysis, compute the ratio values for several time periods (usually years) and compare them (Gallagher & Andrew, 2007). Trend analysis was able to compare all the values in the financial statements

because it is not limited to a formula but rather calculating the percentage ratio of the data. It is very useful for investor in finding out companies performances in a particular group to determine which one is highest and which one is more favorable if seen from the comparative performances of the company.

There are several causes of the decrease of banks performances, among others: 1) The increase of banks non performing loan, 2) Impact of banks liquidation on 1st November 1997 which result the decrease of community trust to banking and goverment thus triggering the withdrawal of funds on a large scale, 3) The decrease of banks capital because of the need for reserves establishment, 4) Banks are not able to cover its debt obligation primaly due to the decrease of rupiah exchange rate, 5) Violation of the Legal Lending Limit, 6) Bank capital or capital adequacy ratio (CAR) not yet reflected the real capability to absorb various risk and loss, 7) Unprofessional management. (Nasser & Aryati, 2000)

According to research bureau InfoBank banking earnings as of December 2005 decrease -23,56 percent or decrease to Rp 22,65 Trillion. Besides profits, NPL or non performing loan also haunt the financial sector. Banking NPL was increase to 7,56 percent in 2005, while in 2004 only 4,5 percent. Based on Bank Indonesia regulation No. 3/22/PBI/2001 regarding transparency of bank financial condition, Bank shall prepare and present financial statements with the form and scope defined, consisting of: 1) Annual Financial Statements Report, 2) Quarterly Financial Statements Report, 3) Monthly Financial Statements Report, and 4) Consolidated Financial Statements. Published financial statements are expected to reflect the actual banks performances.

Capital Adequacy Ratio defined as the ratio of the sum of paid-up capital, reserves, and undistributed profits to total risk assets (Jao, 2001). While Cost to Income Ratio defined as operating expenses over net interest and non interest income (Bikker & Bos, 2008). Net Interest Margin defined as the spread between interest revenue on bank assets and interest expense on bank liabilities as a propotion of bank assets, is expressed as a function of internal (bank-specific) and external (industry-related, macroeconomic and regulatory) determinants (Ho & Saunders, 1981; Berger, 1995; Dermiguc-Kunt & Huizinga, 1999; Drakos, 2003; Maudoz & Fernandez de Guevara, 2004).

Assets are considered to be nonperforming when (a) principal or interest is due and unpaid for 90 days or more; or (b) interest payment equal to 90-day interest or more have neem capitalized, refinanced, or rolled over. For countries that are using standard classification systems, nonperforming is often (but not always) defined as loans in the three lowest categories (substandard, doubtful, loss) (Dziobek, Kanaya, CORTavariia-Chekley, & Song, 2000).

Loan to deposit ratio, this ratio indicates a bank's use of savings. The higher the ratio, the more the bank is relying on borrowed funds, which are generally costlier than most types of deposits (Sophastienphong & Kulathunga, 2010). While the Federal Register stated that host state Loan-to-Deposit Ratio generally means, with respect to a particular host state, the ratio of total loans in the host state relative to total deposits from the host state for all banks (including institutions covered under the definition of "bank" in 12 U.S.C 1813(a)(1)) that have that state as their home state, as determined and updated periodically by the appropriate Federal banking agencies and made available to the public (Register, 2014).

Return on Assets (ROA), here, the profitability ratio is measured in terms of the relationship between net profits and assets. The ROA may also be called profit-to-asset ratio. There are various possible approaches to define net profits and assets, according to the purpose and intent of the calculation of the ratio (Khan & Jain, 2007). Under these condition, the researcher intend to make a research entitled "Trend Ratio Analysis on Banking Companies listed in LQ45 period of 2009 – 2013". The reason for choosing Banking industry as the research object because banking activity is

necessary to support economy in real sector. Real sector will not be able to work well, if the economy sector do not work well too.

## Literature Review

### Definition of Banking

Banking is everything related with bank, including institutional, business activities, as well as the manner and process in carrying out its business activities. Bank's definition under the Law No. 10 of 1998 is a business entity which collects fund from public in the form of saving and distribute it to the public in the form of credit and or other form in order to improve the living standard of the people. While based on Financial Accounting Standard (PSAK) No. 31 of 1999, bank is an institutions that act as an intermediary between the parties that have excess funds and those who lack of funds, as well as institutions that serve to facilitate traffic payments. Based on above, it can be concluded that bank is a financial institution in form of business that collect funds from people who have surplus of fund and distributed back to the community that lack of fund, as well as providing other banking services for profit motive and also improve the lives of many people as the social responsibility.

### Overview of Financial Conditions of Banking in Indonesia

Indonesian economy is still experiencing instability, the government run deregulation and de-bureaucratization policy in phases on the financial sector and the economy. One of purpose of deregulations and de-bureaucratization policy is an attempt to build a healthy, efficient, and strong banking system. The impact of an over-regulated banking industry is a stagnant condition and the loss of banking initiative. It encourages Bank Indonesia to modernize banking by deregulation in accordance with demands of society, business, and economic life of the period.

### Financial Ratio Analysis

The financial side of the business can be managed by the use of appropriate financial management strategies just as the physical side of the business is managed. Financial ratios, which measure the relationship between two financial items or categories are useful tools in this process (Luckham, 2003). Then, financial ratio analysis is an activity that performed to obtain an overview of financial development and financial position of the company. Financial ratio analysis is used as an internal analysis of the company's management to determine the financial result that has been achieved for the future plan and also for internal analysis for creditor and investor.

Ratio analysis is one of financial analysis tool that is mostly used. Ratio is a tool to provide a view of the underlying condition. Ratio is one of starting point, not the end point. Ratio which interpreted correctly identify an areas that require further investigation. Ratio analysis reveals an important relationship and the basis for comparison in finding condition and trend that are difficult to detect by studying each of the component that make up the ratio. As with other analysis tools, ratio is mostly useful for future orientation. This means that we often adjust the factors that affect ratio for trend possibilities and size in the future. We also need to assess the factors that could potentially affect the ratio in the future. Therefore, the purpose of the ratio depend on the application and interpretation skills and here is the most challenging part of ratio analysis(Wild, K.R, & Halsey, 2005).

### Definition of Trend Ratio Analysis

According to Horne (1995), Trend analysis from financial ratio possess two tipe of comparison one of them is financial ratio poured into spreadsheet for several years of period, so that able to study about composition and factors which caused growth of the company or even declined. Trend analysis aimed to determine tendencies of financial condition of a company in the future either upward, down, and stay. This analysis technique commonly used to analyze financial statements at least 3 period or more. This analysis is intended to determine the company development through past range of time and projecting the future situation forward. Based on historical data tendency that might occur in the future could be seen. This trend analysis useful to assess the "trend"

situation that has occurred in the company and to predict trends forward based on the trend line. Way to perform the index of time series analysis is by :

1. Determine the base year. The base year is determined by looking at the meaning of a year could be the year of establishment, the change, or reorganization and other historic year. Financial statement items base year are listed as index 100.
2. Calculate index numbers of other years using the financial statement items number as the denominator.
3. Predicting decisions about things that must be performed to anticipate tendencies.

#### Least Square Method

Linear regression is a statistics method used to find out the relation between dependent variable with one or more of independent variable. Regression analysis at the least has function, namely to aim descriptive from a data phenomenon or a research cases, to aim control and as a prediction. A regression model can be used to do a prediction on dependent variable.

Ordinary Least Square method constitute one of method which often used to obtain values of gauge parameter within the regression model. The methods can be used for time series analysis are Semi Average Method, Moving Average Method, and Least Square Method. In this research, after conducted trends of financial analysis of each company, then, to compare company performances in the future Least Square method of Time Series Analysis can be used. The Least Square method of estimation of parameters of linear (regression) models performs well provided that the residuals (disturbances or errors) are well behaved (preferably normally or near-normally distributed and not infested with large size outliers). In general, linear equations of the least squares method is  $Y = a + b_x$ .

#### Data Collection

The data used to complete this research are taken from Indonesia Stock Exchange website (<http://www.idx.co.id>), and annual report from the company's official website. The data acquired are annual report and consolidated financial statement of PT. Bank Central Asia, Tbk (BBCA), PT. Bank Rakyat Indonesia, Tbk (BBRI), PT. Bank Danamon Indonesia, Tbk (BDMN), PT. Bank Mandiri, Tbk (BMRI), from 2009 to 2013.

#### Population and Sample

Population of this research are all banking companies listed in Indonesia Stock Exchange. Purposive sampling used as the sampling technique, using random type of sample selection with certain consideration to be sample. As of the consideration are :

1. Listed in Indonesia Stock Exchange period of 2009 to 2013.
2. Listed five consecutive years in the LQ45 index.

Table 3.1  
List of Banks

No.	Bank Name	Bank Code
1.	Bank Central Asia, Tbk	BBCA
2.	Bank Rakyat Indonesia, Tbk	BBRI
3.	Bank Danamon Indonesia, Tbk	BDMN
4.	Bank Mandiri, Tbk	BMRI

#### Data Analysis

The data analysis section is the core of this research. Data analysis processes the collected data into the expected result the author wants. Proper methodology or formula used to process the data. There are several methods used on this research. For the banking performance assessment, the method used is financial statement analysis and balance sheet analysis, and also calculated financial ratios analysis.

## Result and Analysis

### Trend of Financial Ratio Analysis

The following trend ratio from Capital Adequacy Ratio (CAR), Cost to Income (CIR), Return on Assets (ROA), Net Interest Margin (NIM), Non Performing Loan (NPL), Loan to Deposit Ratio (LDR) from PT. Bank Central Asia, Tbk (BBCA), PT. Bank Rakyat Indonesia (Persero), Tbk (BBRI), PT. Bank Danamon Indonesia, Tbk (BDMN), and PT. Bank Mandiri (Persero), Tbk (BMRI).

Ordinary Least Square method constitute one of method which often used to obtain values of gauge parameter within the regression model. The methods can be used for time series analysis are Free Hand Method, Semi Average Method, Moving Average Method, and Least Square Method. In this research, after conducted trends of financial analysis of each company, then, to compare company performances in the future Least Square method of Time Series Analysis can be used. The Least Square method of estimation of parameters of linear (regression) models performs well provided that the residuals (disturbances or errors) are well behaved (preferably normally or near-normally distributed and not infested with large size outliers). In general, linear equations of the least squares method is  $Y = a + b_x$ , with explanation:

Y : Variable which ratio trend is sought

X : Variable time (years)

As for the search for the constants (a) and the parameter (b) are:

$$a = \frac{?}{?}$$

$$b = \frac{?}{?}$$

Chart 4.7  
Prediction of CAR Performances  
Banking Companies Years of 2014 and 2015

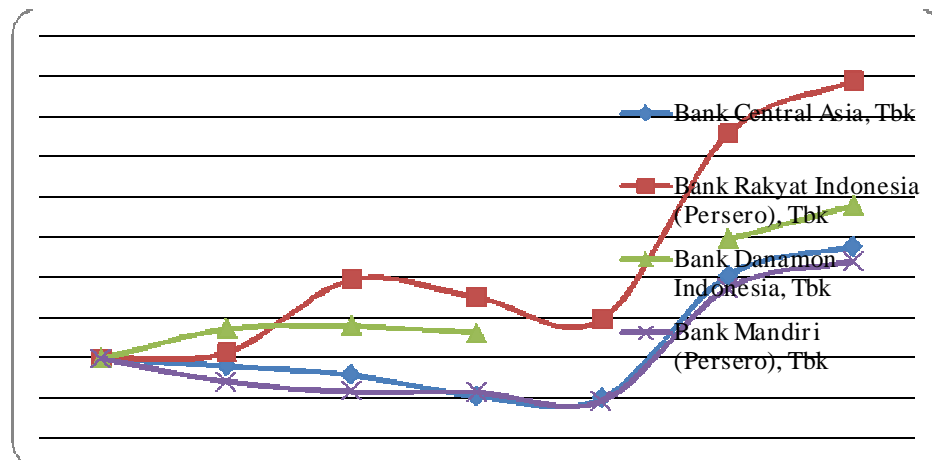


Chart 4.8  
Prediction of CIR Performances  
Banking Companies Years of 2014 and 2015

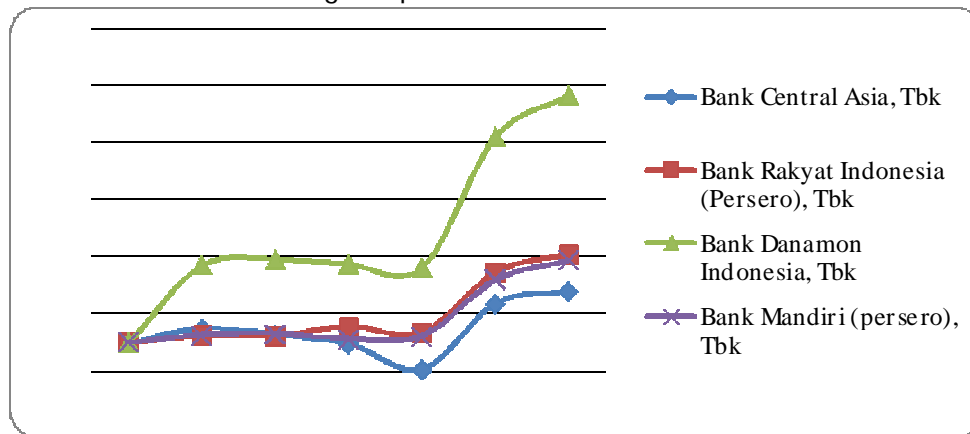


Chart 4.9  
Prediction of ROA Performances  
Banking Companies Years of 2014 and 2015

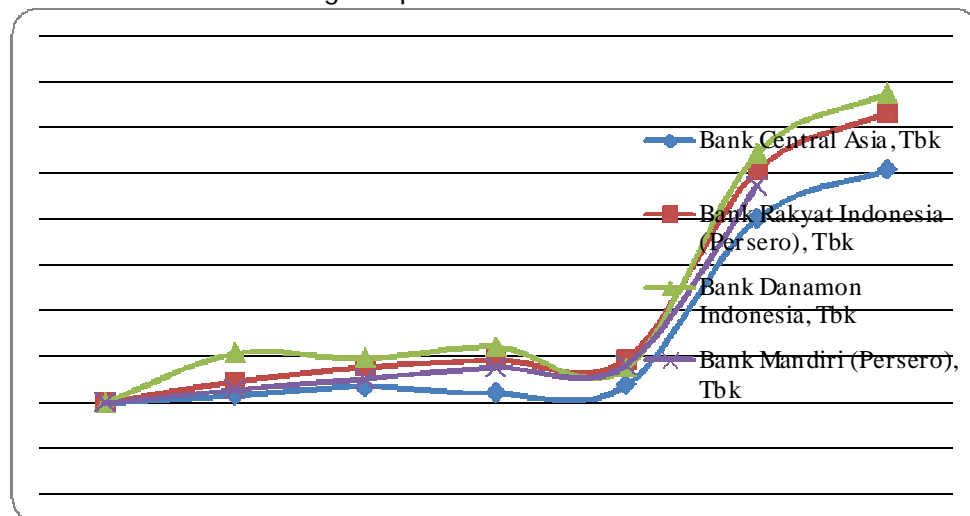


Chart 4.10  
Prediction of NIM Performances  
Banking Companies Years of 2014 and 2015

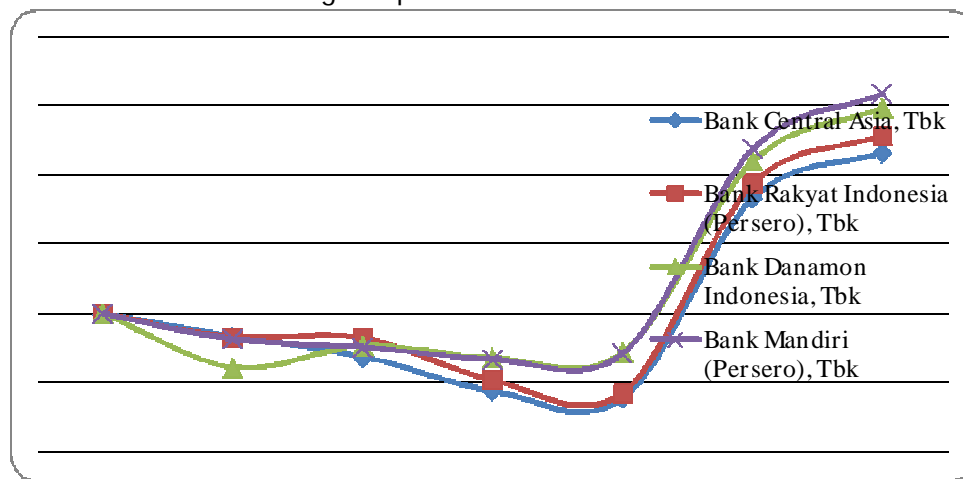


Chart 4.11  
Prediction of LDR Performances  
Banking Companies Years of 2014 and 2015

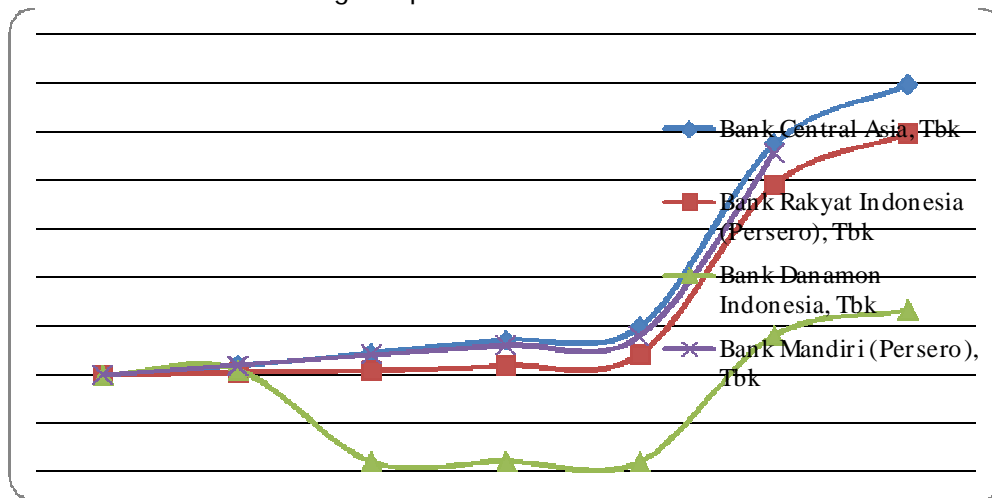
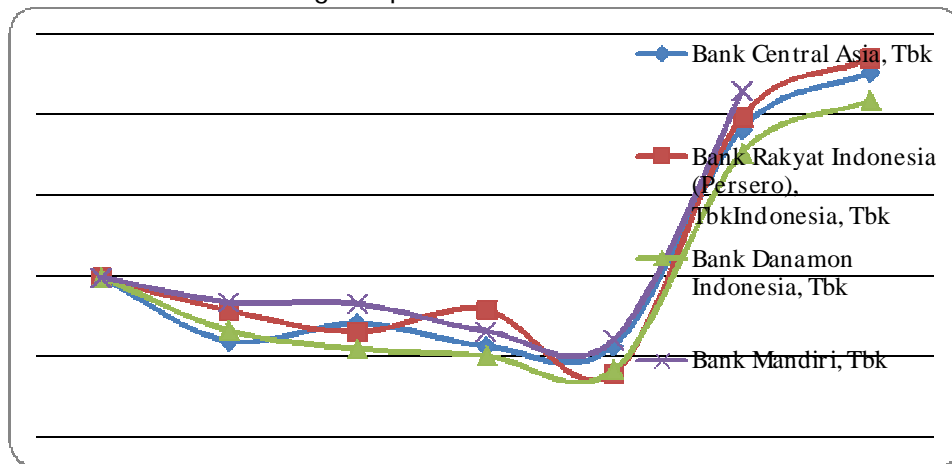


Chart 4.12  
Prediction of NPL Performances  
Banking Companies Years of 2014 and 2015



The result of the banking performances during the last five years was attempt to attract short-term and long-term investor. It can be seen from Bank Danamon Indonesia, Tbk CAR data was not contained in 2013 due to unknown value of weighted assets that the CAR can not be calculated. It can be seen that the company has the highest CAR is Bank Rakyat Indonesia (Persero), Tbk because the company experience continue improvement from year to year. In 2009, 100 used as the base year. In 2010 the company value increase became 107,3096, and in 2011 the company value increase again became 197,8777. Later in 2012 the company CAR value decrease became 175,6951. This was because company generated capital has decrease and affect the CAR. In 2013 the company experience a decrease once again by 6,7 percent from the year 2012, however if the overall trend line drawn then from 2009 to 2013 indicate a positive upward direction.

The company has the highest CIR is Bank Central Asia, Tbk. From 2010 to 2013 the company's CIR increase regularly, each year namely in 2010 became 149,7868 in 2011 became 128,7594 in 2012 became 96,58919, and in 2013 became 6,270482. This occur due to the decrease of company operating cost respectively.

The company has the highest ROA is Bank Mandiri (Persero), Tbk which for five years period of research experience a positive increase namely in 2010 became 114,2857 in 2011 became 126,3736 in 2012 became 138,4615, and in 2013 became 141,2088. The company has the highest NIM ratio is Bank Danamon Indonesia, Tbk which each year namely in 2010 became 61,42011 in 2011 became 76,67373 in 2012 became 68,34492, and in 2013 became 72,4124. Based on the chart above the company has the highest LDR value is Bank Central Asia, Tbk because among all companies BCA has the highest LDR value which means the company has the highest ability to fulfill its financial abilities. While the company has the lowest LDR value is Bank Danamon Indonesia, Tbk due to its small LDR value in 2013 which was 10,71.

The company has the highest NPL value is Bank Danamon Indonesia, Tbk because from 2010 to 2013 the company's NPL value has decrease respectively. Which means the smaller operation scale of a bank the better supervisory aspects will be. It can be seen from the following each periods value, in 2010 NPL value became 66,66667 in 2011 became 55,55556 in 2012 became 51,11111, and in 2013 became 42,2222. After forecasting using trend analysis (time series analysis) then the result are as follows: In 2014 and 2015 the company has the highest CAR prediction is Bank Rakyat Indonesia. While the highest CIR, NIM, and LDR prediction is Bank Central Asia, Tbk. For the highest ROA and NPL prediction is Bank Danamon Indonesia, Tbk.



## Conclusion and Recommendation

### Conclusion

In summary, the highest CAR value owned by Bank Rakyat Indonesia (Persero), Tbk due to its profits enhancement respectively. While the lowest CAR value owned by Bank Mandiri (Persero), Tbk due to the decrease of company capital every year. The lowest CIR value owned by Bank Rakyat Indonesia (Persero), Tbk because in 2011 to 2013 the CIR value decrease significantly. This is due to company's enhancement of operating cost. While the CIR value of Bank Central Asia, Tbk decrease start from 2009 to 2013 caused Bank Central Asia, Tbk has the highest CIR value. NIM of all companies researched experienced a decrease, but Bank Central Asia, Tbk has the lowest NIM because of its productive assets was decrease which caused company's capital provision to gain profits was also decrease. While the company has the highest NIM is Bank Danamon Indonesia, Tbk. The highest NPL is Bank Danamon Indonesia, Tbk due to the decrease of NPL value from 2010 to 2013 which means the smaller operating scale of a company the better supervisory aspects will be. While the lowest NPL is Bank Rakyat Indonesia, Tbk. The company has the highest LDR value is Bank Central Asia, Tbk because of its highest LDR value which means the company's ability to fulfill its financial liabilities was the highest. While the lowest LDR value owned by Bank Danamon Indonesia, Tbk for experience the lowest LDR value 10,71 in 2013. The highest ROA is Bank Mandiri (Persero), Tbk due to its positive enhancement. While the company has the lowest ROA is Bank Danamon Indonesia, Tbk. After forecasting using trend analysis (time series analysis) then the result are as follows, in 2014 and 2015 company with highest CAR prediction is Bank Rakyat Indonesia. While the highest CIR, NIM, and LDR prediction is Bank Central Asia, Tbk. For the highest ROA and NPL prediction is Bank Danamon Indonesia, Tbk.

### Recommendation

For further research, since this research focused only to trend analysis for banking companies, then author suggest to the further researcher to do a research on other industries such as, property industries which is booming now. Besides, the author also suggest to the further research to add more variable related to the industries.

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