THE DIFFERENCE OF FUNDAMENTAL FINANCIAL RATIOS BETWEEN LQ45 AND TOP 20 LOSER STOCK CATEGORIES
(Research Study at BEI in 2014 –2015)

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Abstract

The goal of this study was to find out whether there are significant differences between the companies which was included in the LQ45 and the Top 20 Loser Stock Categories in their fundamental financial ratios, which are the Earnings per Share (EPS), Book Value per Share (BV), Price Earnings Ratio (PER), Price to Book Value (PBV), Debt to Equity Ratio (DER), Return on Asset (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). The hypothesis drawn was that there was a significant difference between the two, since the companies included in the first category was selected through some criteria which then decided that they are qualified companies among others, and the second category consisted of companies which shares were traded in the lowest prices, which indicated that the companies were having some kind of troubles. The research showed that only EPS, ROE, and ROA which significantly different between the two categories.

Keywords: Top Loser, LQ45, EPS, BV, PER, PBV, DER ROA, ROE, NPM

INTRODUCTION

Stock is one popular financial instrument traded in the capital market. Investing in stocks can be done with the goal of long-term investment and short-term investments. An investor must have had a certain consideration before deciding to buy or sell a company's stock. Investors with short-term orientation will generally be more susceptible to fluctuations in the market price of the minute, while for investors with a reasonable long-term investment orientation was not unduly influenced by fluctuations in the price of minute to minute, but more focused on long-term price stability.

One of the considerations that should be the center of every investment is the company's financial performance. Financial performance should be considered by the investor to provide confidence and assurances as to the condition of the company in the future. The hope is that with the company's financial performance was good at the time it would affect the value of the company better in the future.
Capital market conditions also greatly influenced by the market reaction. Market reaction that occurs will affect the share price formation. The market reaction usually occurs when new information. The new information that emerged frequently was overdone by investors. Many investors are not rational and tend to use emotion in response to new information; it is termed as an overreaction. Their overreaction of investors feared would destabilize stock prices. New information unfavorable course will be responded with stock prices weakened. However, when basically the financial fundamentals of the company concerned is good, then it should be the weakening of the market price will not be addressed in the long term, thus weakening the condition of the stock market price will only be a temporary solution for companies such.

The decrease in stock prices sharply due to overreaction to bad news often happens in the stock. For example in the case of BCA stock price decline in the month of April 2015 corruption-related cases of the tax administration of the company. News quoted directly from Tribunnews.com is as follows [4]:

President Director of PT Bank Central Asia (BCA) Tbk, John Setiaatmadja, responded casually about the company's stock price decline in the stock throughout Tuesday (22/04/2014) these days. The decline in stock prices triggered BCA alleged corruption case of the tax administration company in the Directorate General of Taxation.

"I think the stock price up and down was the norm. Every day can go up, can go down as well," said John in his office, BCA Tower, Jakarta, Tuesday (04/22/2014) afternoon.

PT BCA Tbk movements of stocks are in the red zone throughout the trading of shares in the Indonesian Stock Exchange (BEI) on Tuesday (04/22/2014) these days.

By the time the stock opened trading this morning, shares of PT BCA Tbk plunged at IDR 10,950 per share. The value of shares of PT BCA Tbk it fell 225 points, or 2.01 percent compared to the previous day's trading, which at Rp 11,175 per share.

At the end of the trading session, shares of PT BCA Tbk observed to be at Rp 11,025 per share, down 150 points or 1.34 percent compared to the previous day close of stock trading.

And at the end of the close of trading today, shares of PT BCA Tbk stood at 11,050, down 125 points compared to the previous day's closing.

The reverse is actually happening on the movement of Composite Stock Price Index (CSPI), which closed at 4898.21 with a rise of 5.92 basis points, or 0.12 percent.

The movements of Djarum Group companies have the same objection handling corruption cases BCA tax in the Tax Directorate Year 2003-2004 which ensnare a former Director General of Taxation Hadi Purnomo."
BCA president director of the responses imply that the market should not have to react sentiment towards the stock market price of the company during the company's fundamentals actually fine. During July to September 2015 BCA stock price is in around IDR 11 thousand, but in October the price rebounded and up to November 2015 continues to strengthen over IDR 13 thousand, although not yet back on the price before the issue related to the tax that can be reached IDR 15 thousand.

Market sentiment also occurred in the previous case that led to the new company going public - PT Cipaganti Citra Graha Tbk. - To be under heavy pressure due to the case that struck cooperative that is one of the company's shareholders. More coverage quoted Liputan6.com [10] is as follows:

"The stock price of PT Cipaganti Citra Graha Tbk (CPGT) was a sharp drop in stock trading on Tuesday (24.06.2014) at 09:58 pm. The decline in stocks was triggered CPGT of three company officials Cipaganti group were arrested by the police on the alleged cases of embezzlement and fraud Cipaganti cooperative.

Based on data from RTI, CPGT share price fell 27.50% to IDR 58 per share. The share price had opened at IDR 70 from the close of stock trading Monday, June 23, 2014 at IDR 80 per share.

CPGT stock price was at the highest level and the lowest level of IDR 76 to IDR 54 per share. The total frequency of about 1,966 times the stock trading with a volume of 941,399 shares trading stock. The transaction value of shares was trading about USD 5.7 billion.

In the year to date, the stock has lost 71.92 percent CPGT of the close of trading on December 30, 2013 shares at the price level of USD 285 per share to IDR 80 per share on Monday, June 23, 2014.

PT Asjaya Indosurya Securities analyst, William Suryawijaya said, market participants responded to quickly arrest news directors Cipaganti group associated with cases of fraud Cipaganti cooperative. In addition, news of the company's coal mines are not sold also give negative sentiment.

"For a while investors avoided stocks Cipaganti. The detention of three officials Cipaganti Group has reduced investor confidence," said William, when contacted Liputan6.com, Tuesday (06/24/2014).

He added, CPGT stocks will tend to be depressed in the short term while waiting for the development of cooperatives fraud case Cipaganti it. "The first step undertaken by the investor to sell shares CPGT is good. Rather than later CPGT shares was suspended by the exchange that cannot be sold so much better off," said William.

Meanwhile, the Corporate Secretary of PT Cipaganti Citra Graha based on data from the Stock Exchange, the company's shareholders include Cipaganti Global Corporindo amounted to 21.17 percent, people with ownership of more than fifty percent of 67.82 percent, Guna Karya Persada cooperative Cipaganti of 4.92 percent, Endang Nugrahani 5.5 percent, and Liong Juen Fat 5.5 percent. (Ahm /) "
PT Cipaganti Citra Graha later changed ownership and changed its name to PT Nusantara Citra Maharlika Corpora Tbk. CPGT stock price gradually improved in the last months of 2014; due to short-term market sentiment has faded. Februari but in 2015 began a decline in market prices constantly, until the date of July 27, 2015 stock price stopped at IDR 50, - and no transaction occurs again. If considered the possibility of market pressure caused by the GMS information at June 30, 2015 which decided not to pay dividends, followed by a correction to the financial statements Q2 2015 and then a letter published by companies associated with the financial condition of the company, including the amount of bad debts. Some of these publications indicate irregularities on the company's financial fundamentals. Such events anticipated by the cessation market purchase transactions due to the lack of investors willing to buy at the offering price of IDR 50, - since July 27, 2015. The movement of prices in September 2015 to a question from BEI material was relating to the possibility of insider information, which then responds in writing by the company that the company does not know anything regarding the possibility of insider information that drives the price.

If seen from the above two cases, the market sentiment negatively by itself stop in the short term, if indeed the fundamental condition of good company, as in the case of PT BCA, but could also continue if the market perceives that the fundamental condition of the financial company is not good as indicated in the case of Cipaganti.

However, the incidence of overreaction is a condition that is often the case in the market, where investors are selling off redundant triggered by panic reactions without understanding the true condition of the financial fundamentals of companies whose shares he owns. For example, a decrease in JCI ever occurred in 2008 were presented as follows [6]:

"Panicked, shocked, worried .... That is perhaps perceived by the investors of our capital markets. The sharp decline in the Composite Stock Price Index (CSPI) in Indonesia Stock Exchange investors can indeed make the heart beat faster. The sell-off massive stock was unstoppable. An offer was more than demand. As per the law requests for quotation, of course, it will make the price of the shares sold into fall and can affect the JCI itself. As is known JCI decreased quite sharply when trading in the stock exchange reopened after the Eid holiday dated October 6, 2008 to a level of 1648.74 from 1832.51 levels (26 September 2008). JCI then fell back in the next 2 days to level 1451.67 (October 8, 2008) before it finally closed temporarily by BEI. The decline of this JCI itself has actually been going on since the beginning of 2008 is slowly although briefly touched the highest level in history on January 9, 2008 at the level of 2830.26. This decline has been predicted earlier that the number of hot money generally comes from foreign investors in trading on the exchange. Hot money can be withdrawn at any time and can cause a drop in the exchange. JCI related to the concept itself, it should be noted that JCI is an indicator that includes common stock price movements and price of preferred shares on the Stock Exchange. Rise and fall of JCI was highly dependent on the movement of stock prices in the stock. If the stock
price movements are generally good and the ride, the composite index will rise as well. Vice versa, if the stock price movement is less good or down the composite index will go down. JCI fluctuation was caused by the fluctuation of stock prices. And the stock price fluctuation is because one of them is because the measurement value of the stock itself is hardly ever use fundamental indicators of financial performance and the company itself.

When we look at our capital market crash yesterday that is almost all shares on the exchange fell. Some say that the stock market crash we did not escape the global financial crisis. There are also saying that this is because of the Bakrie group that defaulted in the transaction to buy back shares. It is true what some people say it but there is one root cause or problem of why JCI and stocks can rise and fall sharply, that do not use the company's fundamentals as the basis of evaluation of shares in the stock price."

Of such exposure appears that overreaction that occurs triggered by something that is not clear, rumors and information that may not be entirely correct or that actual momentary condition do not affect the company's fundamentals. However overreaction conditions are unfavorable to exchanges and listed companies because of the price volatility indicates market conditions or economic conditions are unstable.

Indonesia Stock Exchange Top 20 Loser known term, representing 20 shares posted the biggest declines in a particular month, as measured by the closing price at the beginning and end of the month. In addition to these categories, BEI also a classification known as the LQ45, where companies can belong to it are measured using a variety of factors, such as liquidity, market capitalization and growth in good company. Referring to the reaction of investors associated with the information available in the market, it is thus fair classification triggers a different reaction from investors, where the reaction will be reflected in the market price of shares in companies linked after the information is published. [16]

Relating to the classification published by the Stock Exchange, to consider whether it is fundamentally significant differences in the financial condition of the company between the two categories. Therefore it is necessary fundamentally comparative financial performance among companies who've signed LQ45 with companies who had entered in the category Top Loser. If the difference is not significant, it should investors do not need to bother with companies whose share price information entered into the category Top 20 Loser, so hopefully not happen overreaction that can be a precursor condition unhealthiness of transactions on the exchange.

This study to prove whether there are differences in the financial condition of the company are fundamentally between the two groups, where the results can be used to assist investors in making investment decisions, so that investors do not take decisions solely driven by conditions overreaction that may occur in the market, especially for investors with long-term investment orientation.
LITERATURE REVIEW

Investment activity is the act of a delay in the use of the funds that we have today to produce a higher return in the future that will provide compensation to investors on time delay, inflation, and uncertainty about the future payments. From the description so we can know that the expense of investors now use its own funds to generate higher value than the current value. The level of compensation expected by investors to compensate for the uncertainty of the future called the required rate of return.

A. DEFINITION of CAPITAL MARKETS

As with any market in general, the stock market is a meeting place between the seller and the buyer. The capital market is a means to improve the company's long-term funding needs by selling shares or issuing bonds. Shares constitute proof of ownership as part of the company, while the bond is a contract that requires the borrower to repay the loan principal plus interest within a certain time that has been agreed.

The stock market is an activity related to the public offering and trading of securities, public companies relating to securities issuance, as well as institutions and professions related to the effect. Capital Markets provides a variety of alternatives for investors in addition to other investment alternatives, such as: savings in banks, buying gold, insurance, land and buildings, and so on. Capital Markets to act as a liaison. Capital Markets acted as a liaison between investors and companies or government institutions through trade instruments through such long-term bonds, stocks, and more. [5]

B. STOCK INVESTMENT

Shares are securities that show ownership of a company ownership of a company. Shares are representing the amount of equity held by the company. Equity shows the ownership of the company. An investor in stocks or shareholders would benefit (yield) of the dividends paid by the company. In addition, if investors buy and sell shares on the stock market, investors have the possibility of getting capital gains are profits derived from the difference between the sale price and the purchase price.

The stock market is a meeting place for supply and demand for stock investment instruments. There are two types of the stock market; according to sources of supply and demand is the primary market and the secondary market. Primary market (primary market) occurs when companies require funding of shares so that the company would seek funds by offering stocks for the first time to the public and demand for stocks will come from investors, while the secondary market occurred in stocks that have been offered to the public, on this market demand and supply of shares occurred among stock investors.

Investing in stocks is done for example if there is idle money in the company. Investment in stocks is the ownership or possession of shares of other companies in order to obtain short-term gains as capital gains, dividends or acquire it could be to strengthen the market or expand distribution network, keeping the supply of raw materials, or to gain control. [1]

Given the number of shares the investment objectives, investment can be done for a short period, for example, if the aim is solely to take advantage of idle money, and
capital gains from the sale at any time. Or do long-term investment if it is to obtain dividends, extend the network or control over the investee company.

C. Efficient Market Hypotheses

The theory of Efficient Market Hypothesis expressed by Eugene Fama [3] states that the prices of securities in a market reflects all available information in the market. In the hypothesis that there are three types of markets, namely:

1. The weak form efficient market hypothesis:

   In the form of weak market hypothesis, the price of securities was formed solely from historical price trends. This is due on the market better information; such as the company's financial statements are usually not to be found.

2. Market Hypothesis strong form:

   In a hypothetical market strong form, the price of securities composed of all the information that can be obtained on the market, historical prices, financial information present, and a variety of other information, including the information parties (insider information) is supposed to be confidential because its presence in the market generally will have an impact on unreasonable price fluctuations in the market. Insider information is information that is prohibited from use in decision making transactions on the exchange, including on the Stock Exchange, which has rules hard enough against the possibility of such information because it could destabilize the price is not in place.

3. The semi-strong form market hypothesis:

   This market is a form that is in between the two extremes previous hypotheses. In the semi-strong market, the price of the securities is made up of all the financial and non-financial information that is both past information and current information, but does not include insider information.

The existence of the efficient market hypothesis has long been the subject of reflection for accountants in presenting financial information relevant accounting for decision making of investors in the market.

D. CLASSIFICATION TOP LOSER AND LQ 45 in BEI

Companies that enter into a group Top Loser on the Stock Exchange each month is basically calculated based on the difference between the closing price at the beginning and end of the month. Price fluctuations that occur from day to day throughout the month is not included in the consideration, so there is a possibility that the extreme price fluctuations occur in the middle of the month but has improved at the beginning and end of the month so as not to cause the company included into Top Loser.

The companies that belong to the category LQ45 is a company chosen by the method - the method of selection that takes into account such things as the following [16]:

LQ45 index uses 45 issuers were selected based on considerations of liquidity and market capitalization, with the criteria that have been determined. Factors that are used as criteria for an issuer to be included in the calculation of LQ 45 index are:
1. It has been listed on the Stock Exchange at least 3 months
2. Activities of transactions in the regular market value, volume, and frequency of transactions
3. The number of trading days in the regular market
4. The market capitalization of the given time period.
5. In addition to considering the liquidity and market capitalization criteria stated above, will be also the financial situation and growth prospects of the company.

E. FINANCIAL RATIOS

Financial ratios are models that can be generated from the company's financial statement information. Some financial ratios provided by the Stock Exchange for the users is the Earnings Per Share (EPS), Book Value per Share (BV), Price Earnings Ratio (PER), Price to Book Value (PBV), Debt to Equity Ratio (DER), Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Each of these ratios as defined below [7]:

(1) Profit for the period

$$\text{EPS} = \frac{\text{Profit for the period}}{\text{Number of issued shares}}$$

This ratio shows the company's profit on each share outstanding. Calculations performed by BEI are the annualized EPS if using interim report as the basis for calculation.

(2) Total Shareholders’ Equity

$$\text{BV} = \frac{\text{Total Shareholders’ Equity}}{\text{Number of issued shares}}$$

This ratio shows the company's equity value on each share outstanding.

(3) Regular Closing Price

$$\text{PER} = \frac{\text{Regular Closing Price}}{\text{EPS}}$$

Where EPS = Earnings per Share is calculated by dividing profit for the period by the number of shares issued.

(4) Regular Closing Price

$$\text{PBV} = \frac{\text{Regular Closing Price}}{\text{BV}}$$
Where PBV = Price to Book Value which calculate the market price of a stock divided by its book value.

\[(5) \quad \text{Total Liabilities} \quad \frac{\text{DER}}{\text{Equity}} \]

Where DER = Debt to Equity Ratio is calculated by dividing total debt by total capital.

\[(6) \quad \text{Profit for the Period} \quad \frac{\text{ROA}}{\text{x 100}} \quad \text{Total Assets} \]

Where ROA = Return on assets is calculated by dividing the profit after tax with all its assets. Calculation of total assets is assets on average, the total assets beginning of the year plus year-end total assets divided by 2.

\[(7) \quad \text{Profit for the Period} \quad \frac{\text{ROE}}{\text{x 100}} \quad \text{Equity} \]

Where ROE = return on equity measures the net profit after tax to total own capital.

\[(8) \quad \text{Profit for the Period} \quad \frac{\text{NPM}}{\text{x 100}} \quad \text{Total sales} \]

Where NPM = Net Profit Margin measure the ratio between net profit and total sales.

**F. PREVIOUS RESEARCH**

Research related to stock market prices has been done, including research conducted by Launay [9] on the French Stock Exchange, by analyzing the behavior of prices Loser and Top Winners groups to seek short-term abnormal returns. The results showed that the return of the Top Winner group tended to fall in the next day, while the return of the most optimum will be found to hold shares Top Loser maximum of 2 days after the fall in prices began.
Research Launay [9] reinforces previous studies conducted by De Bondt and Thaler (1985). Research related to the pattern of change in the stock returns of capital market concluded that the shares were previously underperforming (loser) will then be improved, but unlike the previous stocks that are performing well (winner) then will deteriorate in about 36 months later.

Another study conducted by Pasaribu [12] is the anomaly overreaction in BEI, related to the effort to reduce the impact of market inefficiencies due to the distribution of information on the local bourse LQ45 group. Pasaribu research results indicate that strategy by contrast, are often taken by investors, who believes that the loser portfolio will increase after the decline in the stock portfolio was not proven winner in BEI. Thus Pasaribu not suggest investors expect the price increase in the group of loser stocks caused by a decrease in the value of shares in the group LQ45.

Research conducted by Zarowin (1990) [13] to strengthen research Pasaribu. The results of such research is that the tendency of stocks outperformed winner loser is not dependent on excessive reaction but because of the size of the company's stock is smaller than the size of the loser winner stock company.

Research on the stock return LQ 45 group was also done by Novitasari [14]. Variables used in this research are the Stock Return as the dependent variable, and ROA, CR, DER, PER, EPS, PBV and NPM as independent variables. From the results of the regression analysis, it can be seen that the ROA and no significant positive effect on the stock Return. CR was negative and not significant to return stock. DER was negative and significant effect on stock return. PER was negative and not significant to return stock. EPS was negative and not significant to return stock. PBV was positive and significant effect on stock return. NPM and no significant negative effect on the stock Return.

Other studies were on stock returns made by Kusumo [8]. This study seeks to learn some fundamental variables that can be used as predictors of short return on investment. The object of research used in this study is a non-bank company incorporated in the LQ 45 during period research 2009-2010. The variables studied were profitability, solvency, liquidity, and Activities. The analysis technique used in this research is multiple linear regressions. This research was conducted by a quantitative method the financial statements of companies listed in the LQ 45 during the period 2009-2010. The total sample is 30 companies comprised of 15 companies that consistently incorporated in 2 (two) periods of observation in the LQ 45 and 15 non-banking companies were determined through purposive sampling method. Method of hypothesis was testing using different t-test and multiple linear regressions. The results of research that showed no significant difference between the stocks return TAT variable with a significant influence on stock returns. Although was found no significant relationship between stock returns to the proxy ROA, DER, CR to return stock.

Research on stock returns was done by Sari [15]. This research study was on the analysis of the influence of DER, ROE, CR and TATO on stock returns. The results showed that DER positive and significant effect on stock returns, CR positive effect but not significant toward stock returns, ROE significantly negative influence stock returns, TATO positive and significant effect on stock returns.
Nugroho study [11] of the Fundamental Information Analysis Effect on Stock Return shows that only the DER and QAI is positive and significant impact on stock returns both in the automotive sub-sector and the textile industry.

**RESEARCH OBJECTIVES AND BENEFITS**

**A. RESEARCH OBJECTIVES**

This study aims to determine whether significant differences in the fundamental conditions of corporate finance to firms that belong to the category LQ 45 with companies belonging to the group of Top 20 Loser at BEI. Fundamental condition of the company’s financial views of the financial statements by IDX information is always presented in a statistical report issued by the Stock Exchange, which consists of eight financial ratios as follows:

A. Of the group of companies included in LQ45 categories:

1. $X_1 = \text{Earnings Per Share (EPS)}$
2. $X_2 = \text{Book Value per Share (BV)}$
3. $X_3 = \text{Price Earnings Ratio (PER)}$
4. $X_4 = \text{Price to Book Value (PBV)}$
5. $X_5 = \text{Debt to Equity Ratio (DER)}$
6. $X_6 = \text{Return on Assets (ROA)}$
7. $X_7 = \text{Return on Equity (ROE)}$
8. $X_8 = \text{Net Profit Margin (NPM)}$

B. From the group of companies included in the category of Top 20 Loser:

9. $X_{10} = \text{Earnings Per Share (EPS)}$
10. $X_{11} = \text{Book Value per Share (BV)}$
11. $X_{12} = \text{Price Earnings Ratio (PER)}$
12. $X_{13} = \text{Price to Book Value (PBV)}$
13. $X_{14} = \text{Debt to Equity Ratio (DER)}$
14. $X_{15} = \text{Return on Assets (ROA)}$
15. $X_{16} = \text{Return on Equity (ROE)}$
16. $X_{17} = \text{Net Profit Margin (NPM)}$

**B. RESEARCH BENEFITS**

It is expected to determine significant whether or not the condition of financial fundamentals on the companies included in the category LQ45 with belonging to the group of Top 20 Looser in BEI, will give you a more fundamental about at which investors should take a position or decision, for example in deciding to release or not release their stock in case of the company into the Top 20 Loser.

Decisions with a solid foundation is expected to minimize overreaction so that the impact is expected to price volatility in the stock market can be more stable. Stability in the stock price is an indication of the security of investors in the transaction in the
exchange, which in turn is expected to lead to the confidence of investors to invest in the stock, not only for investment in the short term but also for long-term investing.

RESEARCH METHODS

A. RESEARCH POPULATION AND SAMPLE

The population in this study is a company registered in the Indonesia Stock Exchange in the period 2014 - 2015 which submitted their financial statements. Source data used are secondary data obtained from the company's financial ratios provided in monthly reports and official page provided by IDX (www.idx.co.id) during the period 2014 through to August 2015.

Samples were taken from the companies included in the category LQ45 and are included in the category Top 20 Loser in the observation period. Sampling was done by using purposive sampling that meet the following criteria:

For the companies included in the LQ45, the criteria as follows:
1. Companies that during the observation period is consistently included in the group LQ45 Index, and
2. During the observation period the company did not suffer losses.

For the companies included in the Top 20 Loser, the criteria as follows:
1. The Company has been consistently included in the Top 20 Loser group during the observation period, or
2. The company repeatedly gets into the Top 20 Loser group during the observation period. Sample taken from the highest priority entry into the Top 20 Loser group during the observation period, the rest will be randomly selected to equate with the number of companies entering into group LQ45 drawn into sample.

The following are general criteria:
1. Each of the companies included in the criteria no.1 to 4 above have all the data necessary financial ratios during the observation period.
2. The Company is not delisted from the Stock Exchange by the end of 2015.

B. RESEARCH DESIGN

Since the objective of this study was to find whether there is a difference between the two groups tested, then the method of testing is done by using two different test prices mean (U1 - U2), two-sided test. This test is intended to determine with certainty whether there are differences in the average (mean) between two independent samples (independent sample t-test). The purpose different test t-test is to compare the average group were not related to one another. Are the two groups had the same average value equal or not significantly. [2].

Based on these data were then analyzed quantitatively using SPSS ver.20. The test is carried out as follows:

1. Conduct population variance assumption test two samples
   Different test t-test can only be done if it has passed the test similarity variance. Assumption of variance using the F test based on the value levene's test. Analysis
of different test t-test should use a variance equal population variance is assumed if the two samples together. However, if the condition is reversed, where the population variance two samples are the same, then the t-test should use equal variance not assumed.

The steps to be carried out in the test F is:

1) Determine the hypothesis:
   - Ho: U1 - U2 = 0, there is no difference in financial performance between the group and the group LQ45 Top Loser
   - Ha: U1 - U2 ≠ 0, there is a difference in financial performance between the group and the group LQ45 Top Loser

2) Decision-making
   - If the probability > 0.05 then Ho is accepted so that the same variance
   - If the probability < 0.05 then Ho is rejected so the variance is not the same

2. Test different from the average of two independent samples (independent sample t-test)

After performing variance assumption test, then we can determine whether or not the population variance same two samples. Furthermore, we can do different test average value significantly with the following steps:

1) Determine the hypothesis
   - Ho: X1 = X2, there are no significant differences
   - Ha: X1 ≠ X2, there are significant differences

2) Assign a confidence level of 5%

3) Criteria Testing (depending on the data samples to be obtained), using the value of the Z table if \( n_1 + n_2 - 2 > 30 \), or use the value t table if \( n_1 + n_2 - 2 \leq 30 \).

Testing is done by using the formula:

\[
\text{t hitung} = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}
\]

3. Decision-making.

Decision-making by making a comparison between the value t count with a value of t-table:

- If the value t count \( \geq \) t-table value, then Ho is rejected, so it concluded there are significant differences between the financial performance LQ45 and loser.
- If the value t count value \( \leq \) t table, then Ho is accepted, so it concluded there was no significant difference between the financial performance LQ45 and loser.
RESEARCH RESULTS

A. DATA PROCESSING RESULTS

Of the samples taken, two groups of data accumulated ratio of the financial statements, the financial ratios of companies included in the group LQ45 and included in the Top 20 group Loser. The companies included in the sample used the data are 26 companies that consistently get into the group LQ45 throughout the study period and no losses, while the company during the period of observation into the group of Top 20 Loser monthly taken most frequently (5 times enter into the classification Top 20 Loser) to as much as 3 times belong to the group classification Top 20 Loser throughout the observation period, in which the number of companies that entered 3 times, obtained using a random sample to match the number of companies entering into the group LQ45, ie as many as 26 companies. The name of companies was drawn as a sample is presented in Table 5.1 below:

Table 5.1
Research Samples

<table>
<thead>
<tr>
<th>No.</th>
<th>Kelompok LQ45</th>
<th>Kelompok Top 20 Loser</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Astra Agro Lestari</td>
<td>Buana Finance</td>
</tr>
<tr>
<td>2</td>
<td>Adhi Karya (Persero)</td>
<td>Multifiling Mitra Indonesia</td>
</tr>
<tr>
<td>3</td>
<td>Adaro Energy</td>
<td>Trada Maritime</td>
</tr>
<tr>
<td>4</td>
<td>AKR Corporindo</td>
<td>inovisi Infracom</td>
</tr>
<tr>
<td>5</td>
<td>Astra International</td>
<td>Exploitasi Energi Indonesia</td>
</tr>
<tr>
<td>6</td>
<td>Alam Sutra Realty</td>
<td>Capitalinc Investment</td>
</tr>
<tr>
<td>7</td>
<td>Bank Central Asia</td>
<td>Pembangunan Graha Lestari</td>
</tr>
<tr>
<td>8</td>
<td>Bank Negara Indonesia (Persero)</td>
<td>Logindo Samudramakmur</td>
</tr>
<tr>
<td>9</td>
<td>Bank Rakyat Indonesia (Persero)</td>
<td>Tembaga Mulia Semanan</td>
</tr>
<tr>
<td>10</td>
<td>Global Mediacom</td>
<td>Inti Agri Resources</td>
</tr>
<tr>
<td>11</td>
<td>Charoen Pokphand Indonesia</td>
<td>Plaza Indonesia Realty</td>
</tr>
<tr>
<td>12</td>
<td>Gudang Garam</td>
<td>Eka Sari Lorena Transport</td>
</tr>
<tr>
<td>13</td>
<td>Indofood CBP Sukses Makmur</td>
<td>Cakra Mineral</td>
</tr>
<tr>
<td>14</td>
<td>Indofood Sukses Makmur</td>
<td>Toba Pulp Lestari</td>
</tr>
<tr>
<td>15</td>
<td>Indocement tunggal Prakasa</td>
<td>Garda Tujuh buana</td>
</tr>
<tr>
<td>16</td>
<td>Indo Tambangraya Megah</td>
<td>Erajaya Wasembada</td>
</tr>
<tr>
<td>17</td>
<td>Jasa Marga (Persero)</td>
<td>Hotel Mandarine Regency</td>
</tr>
<tr>
<td>18</td>
<td>Kalbe Farma</td>
<td>Indonesia Paradise Property</td>
</tr>
<tr>
<td>19</td>
<td>Lippo Karawaci</td>
<td>Malindo Feedmill</td>
</tr>
<tr>
<td>20</td>
<td>PP London Sumatra Indonesia</td>
<td>Jembo Cable company</td>
</tr>
<tr>
<td>21</td>
<td>Media Nusantara Citra</td>
<td>Sekawan Intipratama</td>
</tr>
<tr>
<td>22</td>
<td>Perusahaan Gas Negara (Persero)</td>
<td>Bank of India Indonesia</td>
</tr>
<tr>
<td>23</td>
<td>Tambang Batubar Bukit Asam</td>
<td>Wintermar Offshore Marine</td>
</tr>
<tr>
<td>24</td>
<td>PP (Persero)</td>
<td>Indo Tambang Raya Megah</td>
</tr>
<tr>
<td>25</td>
<td>Pakuwon Jati</td>
<td>Express Transindo Utama</td>
</tr>
<tr>
<td>26</td>
<td>Summarecon Agung</td>
<td>Electronic city Indonesia</td>
</tr>
</tbody>
</table>
For the companies belonging to the group LQ45, because the classification is done every six months, the financial ratio is the ratio of captured data reported in the period when the company entered into the group LQ45. Based on available data, there are 3 data for each financial ratio, i.e. the ratio of the 2nd half of the financial year 2014 and half of the 1st and 2nd of 2015. The three data have been averaged. As for the companies belonging to the group of Top 20 Loser amount of data obtained for each company is different, depending on how many times the company's entry into the group. Financial ratio data taken is data that is processed and presented in the company at the time of entry into the category of Top 20 Loser, then averaged.

Ratio data obtained were then processed using SPSS tools ver.20 using independent sample t-test. For each financial ratio obtained results that will be described in the tables below.

Table 5.2 is the result if the data on financial ratios EPS between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.002 <0.05, so the variance is assumed to be the same, therefore the results of the test value is 0.01, where 0.01 <0.05, which means that Ho is rejected and Ha accepted. So in terms of EPS ratio is a significant difference between the group and the group LQ45 Top 20 Loser.

Table 5.3 is the result if the data on financial ratios BV between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.095 > 0.05, so the variance is assumed to be equal, and therefore the results of the t test was 0.66, where 0.66 > 0.05, which means that Ho is accepted and Ha rejected. So in terms of the ratio of BV no significant difference between the group and the group LQ45 Top 20 Loser.

Table 5.4 is the result if the data on financial ratios PER between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.023 <0.05, so the variance is assumed to be the same, therefore the results of the t test was 0.44, where 0.44 > 0.05, which means that Ho is accepted and Ha rejected. So in terms of the ratio of PER was no significant difference between the group and the group LQ45 Top 20 Loser.

<table>
<thead>
<tr>
<th>Table 5.2</th>
<th>Independent Samples Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene's Test for Equality of Variances</td>
<td>t-test for Equality of Means</td>
</tr>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>EPS</td>
<td>Equal variances assumed</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>
Table 5.3
Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>2.904</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.882</td>
</tr>
</tbody>
</table>

Table 5.4
Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>5.509</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.440</td>
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</tbody>
</table>

Table 5.5
Independent Samples Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>3.699</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.520</td>
</tr>
</tbody>
</table>

Table 5.5 is the result if the data on financial ratios PBV between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value was 0.06> 0.05, so the variance is assumed to be equal, and therefore the results of the t test was 0.605, of which 0.605> 0.05, which means that Ho is accepted and Ha rejected. So in terms of PBV ratio is no significant difference between the group and the group LQ45 Top 20 Loser.
Table 5.6 is the result if the data on financial ratios DER between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.687 > 0.05, so the variance is assumed to be equal, and therefore the results of the t test was 0.605, of which 0.692 > 0.05, which means that Ho is accepted and Ha rejected. So in terms of the ratio of DER no significant difference between the group and the group LQ45 Top 20 Loser.

Table 5.7 is the result if the data on financial ratios DER between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.446 > 0.05, so the variance is assumed to be equal, and therefore the results of the t test was 0.000, of which 0.000 < 0.05, which means that Ho is rejected and Ha accepted. So in terms of the ratio of DER there are significant differences between the group and the group LQ45 Top 20 Loser.

Table 5.8 is the result if the data on financial ratios ROE between the groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.027 < 0.05, so the variance is assumed to be the same, therefore the results of the t test was 0.000, of which 0.000 < 0.05, which means that Ho is rejected and Ha accepted. So in terms of ROE ratio is a significant difference between the group and the group LQ45 Top 20 Loser.

Table 5.9 is the result if the data on financial ratios NPM between groups and group LQ45 Top 20 Loser. It appears that the F test of significance value is 0.012 < 0.05, so the variance is assumed to be the same, therefore the results of the t test was 0.092, of which 0.092 > 0.05, which means that Ho is accepted and Ha rejected. So in terms of the ratio of NPM there are no significant differences between the group and the group LQ45 Top 20 Loser.

### Table 5.6

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>DER</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.164</td>
<td>.687</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
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</tr>
</tbody>
</table>

### Table 5.6

**Independent Samples Test**

<table>
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<tr>
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<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.164</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
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</tbody>
</table>
### Table 5.7
**Independent Samples Test**

<table>
<thead>
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<th>t-test for Equality of Means</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
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<tr>
<td><strong>ROA</strong></td>
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<tr>
<td>Equal variances assumed</td>
<td>.590</td>
<td>.446</td>
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<tr>
<td>Equal variances not assumed</td>
<td>3.936</td>
<td>38,762</td>
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### Table 5.8
**Independent Samples Test**

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<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>5.220</td>
<td>.027</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>4.057</td>
<td>29,159</td>
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</tbody>
</table>

### Table 5.9
**Independent Samples Test**

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td><strong>NPM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>6,837</td>
<td>.012</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.752</td>
<td>25,236</td>
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**DISCUSSION**

Results of different test financial ratios of the companies in the group LQ45 and group Top 20 Loser showed a difference significant to the ratio of EPS, ROA and...
ROE, while for other financial ratios there is a significant difference, namely for BV, PER, PBV, DER, and NPM. Discussion on significant ratios described as follows:

A. EPS RATIO

EPS ratio is a ratio which can indicate the amount of net income received for each share of outstanding common shares, or it can be said in this ratio indicates the amount of money to be received by each holder of one share of ordinary income if the period were distributed entirely at the end of the year. The larger the EPS would be more attractive to investors who intend to invest in common stocks, because it means the company is able to provide the expected profit will be distributed as dividends to shareholders.

Although the ratios are important and a ratio that shall be presented in the statement of comprehensive income prepared in accordance with international financial accounting standards, this ratio contains quite a lot of factors in its calculations. EPS calculation required by the international accounting standards is called the fully diluted EPS. Calculations in this way will affect the number of ordinary shares outstanding used in the calculation if the company has securities that can be converted into ordinary shares that have an impact down the value of EPS. That is, it could be two companies - PT A and PT B - own earnings are the same and the number of common shares that are outstanding are the same, but for example PT A has convertible bond, while PT B does not have securities that can be converted into ordinary shares, the results calculation of fully diluted EPS may produce PT A is smaller than EPS PT B. In fact, the convertible bond may never be converted by its bondholder.

EPS is high also does not directly target dividend distributed for the year definitely too high. Another aspect that is not recorded in the calculation of EPS is a component of capital needed to generate such profits. It could be two companies have the same value but the company’s EPS is a need smaller capital than other companies, meaning that it can be said that the first company is better than the second company.

Significant differences EPS ratio between companies belonging to the group LQ45 and Top 20 Loser can be caused by because the level of profit produced by companies included in the group Top 20 Loser much lower than the profit that can be generated by the companies belonging to the group LQ45.

However, because of the multitude of factors that can affect the results of the EPS calculation, the investor should not focus too much on this ratio in making investment decisions.

B. ROA RATIO

ROA measures how efficiently the management company is able to manage the resources of the company assets to generate profits in a given period. For profit oriented company would generate revenue for possible is the main goal. By the time investors to invest, then the assets of the company will increase. Such assets are to be managed by the management to generate profit. By looking at ROA, investors see how investment deposited converted into a variety of productive assets that can generate profits for the company.

The value of this ratio varies between industries with different types. The manufacturing company will certainly have a fixed asset whose value is high, so that the average value of ROA may be lower when compared to companies engaged in the service industry which has relatively high-value fixed assets. Thus, to return as much, maybe once ROA manufacturing companies will be lower than the ROA of the service company.
In the case of significant differences ROA ratios between companies in the group LQ45 and group Top 20 Loser, there may indeed of the company's ability LQ45 better in net income compared to the companies in the group Top 20 Loser, because one thing that is generally accepted is that the higher the ROA, the better, because it means the company is able to generate huge profits from exploiting the company's assets are available. However, it should be considered also that in both groups made up of companies with a broad range of industries, there is a capital intensive company with major investments in fixed assets, some are not, so there is a possibility that the value of ROA affected by these factors.

C. ROE RATIO

ROE is to compare the net income from the company compared with the value of the investment that had been deposited by shareholders, meaning that ROE measures how effectively management in managing the funds received from investors to generate income and develop the company. This ratio is the ratio of profit viewed from the perspective of investors for direct linking between the money that has been invested into the company with the results obtained by the company.

The downside of this is that the ROE ratio can be increased without an increase in profit in the event of transactions that decreases the value of equity, such as the treasury stock. In addition, if the company has a high debt, the larger of the equity, the equity value will be low, so the ratio could be higher ROE, but basically it operates as a debt-financed, not by their own capital. Businesses large debt-financed more vulnerable to unfavorable economic conditions, due to the interest expenses are fixed. A slight decrease in income can lead the company that originally resulted in a profit into a loss.

Significant differences between companies in the category LQ45 Loser and Top 20 for this ratio could be caused by the difference of the net income generated. However, the possibility of high ROE caused by a greater debt than equity value does not seem to happen in this case, because one of the ratios tested, ie Debt to Equity Ratio, showed no significant difference between the two groups.

For the financial ratios were not significantly different others also contains profit figures in its calculations, except for DER. When viewed from the data collected from the companies belonging to the two groups, there are some companies who had entered in the category Top 20 Loser losers, resulting ratios were negative, though when averaged indeed still generate financial ratios positive, but it certainly will reduce the value of these ratios.

RESEARCH LIMITATIONS

Some things that are a limitation in this study include:

1. Lack of long periods of observation due to limitations in data collection.
2. Not doing sorting by type of industry.
PLAN FOR THE NEXT STEPS

Plans for the next stage if possible are:

1. Extend the study period to a minimum of 5 years behind, considering that for fundamental financial ratios will be analyzed better when seen in a long time span, but also taking into account the times of economic crisis which may affect the results of research into bias.
2. Conduct research separately for different types of industries, with the consideration that the equality of the industry will affect the absolute number of financial ratios become too large deviations.
3. Conduct research not only on the Stock Exchange but also on other exchanges such as in Asia as well as in the other regional.

CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

In accordance with the objectives of this study, that seek significant difference eight financial ratios between the two groups of companies, the group LQ45 and Group Top 20 Loser on the Stock Exchange, it can be concluded that from 8 financial ratios studied, only financial ratios EPS, ROA, and ROE significantly different between companies belonging to the group and the group LQ45 Top 20 Loser.

B. RECOMMENDATIONS

Advice can be given with regard to this study are:

a. That the fundamental financial ratios need to be a primary consideration in making investment decisions with regard to the weaknesses of the value generated from these ratios.

b. Further research needs to be done for a longer period and with sorting by type of industry, it is expected from further research will be obtained a much richer picture of the relationship between financial information with the investors' decision to invest.

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