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# ANALYSIS OF FINANCIAL PERFORMANCE WITH CONVENTIONAL FINANCIAL RATIO AND EMOTICON

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**ABSTRACT:** The problem in this study is the analysis of financial performance with conventional financial ratios that are difficult to understand by managers. With conventional financial ratios, managers find it difficult to know whether the company's financial performance is good or not. To accomplish the difficulty is to analyze financial performance with emoticons. The objective of this study is to examine whether the results of performance analysis with emoticons are easily understood rather than financial ratios. This study uses 155 respondents and all respondents stay in Yogyakarta and surroundings. Respondents include students, lecturers and managers who had studied financial management and accounting. Data was got through distributing questionnaires to respondents. Examination is done by sign test. The analysis proceeds show that the value of the sign test probability is smaller than the 5% error rate. Therefore, the findings of this study are as follows. First, the analysis of financial performance with emoticons easier to understand than analysis of performance with conventional financial ratios. Second, the accuracy (effectiveness) and timely (efficiency) of decision making based on the analysis of financial statements with emoticons is exceed than with conventional financial ratios.

**KEYWORDS:** Conventional, emoticons, financial performance, and financial ratios

## 1. INTRODUCTION

### 1.1. Background

The company's financial performance can be referred through the firm's financial statements. The firm provides financial statement information because all company stakeholders need that information. Public companies have many stakeholders, as well as: shareholders, suppliers, bondholders, lenders, bankers, employees, and management. All stakeholders need to monitor, evaluate and assess how well their interests can be served. They get company financial reports periodically. Through financial statements, they make financial statement analysis to obtain information on the overall financial performance of the firm. In the end, they make an analysis of financial statements for decision making in accordance with their own interests (Kusumasari, 2015). It is known that understanding financial statements requires knowledge in accounting and finance (Anggoro, 2004). In the financial standard it is explained that the purpose of making financial statements is for people who have a background in knowledge in finance and accounting. When associated with the objectives of interested parties who want to know the development of the company and its financial condition at that time, financial statement analysis with financial ratios is the best choice, because the use of ratio analysis will help stakeholders: 1) give a basis for forecasting firm prospects in future, 2) give clues or symptoms that arise from the information provided, and 3) facilitate the interpretation of financial statements.

Under the analysis of financial statements, the form of financial ratios is very much because the ratio can be made according to the needs of the analysts. Forms of financial ratios are also complex, and their complexity is influenced by the complexity of financial statements. It should be noted that the complexity of financial statements increases, not only because the financial and accounting principles used are increasingly complex and numerous, but also the numbers presented are fixed numbers. There are not many innovations in the presentation of financial statements. (Ratnatunga, 2016) criticizes the presentation of financial statements, for example 1) not clearly recorded intangible assets that are currently owned by more companies, 2) there are differences in book values and very high fair value, 3) financial statements presented in printed format allows high manipulation of assets, and 3) analysis of financial statements must be done by re-inputting the numbers presented in the financial statements.

Ideas for simplification and improvement in the presentation of financial statements are mostly carried out by researchers in the fields of finance and accounting. These things are based on the idea that the numbers listed in the table do not make it easy for decision makers. (Libby, 1981) finds that there are three options to improve decision making process by: 1) the presentment of financial statement analysis is changed, 2) decision makers are given adequate education in finance and accounting, and 3) the way decision-making is changed with a model. Changing the presentation of financial statements by several companies is done by using the figure method through graphs and tables in the form of two or three dimensions. This is not yet the right solution because accounting multivariate information will be very complex to be presented in graphs or tables of two or three dimensions.

The approach to presenting conventional financial statement analysis, in the form of numbers, needs to be converted into emoticons, as an alternative that is expected to improve the decision making process better. Emoticon is a symbol that forms emotions, for example emotions of sadness, pleasure, anger, and happiness (Chairunnisa & A.S, 2017). Emoticons are much easier to understand than complicated tables and numbers. Emoticons are very necessary in interpersonal communication. The role of emoticons is to support the meaning of the message, but the use of emoticons must be in accordance with the message (Chairunnisa & A.S, 2017).

Researches on emoticon use are still limited. The effectiveness of the presentation of financial statement analysis with emoticons has not been done much, so it is still wide open for further research. Decision makers do not all have financial and accounting education backgrounds, so there are limitations in decision making based on financial statement analysis. Thus, the decisions made by them can be wrong. The presentation of conventional financial statement analysis makes limitations in decision making accurate (effective) and fast (efficient). The alternative presentation of financial statement analysis with emoticons is expected to be easier to understand so that decision making can be done more accurately and faster. Thus, research on the accuracy (effectiveness) and timely (efficiency) of decision making based on the analysis of financial statements with emoticons should be done and compared with the analysis of financial statements with conventional financial ratios.

### 1.2 Problems, Purposes, and Research Contributions

Based on the background of the problem described above, the formulation of the problem of this research is whether the analysis of performance assessment with emoticons is easier to understand than with conventional financial ratios. The purposes of this study are as follows. The first analyzes the company's financial performance with conventional financial ratios. The second analyzes the company's financial performance with emoticons. The third examines whether the performance appraisal analysis with emoticons is easier to understand than conventional financial ratios. The fourth tests whether the accuracy (effectiveness) and timely (efficiency) of decision making are based on the analysis of financial statements with emoticons better than conventional financial ratios.

This study has the contribution as follows. First, this research is important to do because it can be an alternative solution to the form of presentation of financial statements that are too complex. Second, this research provides relevant information that is easily understood for decision making but does not reduce the relevant information content. Third, this research can be used by company owners (investors) to assess the performance of their investments, managers to conduct performance analysis, accounting standard makers for simplifying complex financial information content, and for academicians to contribute to the development of science, which is relevant to practice.

## 2. LITERATURE REVIEW

### 2.1 Foundation Theory

Research on the issue of improving communication about the presentation of financial statements is still very limited. Financial and accounting data mostly contains complex data. Conventional presentation of financial statements and analysis of financial statements is usually very complex and does not integrate financial performance as a whole. As a result, analysts and other users are expected to be able to analyze and make their own conclusions about the data. Their ability to analyze becomes a very decisive thing in the assessment of company performance based on financial statements. Getting alternative presentation in other ways is expected to be a way out to avoid the complexity of the presentation of financial statements. Many people already know that the purposes of financial statements are to give information about financial position, financial performance, and cash flow to corporate

entities. This information is useful for most users of financial statements in financial decision making. Thus, financial statements need to be analyzed properly to support decision making. Financial statement analysis is an analytical process, providing an evaluation to evaluate the current and past financial position and results of the firm's operations (Kusuma, 2016).

In addition, financial ratio analysis can also be used for financial indicators that describe a relationship between company risk and the company's financial ratios. Then the results of the analysis can be used to assess the risk of the company, and can be used to assess the company which risk is greater. (Altman, 1968) uses financial ratios to predict corporate bankruptcy. The results of his research have become a reference for other researchers. Subsequent research was conducted by (Novita, 2003) and (Sudarini, 20015) who tested the usefulness of financial ratios to predict earnings in the time to come. Financial ratio analysis basically consists of two comparison methods. The first method compares the company's financial ratios with other firms in the same industry, or with the average ratio in the industry. The second method compares the ratios of a given time with the ratios of the previous times of the same company. Ratio groups taken in the analysis of financial statements are aligned with the interests of creditors, investors, and management. In general, grouping ratios is based on: 1) liquidity, 2) leverage, 3) activity, and 3) profitability (Brigham, 2015). The following describes each of these groups of ratios.

Liquidity is the level of a firm's ability to fulfill its responsibility that must be fulfilled immediately (Miswanto, 2012). The two main accounts used in these liquidity ratios are current assets and current debt. If the firm is reviewed to have the capability to meet its short-term obligations, the firm is liquid. Conversely, if the firm is in a state to meet inadequate its short-term obligations, the firm is not liquid. The liquidity ratio has current ratio, quick ratio, cash ratio and inventory to net working capital (Horne & Wachowicz, 2009). If the numbers of these ratios of a firm increase from the previous year, the firm's liquidity increases from the previous year. The firm's liquidity increases, indication of the company's performance gets better

Leverage measures the amount of stock equity compared to the total of debt obtained from the firm's creditors (Miswanto M. , 2013). Investors or company owners will get the benefits of using debt because they get additional funds without losing control of the company. Leverage or solvency ratio is a ratio used to measure the extent to which a company's assets are financed by debt. Solvency ratio (leverage) has the debt to assets ratio, debt to equity ratio, and long-term debt to equity ratio (Ross, 2016). If the numbers of these ratios of a company increases from the previous year, the firm's debt also increase from the previous year. The debt increases, the indications of firm performance are not good

Activity ratio is the ratios used to measure how efficient the use of funds owned by the company (Horne & Wachowicz, 2009). The management and investors are very interested in using this activity ratio to find out the results of operations that have been carried out using assets owned by the company. Thus, managers and investors can assess the efficiency of all activities carried out in the period and development of all activities from one period to the next. The creditors also have an interest in knowing the efficiency of the use of funds by companies that are given credit. The activity ratio is generally in the form of cash turnover, accounts receivable turnover, inventory turnover, and total asset turnover. In general, activity ratio has total asset turnover cash turnover, accounts receivable turnover and inventory turnover (Titman, Keown, & Martin, 2014). If the numbers of these ratios of a company increase from the previous year, the uses of the company's assets are also more efficient than the previous year. The efficiency of using company assets increases, the indications of the company's performance get better.

Profitability ratios show that profits have been achieved from various policies and decisions taken by the company (Brealey, Myers, & and Marcus, 2012). The company's profitability ratio also shows the ability of a company to generate profits with capital invested in the company. Management and investors are very interested in profitability ratios. The creditor also needs to know what has been achieved by the company that will be given credit. Therefore, through these ratios, creditors can estimate and evaluate the development of companies that will be given credit in the future. The profitability ratio consists of EPS (earnings per share), net profit margin, return on investment and return on equity. If the numbers of these ratios of a company increase from the previous year, the company's profitability also increases from the previous year. The firm's profitability increases, the indications of the firm's performance get better

### 2.2 Hypothesis Development

Every individual in communication surely hopes that the objectives of communicating is reached. In general, the objectives of communication expects feedback provided by the recipient, and all messages

conveyed can be understood by the recipient, and there are effects that occur after the communication. In the current era of globalization, communication does not only occur directly. With the development of technology, communication can occur through social media, such as Facebook (FB), WhatsApp, and Instagram. Emoticons are part of the language elements in communication. Emoticon is a symbol of the emotional expression of the sender that represents meaning. Research on the effect of using emoticons began to be investigated, but the research was still limited, and only examined to determine how well people were able to interpret the meaning of emoticons (McDougald, Carpenter, & Mayhorn, 2011). There are three determinants of emoticons, namely the factor of proximity between personal relationships, factors of the situation or state of social speech, and factors of communication efficiency. The use of emoticons in conversations through social media can avoid misunderstandings that occur when the message writers only express their emotions through speech (Sallo, 2011) and (Yustisiana & Sari, 2016).

Emoticons are used in instant messages. Technology has developed emoticons used in text messages, and emoticons are useful for presenting the sender's mood or facial expressions. Emotions are often used to alert the recipient of the message to the true meaning of the message. People nowadays increasingly need the delivery of message content, emotions, moods that are fast and accurate. These needs can be obtained with emoticons. According to the history of communication, communication needs with emoticon have existed since ancient times. Therefore, emoticons are a valuable and irreplaceable part of modern literacy (Tomic, Martinez, & Vrbanec, 2013).

Emoticon is a symbol that forms emotions (Chairunnisa & A.S, 2017). Emoticon is used to strengthen the message so that the recipient will understand the condition or emotion of the sender (McDougald, Carpenter, & Mayhorn, 2011). Emoticons are also often taken to strengthen messages or as feedback on messages. If the sender of the message gives praise via text message, he can add emoticons so that the recipient of the message will feel the effects of his emotions. Research conducted by (Chairunnisa & A.S, 2017) shows that sending text messages with emoticons will create perfection of information so that the recipient perfectly senses the effects of the messages received. In interpersonal communication, both written and oral, the role of emoticons: 1) improving relationships with other people in chat, 2) showing emotional expression, and 3) showing the atmosphere of the current feeling. Therefore, the brain is faster in responding to images than numbers or words (Hariyanto, 2010) and (Chairunnisa & A.S, 2017).

Users of financial statement analysis use faster and more effective time to be able to interpret financial and accounting information based on financial ratios such as liquidity ratios, leverage, and profitability using emoticons compared to conventional financial ratio numbers (Kartadjumena, Jayanti, & Hadi, 2015) and (Smith, Taffler, & White, 2002). (Ratnatunga, 2016) states that auditors no longer need to only provide true and fair opinions on a financial report. However, the auditor needs to also provide emoticons on several important financial ratios that show the performance of the company. The emoticons used can be smiling faces for above-average performance. By using the various results of the studies mentioned above, the hypothesis in the study is the analysis of financial performance with emoticons easier to know than analysis of performance with conventional financial ratios.

## 3. METHODOLOGY

### 3.1 Research Data and Samples

Data collection is done by giving questionnaires to the respondents. The sample selection method is based on purposive sampling. The selection of samples is adjusted to the purpose of the study and is done not randomly (Indriantoro & Supomo, 1999). This study was done in Yogyakarta. To support the success of this study, respondents had a background in studying accounting and financial management. The main data collected is the ability of respondents to assess the company's financial performance using financial ratios and emoticons.

### 3.2 Questionnaire Design

As a basis for compiling questionnaires, researchers designed a questionnaire to analyze financial performance with financial ratios and emoticons. Then, the researchers designed the selection of easy-to-recognize (eye catching) emoticons that could represent financial statement analysis information. The focus group discussion (FGD) approach is used because this research requires special and general knowledge to choose emoticons. The selected emoticons are used to design an analytical model of

financial statements and their user-friendly emoticons. In the questionnaire, the financial ratios used in assessing company performance are current ratio, leverage ratio, return on asset, and earnings per share.

Current ratio is measured by current assets to current debt. If the ratio increases the firm's liquidity increases. The leverage ratio is measured by total debt to total asset ratio. The ratio is total debt divided by total assets. If the ratio increases, the proportion of the firm's debt increases and the indications are not good. Return on assets is profit after tax divided by total assets. If the ratio increases the profitability of the company also increases. Earning per share (EPS) is profit after tax divided by the number of shares of equity. If the ratio increases, the company's profitability will also increase (Brealey, Myers, & and Allen, 2008). Valuation of the company's financial performance conventionally based on the calculation of the numbers on these ratios. While the assessment of financial performance with emoticons is refer to the results of calculations of ratios that have been replaced with emoticons. The emoticons used in the form of a smiley face for performance above the average.

### 3.3 Hypothesis Testing

The hypothesis testing in the first step performs descriptive data analysis. Through this analysis, testing is done by comparing the value of average, minimum, maximum, and standard deviation on the value of financial performance between those who use financial ratios and those using emoticons. The hypothesis testing in the second step performs a sign test analyst, which is a nonparametric statistical analysis. If the probability value of a sign is less than 5%, the hypothesis is supported, namely the analysis of financial performance with emoticons is easier than with conventional financial ratios (Algifari, 2013).

## 4. RESULTS AND FINDINGS

### 4.1 Descriptive Data

Data analysis was carried out with the SPSS program. The results of descriptive data analysis are as follows. The number of respondents is 155 people. Values of mean, minimum, maximum, and standard deviations using emoticons are 4.8258, 3.00, 5.00 and 0.44355 respectively. Values of mean, minimum, maximum, standard deviation using conventional financial ratios are 4.3548, 1.00, 5.00 and 0.88818 respectively. Based on these descriptive data, the true average value with emoticons is higher than with financial ratios. A higher true average value on emoticons shows that performance appraisal using emoticons is easier than with financial ratios. Table 1 below shows a resume of the results of descriptive data analysis.

**Table 1 Results of Descriptive data Analysis**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Emoticon | 155 | 3.00 | 5.00 | 4.8258 | .44355 |
| Ratio | 155 | 1.00 | 5.00 | 4.3548 | .88818 |
| Valid N (listwise) | 155 | | | | |

### 4.2 Analysts for Sign Test results

The number of respondents in this study was 155 people and then divided into three groups. The first group, the number of respondents who assessed financial performance with emoticons were lower than assessing finance with a financial ratio of 3 people. The second group, the number of respondents who assessed financial performance with emoticons were higher than assessing finance with a financial ratio of 49 people. The third group, the number of respondents who assessed financial performance with emoticons were the same as assessing financial performance financial ratios, which were103 people. The number of respondents in each group can been summarized briefly in Table 2.

**Table 2 Respondent Groups**

| Groups | | N |
|---|---|---|
| Emoticon - Ratio | Negative Differences[a] | 3 |

| | | |
|---|---|---|
| | Positive Differences[b] | 49 |
| | Ties[c] | 103 |
| | Total | 155 |

a. Emoticon< Ratio b. Emoticon > Ratio c. Emoticon = Ratio

The results of the sign test are presented in Table 3. The Z value of the emoticon ratio is -6,240 and the probability value is 0%. The critical value (α) used in this study is 5%. The probability value of 0% (zero percent) is less than 5%. Based on these comparisons, the number of correct values using emoticons is higher than with financial ratios. Therefore, the results of the test indicate that the research hypothesis is supported because the probability value of the sign test is smaller than the critical value.

**Table 3 Results of Sign Test**

| | Emoticon - Ratio |
|---|---|
| Z | -6.240 |
| Asymp. Sig. (2-tailed) | .000 |

a. Sign Test

### 4.3 Findings

The research hypothesis states that assessing the company's financial performance with emoticons is easier than with financial ratios. The results of descriptive data analysis show that the true average value with emoticons is higher than with financial ratios. The results of the sign test analysis also show that the number of correct values with emoticons are higher than with conventional financial ratios. Thus, the two results of the analysis support the hypothesis.

Financial performance assessment can be done by comparing the performance of one company compared to another. Although respondents have studied financial management and accounting, assessing financial performance with financial ratios is not easy to state which company is better. The basic difficulty in assessing financial performance with financial ratios is the ratios that are compared in the form of numbers. If these numbers increase or decrease, the analysts are difficult to state whether the indicated financial performance is increase, or vice versa. The background of the respondents, they have never studied formally about emoticons. However, the number of true values on the valuation of financial performance with emoticons are more than with conventional financial ratios. The results of this study are in accordance with the results of the study of Kartadjumena, Jayanti and Hadi (2015), and Smith, Taffler, and White (2002) that the assessment of company performance with emoticons is easier to do than with financial ratios

Financial performance assessment with emoticons uses symbols, figures, or images. Because with those symbols, valuation of financial performance with emoticons is easier than conventional financial ratios. This result is in accordance with the findings of Hariyanto (2010), Chairunnisa and U.S. (2017) which state that the brain is faster in responding to images than numbers or words (Hariyanto, 2010; Chairunnisa and U.S., 2017). The results of financial statement analysis are used in decision making in accordance with the interests of each stakeholder. Therefore, the findings of this study are as follows. First, the analysis of financial performance with emoticons easier to understand than analysis of performance with conventional financial ratios. Second, the accuracy (effectiveness) and timely (efficiency) of decision making based on the analysis of financial statements with emoticons is better than with conventional financial ratios.

## 5. CONCLUSION

The idea of simplification and improvement in the presentation of financial statement analysis is mostly carried out by academicians and researchers. Although respondents have studied financial management and accounting, when assessing financial performance with conventional financial ratios it is not easy to state which company is better. The main difficulty in the analysis of conventional financial statements is caused by financial ratios in the form of numbers. Financial performance assessment with emoticons using symbols, figures, or images. Because with those symbols, valuation of financial

performance with emoticons is easier than conventional financial ratios. This statement is strengthened by the results of descriptive data analysis and the results of the sign test in this study.

The descriptive analysis results show that the true average value with emoticons is higher than with conventional financial ratios. The results of the sign test analysis also show that the number of correct values with emoticons is higher than with conventional financial ratios. Although respondents have never studied specifically about emoticons, the findings of this study that analysis of financial performance with emoticons is easier than analysis of performance with conventional financial ratios. The results of financial statement analysis are used in decision making in accordance with the interests of each stakeholder. Therefore, the findings of this study are as follows. First, the analysis of financial performance with emoticons easier to understand than analysis of performance with conventional financial ratios. Second, the accuracy (effectiveness) and timely (efficiency) of decision making based on the analysis of financial statements with emoticons is better than with conventional financial ratios.

The limitation of this study is that respondents only came from or lived in the city of Yogyakarta. The suggestion for the next research is that respondents are expanded, not only in Yogyakarta, but extended to other cities, and even expanded to other countries. As long as the respondents expanded both the city and the country, the generality of the results of the study would be better than the results of this study. The next study also needs to be done, the influence of gender and education level on the ability to assess the company's financial performance, both with conventional financial ratios and with emoticons.

## 6. RECOGNITION

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