



Financial Ratio Analysis that Distinguishes Company Shares Indexed in LQ45 and the Non-LQ45 on the Indonesia Stock Exchange (Bursa Efek Indonesia)

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ABSTRACT

The LQ45 index is the rank 45 ranking of the most liquid listed companies in the Indonesia Stock Exchange (BEI). By being in the LQ45 index, the company will be smoother in long-term funding because the shares circulating in the market tend to be more attractive if they are on the LQ45 index. This can be seen on the listing board for market activity published on the Indonesia Stock Exchange (BEI) website (www.idx.com). LQ45 companies tend to have high frequency of transaction values. To be indexed in LQ45, the Indonesia Stock Exchange does not specify how the financial conditions are the criteria of an LQ45 company. This study tries to look at the criteria of LQ45 companies through aspects of financial conditions. This is done by analyzing financial ratios in LQ45 companies and comparing them with non-LQ45 companies with the same sector. In this research was using 6 financial ratio with 25 financial ratio indicators. The number of samples in this study amounted to 230 companies then they are divided into 35 sample companies in the category of LQ45 companies and 195 companies in the category of non-LQ45 companies with the same sector. From discriminant analysis, the results of analysis can show whether there is a significant difference or not between the company's ROC indexed LQ45 and non-LQ45. The results output can be used as criteria for aspects of the financial situation that need to be observed by corporate stakeholders. The test results through discriminant analysis prove that there is a significant difference between LQ45 indexed company financial ratios and firms that are not indexed in LQ45 (non-LQ45). The results also prove that variables capable of distinguishing between companies indexed by LQ45 and those that are non-LQ45 from the 25 variables tested in this study include the dividend yield ratio (DYR), total assets turnover (TAT), per-share dividend (DPS), net working capital (NWC), market book value per share (MBVP), debt to equity ratio (DER), current ratio (CURRENT R), long term debt to equity (LTDE), account receivable turnover (ARTO), operating profit margin (OPM), fixed assets turnover (FAT), and inventory turnover (ITO). The most significant variable that distinguishes between indexed company financial ratio in the LQ45 index and companies not listed on the LQ45 index is dividend yield ratio (DYR).

Keywords: discriminant analysis; LQ45; financial ratio

INTRODUCTION

Companies as economic entities generally have short-term and long-term goals. The short-term goal of the company is to maximize profits by using existing resources, while the company's long-term goal is to maximize the value of the company. The main purpose of companies that have *gone public* is to increase the prosperity of the owners or shareholders through increasing the value of the company. According to [1] one of the objective function of "go public" companies is enhancing prosperity the owner or shareholder from increasing company's value. Company value is very important because it reflects the company's performance which can affect investors' perceptions of the company [2].

The company's financial statements are indicators used to assess a company's performance. The better the company's performance, the higher the *return* that will be obtained by investors. Horne (2014), states that the measurement of financial performance includes the results of the calculation of financial ratios based on the company's financial statements published and audited by public accountants. These ratios are designed to help the analysis or investors in evaluating a company based on their financial statements. In general, investors will look for companies that have the best performance and invest in the company. The acquisition of company capital and company value will increase if the company has a good reputation reflected in the financial statements.

The LQ45 index is ranked 45th among the best listed companies in the Indonesia Stock Exchange. Director of PT. The Indonesia Stock Exchange [3] states that shares included in LQ45 are selected shares. The issuers are ranked according to certain criteria and sorted by the best rank. The criteria are the amount of capitalization, liquidity (which is seen from the frequency, volume and value), and records of stock movements. This indicates that companies in the LQ45 index have good performance and a greater level of trust and recognition from capital market players.

By being in the LQ45 index, the company will be smoother in long-term funding because the shares circulating in the market tend to be more attractive if they are on the LQ45 index. The frequency of stock trading is the number of times a buy and sell transaction occurs in the relevant stock at a certain time. With the frequency of stock trading, we can find out whether the shares are of interest to investors or not. Fifty percent of the ten companies listed are companies listed on the LQ45 index. Being in the LQ45 index will also improve the *image* and value of the company and increase the ability to maintain the sustainability of the company that is the goal of each company [4].

To be able to enter the LQ45 index not specifically explained in the Stock Exchange website Indonesia [4] the weight of the criteria that are the rating of an issuer can enter the LQ45 index. In the FAQs page (*Frequently Asked Questions*) on the Indonesia Stock Exchange website it is only explained that an issuer to be included in the calculation of the LQ45 index must consider the following factors:

1. It has been listed on the IDX at least 3 months
2. Transaction activities in the regular market include the value, volume and frequency of transactions.
3. Number of trading days on the regular market.
4. Capitalization for a certain period of time.
5. In addition to considering the criteria for liquidity and market capitalization, you will also see the financial condition and growth prospects of the company.

This study tries to look at the criteria of LQ45 companies through aspects of financial conditions. This is done by analyzing financial ratios in LQ45 companies and comparing them with non-LQ45 companies with the same sector. The analysis used in comparing the two categories is discriminant analysis. Discriminant analysis is chosen as an analysis method because according to [5] states that discriminant analysis can (1) identify variables that can distinguish between the two groups, (2) identified variables can be arranged into an equation or function to calculate new variables or indices that can explain the differences between the two groups, (3) identified variables can be developed into rules or groupings of future observations into one of the two groups. Through discriminant analysis can show whether or not there is a significant difference between the company's financial ratios indexed LQ45 and non-LQ45, and if the results of the analysis indicate a significant difference between LQ45 and

non-LQ45 companies the *output* can be used as a criterion of aspects of financial conditions that must be observed by stakeholder's company.

Several previous studies used discriminant analysis to compare bank performance based on financial ratios such as [6], [7], [8], [9], [10], [11], and [12]. In the study of [7] have compared the performance based on financial ratios of the government banks (*public*) and privately owned banks (*private*) in Pakistan. In this study using variable size companies, profitability ratios, liquidity ratios, and valuation ratios. The results of the study indicate that the most significant valuation ratios distinguish performance at government banks and private banks. This form of research is also applied in the research of [6] which compares the performance of securities companies in Pakistan. The results of the research by [6] show that the variable profitability ratio most distinguish the performance of securities companies in Pakistan.

It also uses discriminant analysis in comparing the performance of foreign banks and domestic banks in Ghana. In comparing the performance of the bank, in the study of [8] using the variable profitability ratio, liquidity ratio and valuation ratio. The results of discriminant analysis show that profitability ratios are the most distinguishing variables between foreign banks and domestic banks and the calculation of financial ratios of foreign banks has a higher value ratio dominating domestic banks. [9] used discriminant analysis to compare the performance of conventional banks and Islamic banks. In the research of [9] using variable activity ratio, liquidity ratios, and growth ratio used as a comparison between conventional banks and Islamic banks. The results of discriminant analysis in the study show that the most significant ratio differentiating between the performance of conventional banks and Islamic banks is the activity ratio.

Some previous studies also used discriminant analysis to get the value of *signaling* or predictors of bankruptcy. The value of signaling is found from discriminant analysis that compares a bankrupt company with a company that is not bankrupt. This is in the research of [13], [14], [15], and [16].

[13] apply discriminant analysis as a tool to predict the bankruptcy of construction companies in *China* by comparing companies that have been gone bankrupt with those that do not. The purpose of this study is to establish a bankruptcy warning indicator where the value of the signal is found from the results of the financial ratio analysis of the bankrupt company and compare it with the company that is still running. In this study [13] using financial ratio analyzed are liquidity ratio, profitability ratio, leverage ratio and activity ratio. The results of discriminant analysis in the study indicate that the most significant variable distinguishes between companies that go bankrupt and not is the profitability ratio. In the study of [14] also used discriminant analysis to predict bankruptcy in public and private banks in Indonesia. The purpose of this study is to find the value signaling found in discriminant analysis that compares bankrupt and not bankrupt banks. The financial ratios that will be compared in [14] include profitability ratios, liquidity ratio, activity ratio, and leverage ratio. The results of the study based on discriminant analysis show that the most significant financial ratio distinguish between bankrupt banks and banks that do not bankrupt, there is a profitability ratio.

Similar to the previous research in this study using discriminant analysis with financial ratio, but in this study using different objects that are companies indexed in LQ45 and non-LQ45 which cover several sectors of the company. In addition, it is also in accordance with the objectives of the study, this study examines financial ratios by 25 financial ratio to be compared through discriminant analysis. Researchers used financial ratio indicators which

numbered 25 ratios to be tested in discriminant analysis with the aim of increasing the percentage of the possibility of truly significant financial ratio distinguishing LQ45 indexed companies with non-LQ45.

In further elaboration, this study aims to determine the financial ratio that must be considered by non-LQ45 companies in order to enter the LQ45 ranks. By comparing these 25 financial ratios, this study is expected to illustrate the full state of the financial ratios that must be considered by non-LQ45 companies to become the LQ45 ranks. The financial ratios examined in this study include liquidity ratio that are proxied through cash ratio, net working capital, current ratio, quick ratio, activity ratio that are proxied through total asset turnover, fixed asset turnover, accounts receivable turn over, average collection period, inventory turnover, working capital turnover, leverage ratio proxied through debt ratio, debt equity to ratio, long term debt to equity, profitability ratio proxied through gross profit margins, operating profit margin, net profit margin, return on assets , return on equity, growth ratio that is proxied through sales growth, earnings after tax growth, earnings per share growth, per-share dividend growth, and valuation ratio proxied through price earnings ratio, market book value per share, dividend yield ratio.

The lack of clarity in the criteria for the financial condition of an issuer to enter the LQ45 index encourages researchers to conduct research, namely through discriminant analysis, the results of this study will show what financial ratios distinguish LQ45 and non-LQ45 companies so that they can be drawn into a clear financial condition criteria for an issuer to be included in the LQ45 index. With these criteria, a company or issuer can focus on improving company performance in meeting good criteria in order to achieve the LQ45 index and increase the value of the company which is the goal of all companies.

FORMULATION OF THE PROBLEM, RESEARCH OBJECTIVE, AND BENEFIT OF RESEARCH

Based on the background described, the formulation of the problem in this study is as follows.

1. Is there a significant (significant) difference between the company's financial ratio recorded in the LQ45 index and those that are not listed on the LQ45 (non-LQ45) index?
2. What financial ratio most significantly distinguish between the company's financial ratio on the LQ45 index and the Indonesian Stock Exchange's non-LQ45 company?

Based on the formulation of the problem described, the objectives in this study are as follows.

1. Analyzing the presence or absence of a significant difference between the company's financial ratio recorded in the LQ45 index and companies not listed on the LQ45 index (non-LQ45).
2. Analyzing financial ratio that most significantly distinguishes between the company's financial ratios on the LQ45 index and the Indonesian Stock Exchange's non-LQ45 company.

Benefit this research for investors is the results of this study can be used as a consideration by investors in investing. By looking at financial ratio as a benchmark, investors can assess company performance. Thus investors can avoid losing large funds when investing in the company.

Benefit this research for investors for companies, this research is expected to be used as a benchmark for companies to improve performance by achieving ratio that will be shown in the results of this study. Thus the company will be able to fulfill the company's long-term goals of increasing company value and maintaining the sustainability of the company.

Benefit this research for investors for academics, this research is expected to be a reference and can provide empirical evidence regarding the analysis of financial ratios and different tests on companies.

LITERATURE REVIEW

Definition of Financial Report Analysis

Analysis of financial statements is the analysis of financial statements consisting of review or study of relationships and tendencies or trends to determine the financial position and results of operations and the development of the company concerned. The purpose of financial statement analysis is a very important tool for obtaining information relating to financial position and the results that have been achieved by the company concerned. The financial data will be more meaningful to interested parties if the data is compared for two or more periods, and further analyzed so that data can be obtained that will be able to support the decision to be taken.

According to [17] analysis of financial statements is a report that shows the company's financial condition at this time or in a certain period. According to [17] the purpose of financial ratio analysis aims to:

1. Provide information about the type and amount of assets (assets) owned by the company at this time.
2. Provide information about the type and amount of liabilities and capital owned by the company at this time.
3. Provide information about the type and amount of income obtained in a given period.
4. Provide information about the amount of costs and types of costs incurred by the company in a certain period.
5. Provide information about changes that occur in assets, liabilities, and company models.
6. Provide information about the company's management performance in a period and notes to financial statements.

Whereas according to [18], financial statement analysis is a process to dissect financial statements into its elements and examine each of these elements with the aim of obtaining a good understanding and understanding of the financial statements.

According to [18] the purpose of financial statement analysis is as follows:

- a. To find out the company's financial position in a certain period, both assets, liabilities, equity, and the results of the business that has been achieved for several periods.
- b. To find out the weaknesses that are lacking in the company.
- c. To find out the strengths that are the company's superiority.
- d. To determine the steps for repairs that need to be done in the future, especially those relating to the company's current financial position.
- e. To assess management performance.
- f. As a comparison with similar companies, especially regarding the results that have been achieved.

Based on the opinions above, it can be concluded that the analysis of financial statements is a process to compare the performance of the company in the form of numbers and dissect financial statements consisting of reviews or reports that show the company's financial condition at this time or in a certain period. With the aim of producing good and precise estimates of the financial statements themselves.

Definition of Financial Ratio Analysis

Basically the analysis of a company's financial statements is a calculation of the ratio to assess a company's financial condition in the past, present, and possibly in the future. In interpreting and analyzing financial statements of a company, an analysis requires a measure. The measure that is often used in financial analysis is called ratio. Here are some of the notions of financial ratio analysis that researchers quoted from several sources, namely:

According to [17], the notion of financial ratio analysis is an activity that has been carried out by the company in a certain period. The activities that have been carried out are stated in numbers, both in the form of Rupiah and in foreign currencies. The numbers in the financial statements are less meaningful if only one side is seen, meaning if only by looking at what they are. These numbers will be more if we can compare between one component and another component. The trick is to compare the numbers in the financial statements or between financial statements. After making a comparison, you can conclude the financial position of a company for a certain period. In the end we can assess management performance in that period with this comparison known as financial ratio analysis.

According to [19], ratio analysis is used by comparing a certain number in an account to a number from another account. Ratio analysis is often used by managers, credit analysis and stock analysis. Ratio analysis is useful because it compares a number relative, so it can avoid misinterpretation of the absolute numbers in the financial statements.

Whereas according to [20], financial ratio analysis is a merger that shows the numbers of relations of an element with other elements in the financial statements and the relationship between elements of the report is expressed in a simple mathematical form. Ratio analysis is a form or general method used in financial ratio analysis in other words among the analytical tools that are always used to measure the strengths or weaknesses of a company in the financial sector.

The researcher concludes that financial ratio analysis is an activity carried out by the company by comparing a certain number with elements of financial statements that can be compared between one component and another component.

Using of Financial Ratio Analysis

According to James. C and John. M (2014), the usefulness of various ratios depends on the intelligence and experience of financial analysts who implement it. Comparing a company with other companies that are almost the same and industry standards all the time, is important. This kind of comparison reveals the main clues in evaluating changes and trends in the financial condition and profitability of the company. This comparison is indeed historical, but also includes analysis of future financial statement predictions. There are three uses of financial ratio, among others:

1. Managers who apply ratios to help analyze, control, and then improve company operations.
2. Credit analysts include bank loan officers and bond rating analysts who analyze ratios to help decide a company's ability to pay its debts and,
3. Stock analysts who are interested in the company's efficiency, risks and growth prospects.

According to [21], financial ratios are very important for analyzing the company's financial condition obtained from the results of the company's operations. It can be concluded that the usefulness of ratio analysis is the basis of comparison comparing a company with other

companies or analyzing the company's financial condition obtained from the results of the company's operations.

Advantages and Limitations of Financial Ratio Analysis

Ratio analysis has several advantages as an analytical tool put forward by [17]:

1. Ratio is numbers and statistical summaries that are easier to read and interpret.
2. It is a simpler substitute for information presented in very detailed and complicated financial statements.
3. In order to know the position of the company in the middle of other industries.
4. It is very useful for materials in filling decision-making models and prediction models.
5. Standardize company size.
6. It's easier to compare companies with other companies or see the company's development periodically or time series.
7. It's easier to see trend's company and do predictions in the future.

Besides the advantages of this ratio analysis, there are also some limitations that must be realized in its use so that it is not wrong to use it. The limitations of ratio analysis according to [17] including:

1. Difficulties in choosing the right ratio that can be used for the benefit of the wearer.
2. The limitations of financial statements are also a limitation of this analysis such as:
 - a. Material for calculating ratio or financial statements contains many estimates that can be considered normal or objective.
 - b. The value contained in financial statements of ratio is the cost not the market price.
 - c. The classification in financial statements can have an impact on the ratio number.
 - d. The recording method illustrated in accounting standards can be applied differently by different companies.
3. If the data for calculating the ratio is not available, it will cause difficulty calculating the ratio.
4. If the available data is out of sync, it will be difficult to calculate the ratio.
5. If two or more companies are compared techniques and methods used are different then the comparison can cause errors.

CONCEPTUAL FRAMEWORK

The conceptual framework according to [22], is a conceptual model of how theory relates to various factors that have been identified as problems. The thinking framework relates to how a researcher constructs a theory or connects logically several factors that are identified as important problems, so that the framework will discuss the interrelationships between variables that are deemed necessary to complement the dynamics of the situation or things studied.

Financial ratio analysis is a technique of comparing company performance in the form of numbers and reviewing each of these elements with the aim of producing good and precise estimates of the financial statements themselves [23]. [17], also emphasizes that financial ratio analysis is an analysis carried out on activities that have been carried out by the company in a certain period by comparing the numbers in the financial statements or between financial statements.

Based on this, the assessment of company performance can be done through financial ratio analysis on the company's financial statements. Job assessment through financial ratios can describe how a company performs. Companies listed on the LQ45 index are companies with "liquidated" status from all companies in Indonesia. Companies in the LQ45 index tend to be attractive to investors. By using financial ratio and discriminant analysis comparing the financial ratios of LQ45 companies with non-LQ45 companies this study wants to know how the financial ratio of a company indexed by LQ45. According to [24], one of the objectives of discriminant analysis in general is to create a discriminant function to distinguish a group in a predetermined category. Thus the results of this study can be used by non-LQ45 companies as a benchmark to improve company performance and achieve a ratio that will emerge from the results of this study in order to become a LQ45 company. Figure 1 will illustrate how the conceptual framework in this study is as follows.

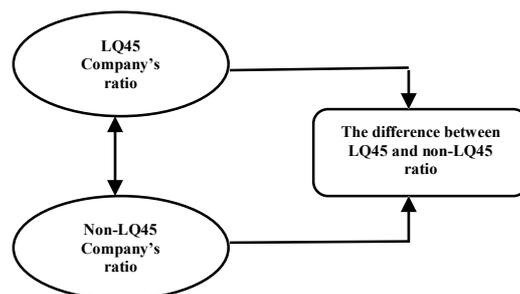


Figure 1 Conceptual Framework

Figure 1 describes the results of the ratio analysis in each category of companies, namely LQ45 companies with non-LQ45 category will be tested through discriminant analysis, the results of the analysis will bring up a ratio that can distinguish between LQ45 companies and non-LQ45 companies.

RESEARCH HYPOTHESES AND METHODS

Research Hypotheses

The hypotheses constructed in this study are as follows:

H01: There is no significant (significant) difference between the company's financial ratios recorded in the LQ45 index and companies not listed on the LQ45 (non-LQ45) index.

Ha1: There are significant differences in financial ratios (liquidity ratios, activity ratios, leverage ratios, profitability ratios, growth ratios, valuation ratios) between companies listed on the LQ45 index and companies not listed on the LQ45 (non-LQ45) index.

Research Design

In this section, the research design referred to refers to the definition of the use of the term research design by [22] which states that the use of the term research design is defined as the structure or stages of the research to be carried out by the researcher. The researcher determined the type of this study using quantitative methods because the research data were in the form of numbers and analyzed using statistics [22].

This study analyzes the financial ratio variables that distinguish between companies listed on the LQ45 index and companies that are not listed on the LQ45 (non-LQ45) index. This study will measure financial ratios that are used as variables in companies listed on the LQ45 index and companies that are not listed on the LQ45 index (non-LQ45). Financial ratio used as variables in this study are liquidity ratio, activity ratio leverage, ratio, profitability ratio, growth ratio, and valuation ratio. Data collection in this study through documentation on the company's financial statements which became the sample in this study. The existing data will be processed and analyzed by discriminant analysis using IBM SPSS 23. The results of the

analysis are then interpreted and discussed so that the results of the research can be concluded and given suggestions on the problems raised in this study.

Research Subject

Population is a generalization area consisting of objects or subjects that have certain characteristics set by researchers and conclusions are then drawn [22]. The population in this study were all companies listed on the Indonesia Stock Exchange, which numbered 539 companies.

According to [25] explained that the sample is a subset of the population, the sample is a number of members of the population. This subset is taken because in many cases it is impossible for us to examine all members of the population, therefore we form a representative population called a sample. Determination of the number of samples in this study using the Yamane approach method. [25] explained that the determination of samples using the method of using the formula as follows:

$$\eta = \frac{N}{1+Nd^2} \quad (1)$$

where:

η = number of sample

N = population size

D = precision set or percentage.

Based on the Yamane method formula that has been described previously, the calculation of the number of samples used in this study are as follows:

Population Size (N) = 539

Percentage (D) = 5%

$$\eta = \frac{539}{1+539(5\%)^2} = 230 \quad (2)$$

According to [25] explained that after determining the size or quantity of samples to be used the next process is the process of sampling. In management research, two common sampling approaches that are usually used in the sampling process are probability sampling and nonprobability sampling.

In this study, the approach used is probability sampling (the population has the same opportunity to be chosen as a sample). The probability sampling approach is chosen because in this study the objects used in the study have the same characteristics, namely manufacturing companies. In the probability sampling approach there are several types of sampling, namely random sampling, systematic sampling, random route sampling, stratified sampling, multistage cluster sampling.

In accordance with the purpose of this study the researcher determined that the sampling used in this study was stratified sampling. Based on [25] explained that in this technique, all objects in the sampling frame are divided into categories or groups, then in each of these categories sampling is done by simple random. The choice of stratified sampling was chosen because in the LQ45 indexed companies were joined from several sectors of the company, so the samples to be taken must be categorized first into the sector / category. In addition, the selection of

companies in the LQ45 indexed category taken is LQ45 indexed companies for three consecutive years in the 2014-2016 observation period. This is done because every year the company is indexed.

LQ45 is not always the same and always changes. By doing this, the researcher intends that the company being sampled is a company that can truly define LQ45 indexed companies.

Data Analysis Technique for Hypotheses Testing and Discriminant Analysis

According to the objectives of the study, this study uses discriminant analysis as data analysis. Based on [5] states that discriminant analysis is a form of regression with dependent variables in the form of non-metrics or categories that can (1) identify variables that can distinguish between the two groups, (2) variables that have been identified can be arranged into an equation or a function for calculating new variables or indices that can explain the differences between two groups, (3) identified variables can be developed into rules or grouping observations in the future into one of the two groups. The discriminant analysis model is a linear combination formed in the following equation:

$$Z_{jk} = a + W_j X_{ik} + \dots + W_n X_{nk} \quad (3)$$

In knowing the independent variables that can discriminate against a group in this study using wilks' lambda test statistics with the following equation:

$$\Delta^* = \frac{\left| \sum_{i=1}^k \sum_{j=1}^{m_i} (x_{ij} - \bar{x}_i)(x_{ij} - \bar{x}_i)' \right|}{\left| \sum_{i=1}^k \sum_{j=1}^{m_i} (x_{ij} - \bar{x})(x_{ij} - \bar{x})' \right|} \quad (4)$$

Decision making H0 is rejected or not based on the magnitude of the significant value of the results of the test wilks' lambda. If the significant value (Sig.) It is smaller than 0.05 (<0.05) then H0 is rejected.

Assumption of Discriminant Analysis

Discriminant analysis has the assumption that the data comes from multivariate normal distribution and the m covariance matrix of the two groups of companies is the same. The multivariate assumption is normally distributed, it is important to test the significance of the discriminator variable and the discriminant function. If the data is not multivariate abnormally, then the test theory of significance becomes invalid. The classification results according to the theory are also influenced by multivariate normal distribution [5].

Normality Testing

Data normality test is the first step that must be done for each multivariate analysis especially if the purpose is inference. If there is normality, then the residual will be distributed normally and independently, that is the difference between the predicted value and the actual score or the error will be distributed symmetrically around the mean value equal to zero [5].

This normality test aims to determine the distribution of data in the variables that will be used in the study. Data that is good and feasible to use in research is data that has a normal distribution. The normality of the data can be seen using the Kolmogorov-Smirnov Normal test used in this study by reference if the Sig. (Asymp. Sig. (2-tailed)) has a value higher than 0.05 (> 0.05) so the data can be said to be normally distributed [24].

DISCUSSION

Normality Testing

Before the data is processed based on research models, the normality test should be carried out first on the data to be processed. The normality test aims to determine the distribution of data in the variable will be used in the study. Data that is good and feasible to use in research is data that has a normal distribution. Normality of the data in this study was tested using the Kolgorov-Smirnov Normal test. The results of normality test data using the Kolgorov-Smirnov Normal test on 25 data variables in this study are presented in Figure 2 below.

One-Sample Kolmogorov-Smirnov Test

		GPM	OPM	NPM
N		230	230	230
Normal Parameters ^{a,b}	Mean	2198.7561	2355.9939	-13300.7378
	Std. Deviation	23009.65906	19340.27231	194674.3151
Most Extreme Differences	Absolute	.494	.495	.499
	Positive	.494	.495	.444
	Negative	-.452	-.446	-.499
Kolmogorov-Smirnov Z		1.120	1.245	1.193
Asymp. Sig. (2-tailed)		.125	.085	.113

Figure 2 The result of Normality test *Kolgorov-Smirnov* GPM variable, OPM and NPM

One-Sample Kolmogorov-Smirnov Test

		ROA	ROE	SG
N		230	230	230
Normal Parameters ^{a,b}	Mean	1309.3659	1959.3354	7017.9817
	Std. Deviation	18874.35338	25286.94356	88411.02958
Most Extreme Differences	Absolute	.504	.488	.504
	Positive	.504	.488	.504
	Negative	-.454	-.449	-.458
Kolmogorov-Smirnov Z		.460	.447	.456
Asymp. Sig. (2-tailed)		.954	.986	.968

Figure 3 The result of Normality test *Kolgorov-Smirnov* ROA variable, ROE and SG

One-Sample Kolmogorov-Smirnov Test

		EAT	EPS	DPS
N		230	230	230
Normal Parameters ^{a,b}	Mean	655.1341	2084.8720	-44.9024
	Std. Deviation	8131.70192	28229.65049	5184.92648
Most Extreme Differences	Absolute	.348	.441	.353
	Positive	.348	.441	.353
	Negative	-.308	-.382	-.339
Kolmogorov-Smirnov Z		.454	.648	.523
Asymp. Sig. (2-tailed)		.972	.341	.439

Figure 4 The result of Normality test *Kolgorov-Smirnov* EAT variable, EPS and DPS

		PER	MBVP	DYR
N		230	230	230
Normal Parameters ^{a,b}	Mean	144417220.4	427378676.8	50.8293
	Std. Deviation	1547982143	1713624739	232.14673
Most Extreme Differences	Absolute	.465	.432	.449
	Positive	.465	.432	.449
	Negative	-.449	-.389	-.413
Kolmogorov-Smirnov Z		.961	.532	.748
Asymp. Sig. (2-tailed)		.215	.412	.295

Figure 5 The result of Normality test *Kolgorov-Smirnov* PER variable, MBVP and DYR

		CR	NWC	CURRENT R	QR
N		230	230	230	230
Normal Parameters ^{a,b}	Mean	890.1707	167.9695	3418.1402	2972.3537
	Std. Deviation	2701.98361	333.67692	9781.35646	10491.95050
Most Extreme Differences	Absolute	.371	.129	.364	.371
	Positive	.307	.109	.334	.370
	Negative	-.371	-.129	-.364	-.371
Kolmogorov-Smirnov Z		.752	.652	.656	.746
Asymp. Sig. (2-tailed)		.291	.325	.318	.307

Figure 6 The result of Normality test *Kolgorov-Smirnov* CR variable, NWC, CURRENT R and QR

		DAR	DER	LTDE	TAT
N		230	230	230	230
Normal Parameters ^{a,b}	Mean	498.3110	1383.7561	542.0061	745.3902
	Std. Deviation	335.23252	2454.60407	1252.79312	977.43731
Most Extreme Differences	Absolute	.108	.264	.308	.217
	Positive	.108	.232	.249	.195
	Negative	-.099	-.264	-.308	-.217
Kolmogorov-Smirnov Z		1.181	1.178	.948	.776
Asymp. Sig. (2-tailed)		.118	.119	.208	.295

Figure 7 The result of Normality test *Kolgorov-Smirnov* DAR variable, DER, LTDE and TAT

		FAT	ARTO	ACP
N		230	230	230
Normal Parameters ^{a,b}	Mean	14353.1280	92242.9085	685902.7927
	Std. Deviation	94557.14480	662168.5326	7899007.275
Most Extreme Differences	Absolute	.434	.439	.503
	Positive	.413	.429	.503
	Negative	-.434	-.439	-.464
Kolmogorov-Smirnov Z		.553	.616	.441
Asymp. Sig. (2-tailed)		.403	.339	.903

Figure 8 The result of Normality test *Kolgorov-Smirnov* FAT variable, ARTO and ACP

One-Sample Kolmogorov-Smirnov Test

		ITO	WCTO
N		230	230
Normal Parameters ^{a,b}	Mean	149746.9024	9837.0366
	Std. Deviation	1521168.891	97570.34903
Most Extreme Differences	Absolute	.477	.498
	Positive	.477	.498
	Negative	-.461	-.460
Kolmogorov-Smirnov Z		1.106	1.280
Asymp. Sig. (2-tailed)		.146	.078

a. Test distribution is Normal.

b. Calculated from data.

Figure 9 The result of Normality test Kolgorov-Smirnov ITO variable and WCTO

Based on the Kolmogorov-Smirnov One-Sample Test output presented in Figures 2 to 9 it can be stated that the sample is normally distributed.

Discriminant Analysis

In accordance with the formulation of the problem and objectives in the study, this study used discriminant analysis to answer the problem formulation and objectives in this study. The purpose of discriminant analysis is to identify variables that can distinguish between the two groups, using variables that have been identified to form equations or functions to calculate new variables that can explain the differences between the two groups then use variables that have been identified to develop rules or ways group future observations into one of the two groups. The group intended in this study are LQ45 indexed companies and companies that are not indexed in LQ45 (non-LQ45).

After testing using SPSS the results are presented in several sections as follows:

Table 1 Test of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
GPM	.998	.282	1	162	.596
OPM	.337	.557	1	162	.000
NPM	.999	.213	1	162	.645
ROA	.999	.185	1	162	.668
ROE	.999	.209	1	162	.648
SG	.998	.274	1	162	.602
EAT	1.000	.056	1	162	.813
EPS	1.000	.009	1	162	.925
DPS	.271	4.761	1	162	.000
PER	.998	.377	1	162	.540
MBVP	.283	2.757	1	162	.000
DYR	.165	25.356	1	162	.000
CR	.999	.192	1	162	.662
NWC	.275	4.152	1	162	.000
CURRENT R	.295	.850	1	162	.000
QR	1.000	.076	1	162	.783
DAR	1.000	.000	1	162	.999
DER	.294	1.042	1	162	.000
LTDE	.315	.821	1	162	.000
TAT	.209	16.191	1	162	.000
FAT	.347	.467	1	162	.000
ARTO	.326	.666	1	162	.000
ACP	.999	.243	1	162	.623
ITO	.358	.400	1	162	.000
WCTO	.998	.280	1	162	.598

Table 2 Summary of Canonical Discriminant Function**Eigenvalues**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	23.940 ^a	100.0	100.0	.920

a. First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.162	216.872	24	.000

Table 3 Structure Matrix

	Function
	1
DYR	-.555
TAT	.443
DPS	.240
NWC	-.225
MBVP	.183
DER	-.112
CURRENT R	.102
LTDE	-.100
ARTO	.090
OPM	.082
FAT	.075
ITO	.070
ACP	.068
PER	.068
GPM	.059
WCTO	.058
SG	.058
NPM	-.051
ROE	.050
CR	.048
ROA	.047
QR	-.030
EAT	-.026
EPS	-.010
DAR	.000

Table 4 Classification Result

Classification Results^a

			Predicted Group Membership		Total
			LQ45	NON-LQ45	
Original	Count	LQ45	22	13	35
		NON-LQ45	11	184	195
	%	LQ45	62.9	37.1	100.0
		NON-LQ45	5.4	94.6	100.0

a. 89,5% of original grouped cases correctly classified.

Based on Table 1, there are 12 variables, namely dividend yield ratio (DYR), total assets turnover (TAT), dividend per share (DPS), net working capital (NWC), per-share market book value (MBVP), debt to equity ratio (DER), current ratio (CURRENT R), long term debt to equity (LTDE), account receivable turnover (ARTO), operating profit margin (OPM), fixed assets turnover (FAT), and inventory turnover (ITO) can be declared capable and can be used to differentiate (differentiating variables) the ratio of companies indexed in LQ45 and those that are not (non-LQ45)

In Table 2 in the eigenvalues section, the canonic correlation number is 0.92. This means that 92% of the variance of the financial ratio variables that distinguish companies indexed by LQ45 and those that are not (non-LQ45) can be explained by 25 variables used, while the remaining 8% are explained by other variances.

In Table 2 also presented the wilks' table which describes the hypothesis testing. Through the table wilks, this will determine whether H01 can be accepted or rejected by seeing the results of a significant value (Sig.). If the significant value (Sig.) It is greater than 0.05 then H01 is rejected and Ha1 is accepted.

Based on Table 3 above, it is shown that the dividend yield ratio (DYR) is the most significant variable that distinguishes between the company's financial ratios listed on the LQ45 index and those that are not listed on the LQ45 index which are coefficients of -0.554 and then followed by other variables.

Based on Table 4, it can be seen how the discriminant analysis model clarifies into categories. The output of the classification result shows that the discriminant analysis model gives a value of the clarification level of 89.5%. The results of the classification matrix show that 206 observations have been clarified correctly, so the accuracy of the classification can be calculated at (206/230) or 89.5%.

CONCLUSION

As the purpose of this study, conclusions can be drawn based on the results of data analysis and the discussion in the previous chapter are as follows:

1. Based on the results of testing through discriminant analysis proves that Ha1 is accepted which means that there is a significant (significant) difference between the LQ45 indexed company's financial ratios and companies that are not indexed in LQ45 (non-LQ45).
2. The variable that most significantly distinguishes between the company's financial ratios indexed in the LQ45 index and those that are not listed on the LQ45 index is the

dividend yield ratio (DYR) variable with the highest coefficient value in the structure matrix compared to the other variables.

The variance value of the 25 variables tested in this study shows a value of 92% in explaining the financial ratios that distinguish LQ45 and non-LQ45 indexed companies. Based on the results of testing through discriminant analysis prove that the variables capable of distinguishing between companies indexed by LQ45 and those that are not (non-LQ45) from the 25 variables tested in this study are dividend yield ratio (DYR), total assets turnover (TAT), dividend per-share (DPS), net working capital (NWC), market book value per share (MBVP), debt to equity ratio (DER), current ratio (CURRENT R), long term debt to equity (LTDE), account receivable turnover (ARTO), operating profit margin (OPM), fixed assets turnover (FAT), and inventory turnover (ITO). The classification level produced from the discriminant model in this study gives a value of clarification level of 87.8% (144/164).

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