



## Panel Data Model in Analyzing Factors Affecting Market Value Added (MVA) in Companies Listed on the LQ45 Index

Yudhistira Ardana <sup>a,1,\*</sup>, Nur Syamsiyah <sup>a,2</sup>, Akhmad Faiz <sup>a,3</sup>

<sup>a</sup> Fakultas Ekonomi dan Bisnis Islam, IAIN Metro Lampung, Indonesia

<sup>1</sup> yudhistiraardana@metrouniv.ac.id\*; <sup>2</sup> nursyamsiyah@metrouniv.ac.id; <sup>3</sup> faizmaster2008@gmail.com

\* corresponding author

### ARTICLE INFO

#### Article history

Received: 14 September 2023

Revised : 03 January 2023

Accepted: 15 February 2023

#### Keywords

Economic Value Added  
Profitability Ratio  
Market Value Added

#### Kata Kunci

Nilai Tambah Ekonomi  
Rasio Profitabilitas  
Nilai Tambah Pasar

### ABSTRACT

To increase shareholder value, companies are required to improve their financial performance. MVA (Market Value Added) is one of the company's performance indicators for increasing MVA. This study aims to measure the factors that affect the market value added (MVA) of companies listed on the LQ45 index using a panel data model. The variables used are economic value added (X1), return on equity (X2), return on assets (X3), earnings per share (X4), dividend per share (X5), and market value added (Y). The best model used in this study is the random-effects model. The estimation results show that all variables used in this study (EVA, ROA, ROE, EPS, and DPS) have a significant effect on the MVA of companies incorporated in the LQ45 index, with a percentage of 64.68%. The results of the partial estimation of the ROA, ROE, and EVA variables have a significant positive effect on MVA. The DPS variable has no significant positive impact on MVA, and the EPS variable has no significant negative impact on MVA.

### ABSTRAK

Untuk meningkatkan nilai pemegang saham, perusahaan dituntut dalam meningkatkan kinerja keuangannya. Market Value Added (MVA) merupakan salah satu indikator kinerja perusahaan dalam meningkatkan nilai tambah pasar. Penelitian ini bertujuan untuk mengukur faktor-faktor yang mempengaruhi Market Value Added (MVA) perusahaan yang terdaftar pada indeks LQ45 dengan menggunakan model data panel. Variabel yang digunakan adalah Economic Value Added (X1), Return on Equity (X2), Return on Asset (X3), Earning Per Share (X4), Dividend Per Share (X5), dan Market Value Added (Y). Model terbaik yang digunakan dalam penelitian ini adalah model random-effect. Hasil estimasi menunjukkan bahwa semua variabel yang digunakan dalam penelitian ini (EVA, ROA, ROE, EPS, dan DPS) berpengaruh signifikan terhadap MVA perusahaan yang tergabung dalam indeks LQ45 dengan persentase 64,68%. Hasil estimasi parsial variabel ROA, ROE, dan EVA berpengaruh positif signifikan terhadap MVA. Variabel DPS berpengaruh positif tidak signifikan terhadap MVA dan variabel EPS berpengaruh negatif tidak signifikan terhadap MVA.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



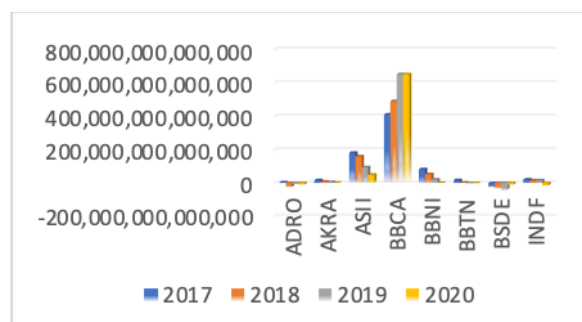
## 1. Introduction

As seen from the increasing number of business developments in the community, the latest technological breakthroughs in the digital field have an impact on the development of the commercial world. Every company tries to get the maximum profit. The world economy is growing rapidly, causing competition between business actors, both in terms of acquisitions and expansion. Company performance is commonly referred to as the achievements or achievements given by the company during the period. The measure of the success or failure of the company's financial performance can be assessed by the company's ability to maximize the owner's wealth, which was the purpose of its establishment. As a result, there is intense competition that cannot be ignored by business actors. Companies are not only trying to make as much money as possible, but they are also competing to improve the quality of their performance. The higher the quality of the company's performance, the easier it will be to meet company goals. The goal is to generate added value for the company.

Besides being influenced by the law of supply and demand, the company's performance has an impact on the level of stock prices in the capital market (Riza, 2018). It is a common thing to happen if the stock value rises or falls as a result of internal or external influences (Adhipradana & Daljono, 2013; Damanik, 2017). Increased company financial performance, especially the success of its financial performance, has an impact on increasing market value or stock prices. The stock value is not a book value category, but the market value or stock market price; therefore, when the company value decreases, the stock market value also decreases. To increase shareholder value, the company is required to improve its financial performance. Market value added (MVA) is one of the company's performance indicators for increasing market value added. If the stock price increases, the company's market value added (MVA) also increases, because the stock price is one of the components that make up the MVA (Febriyanti, 2014). MVA can be used to evaluate the success of a company because it can determine not only the added value of the money invested but also the manager's performance (Aisyana & Sun, 2012).

The LQ45 index, which consists of 45 company shares with a high level of liquidity and market value, is one of the indices used to analyze changes in stock price movements on stock exchanges in Indonesia. Furthermore, this index has a strong fundamental background where business stocks are classified as leading stocks. In recent years, the MVA value for companies listed on the LQ45 index has fluctuated and even decreased. This is contrary to the description of the LQ45 index, which shows that companies included in the index have a stable value, a high level of liquidity, and a high market value. Because of this, it is very important to do research into the things that cause this to happen.

The LQ45 index, which consists of 45 business stocks with a high level of liquidity and market value, is one of the indices used to assess stock market developments. Additionally, the index has a solid history of corporate stocks that are classified as "blue chip" stocks. Blue-chip stocks are those with solid value and consistent price growth. Regarding the events that occurred over the last four years, a number of companies listed on the LQ45 index experienced a decline in MVA values, and several companies even experienced a quite severe decline. This is contrary to the reasons for the LQ45 index, which states that companies have a stable value, high levels of liquidity and market value, as well as constant growth. Therefore, it is very important to study the causes of these events. The following is an image of the market value added of several companies listed in the LQ45 index for the 2017-2020 period.



**Figure 1.** Market Value Added Several Companies Listed on the LQ45 Index

Figure 1 explains that from the data BBCA is a company that has an MVA value that has increased every year, namely 2017-2019 respectively (408,543 billion, 489,276 billion, and 649,950 billion) and experienced a slight decrease in 2020, which was 649,857 billion. Meanwhile, AKRA (MVA in 2017 of 16,410 billion, in 2018 of 7,296 billion, in 2019 of 5,791 billion, and in 2020 of 2,210 billion), BBNI (MVA in 2017 of 81,872 billion, in 2018 of 52,093 billion, in 2019 of 19,924 billion, and in 2020 of 1,131 billion), and ASII (MVA in 2017 of 179,684 billion, in 2018 of 158,614 billion, in 2019 of 93,585 billion, and in 2020 of 48,459 billion) have decreased every year. The rest, namely ADRO, BBTN, BSDE, and INDF, even got negative results. ADRO obtained negative MVA in 2018–2020 (-23,444 billion, -5,635 billion, and -9,999 billion). BBTN obtained negative results in 2019 and 2020 (-1,385 billion and -1,720 billion). INDF obtained a negative result in 2020, which was -15.128 billion. Meanwhile, BSDE from 2017–2020 continues to get negative MVA. Based on the explanation in figure 1, it can be concluded that companies with negative MVA have not been able to maximize shareholder wealth. This shows that every company's financial management cannot use information about the company's added value. If this trend continues, the company's MVA is expected to decline in the coming years. Economic Value Added (EVA), Return on Equity (ROE), Return on Assets (ROA), Earnings Per Share (EPS), and Dividend Per Share (DPS) are some indicators that can be used to measure a company's financial performance with Market Value Added (MVA).

Economic value added (EVA) is a value-based financial measure that relates to a measure of the cost of capital and provides a road map for increasing MVA (Reedy, 2019). If EVA is positive, the rate of return on investment exceeds the cost of capital for the company. Conversely, a negative EVA indicates that the rate of return on investment is smaller than the company's cost of capital. In addition, EVA is an important method to measure the economic value of a business after considering the cost of capital, including the cost of debt and the cost of equity. Thus, EVA encourages managers to optimize the use of resources for the company. EVA provides an investment opportunity to choose low-risk options to evaluate firm value (Nakhaei & Hamid, 2013). The results of the study (Mertayasa et al., 2014; Mizan, 2018; Nakhaei & Hamid, 2013; Putri & Tumewu, 2019; Supriani & Pernamasari, 2021) concluded that EVA had a significant positive effect on MVA. Meanwhile, research (Chelsea & Salim, 2020; Martias, 2020; Sofyan & Naomi, 2020; Sunarko & Martini, 2011) concluded that EVA had no significant positive effect on MVA. Research by Akgun et al. (2018) concluded that EVA had a significant negative effect on MVA. Research by Martias (2020) results that EVA has no significant negative effect on MVA.

Return on equity (ROE) is a company's profitability measurement ratio that shows how much profit the company earns compared to the amount of capital invested by shareholders. The ROE indicator is important for investors because it focuses on managing investors' capital and represents the level of return on shares that management has achieved as a result of using the capital provided by investors. The results of the study (Mizan, 2018; Sitorus & Pangestuti, 2016) concluded that ROE had an insignificant positive effect on MVA. The results of the study (Chelsea & Salim, 2020; Nakhaei & Hamid, 2013) concluded that ROE had a significant negative effect on MVA. The research by (Akgun et al., 2018) concluded that ROE had no significant negative effect on MVA.

Management efficiency in managing assets to generate profits is described by the return on assets (ROA). In investing in stocks, investors should consider ROA because it is a measure of the company's efficiency in managing assets to earn a profit. The results of the study concluded that ROA had no significant positive effect on MVA. Meanwhile, Martias (2020) concludes that ROA has no significant negative effect on MVA. The research of Mertayasa et al. (2014) shows that ROA has a significant positive effect on MVA. Earnings per share (EPS) is an indicator that shows the company's ability to earn earnings per share. The amount of EPS achieved by the company will be used by investors to measure the company's potential to create net income for each share. The demand for shares will increase along with the increase in EPS, and the share price will increase as well. When the stock price of a company rises, the value of the company is created. The results of the study concluded that EPS had an insignificant positive effect on MVA. Meanwhile research (Chelsea & Salim, 2020) concluded that EPS had a significant positive effect. And research (Mizan, 2018) concluded that EPS had an insignificant negative effect on MVA.

Dividends per share are the number of dividends per share or the number of profits delivered to shareholders as dividends per share. An increase in DPS will provide a favorable signal for investors making stock funding decisions, so an increase in DPS will increase MVA. The results of the study (Sitorus & Pangestuti, 2016) showed that DPS had a significant positive effect on MVA. Considering

that there are still many inconsistent research results, the authors want to analyze the factors that affect market value added (MVA) in companies listed on the LQ45 index by using panel data regression analysis.

## 2. Literature Review

### 2.1. LQ45 Stock Price Index

The LQ45 index consists of 45 shares of selected companies on the IDX that have passed selection based on several selection criteria and have a high level of liquidity and a large market capitalization (Tandelilin, 2010). The criteria used to select stocks included in the LQ45 Index are: 1) shares are in the top 60 of the total average stock transactions on the regular market over the last 12 months; 2) the order is based on the average market capitalization value for the last 12 months; 3) the stock has been listed on the IDX for at least 3 months; 4) the financial condition and growth prospects of the company are considered, as well as the frequency and number of transaction days in the regular market.

### 2.2. Return on Asset

Return on assets is a type of profitability ratio that measures the company's ability to generate net income based on certain asset levels. A high level of the ratio indicates the efficiency of asset management, which means management efficiency (Hanafi & Halim, 2016). This ratio is used to assess how well a company uses existing economic resources to generate profits from its assets. A positive return on assets indicates that the overall assets used in the company's activities are profitable. If it is negative, it indicates that the total assets used by the company are at a loss. According to Sudana (2015), the formula for calculating return on assets is as follows:

$$ROA = \frac{\text{Net profit after tax}}{\text{Total assets}}$$

### 2.3. Return on Equity

Return on equity is defined as the ratio of net income to common equity and reflects the rate of return on investment by common stockholders (Brigham & Houston, 2009). Companies that create a high ROE indicate that the company has earnings capacity in terms of shareholder investment value. This will result in a company with a high return on equity (ROE), which indicates shareholder wealth. According to (Kasmir, 2018), the formula for calculating return on equity is:

$$ROE = \frac{\text{Net profit after tax}}{\text{Total equity}}$$

### 2.4. Earnings Per Share

Earnings per share (EPS) is an indicator that shows the company's ability to generate earnings per share (Harahap, 2013). A high EPS indicates that the company can generate more earnings per share. The higher the EPS, the more interested investors will be in investing in the company. This will increase the demand for the stock, as well as its price. On the other hand, if the company's earnings per share are low, this indicates that the company is not able to earn net earnings per share. As a result, the demand for shares fell. According to Syahyunan (2015), the formula for calculating earnings per share is:

$$EPS = \frac{\text{Net profit after tax}}{\text{Number of common shares outstanding}}$$

### 2.5. Dividend Per Share

Dividend per share refer to the distribution of cash dividends to shareholders. Companies with a high DPS compared to other companies will be more attractive to investors because they will get certainty from the invested capital in the form of dividends. According to Brigham & Houston (2009), the formula for calculating Dividend Per Share is:

$$DPS = \frac{\text{Dividends paid to common stockholders}}{\text{Number of common shares outstanding}}$$

### 2.6. Economic Value Added

Economic value added (EVA) is the economic profit obtained by the company after deducting all costs of capital. The concept of "economic value added," namely the cost of capital, is used as a cost

component in the calculation of profit. If all operational and capital costs are met, the company has economic value added (economic profit). EVA can be calculated using the following formula:

$$\text{EVA} = \text{NOPAT} - \text{capital charges} \text{ or } \text{EVA} = \text{NOPAT} - (\text{WACC} \times \text{invested capital})$$

### 2.7. Market Value Added

The difference between the market value of the company's equity and the book value as shown on the balance sheet is known as the "market value added." Market value is calculated by multiplying the share price by the number of shares outstanding. Market Value Added, according to [Brigham & Houston \(2009\)](#), can be determined using the following formula:

$$\text{MVA} = \text{Market value of shares} - \text{Equity capital provided by shareholders}$$

## 3. Hypothesis Development

### 3.1. Effect of Economic Value Added on Market Value Added

Economic Value Added (EVA) is a parameter that describes the company's ability to generate new income. The goal of investors in the capital market is to get a return on their investment. EVA is calculated as the difference between net operating profit after tax and the company's cost of capital (cost of debt and equity capital). When EVA is positive, it indicates that the company has succeeded in creating value for the owners of capital by generating a higher rate of return than the cost of capital. When EVA is negative, however, it indicates that the company has failed to create value for the owners of capital because the rate of return created is less than the cost of capital. Companies with a high EVA value are more likely to be attractive to investors, because the greater the EVA, the better the company's financial performance. Investors who invest in company shares will also increase share prices, which will increase the rate of return on shares ([Esomar & Tuapattinaja, 2019](#)). The results of the study ([Mertayasa et al., 2014](#); [Mizan, 2018](#); [Nakhaei & Hamid, 2013](#); [Putri & Tumewu, 2019](#); [Supriani & Pernamasari, 2021](#)) concluded that EVA had a significant positive effect on MVA. Meanwhile, research ([Chelsea & Salim, 2020](#); [Sofyan & Naomi, 2020](#); [Sunarko & Martini, 2011](#)) concluded that EVA had no significant positive effect on MVA. Research by [Akgun et al. \(2018\)](#) concluded that EVA had a significant negative effect on MVA. Research [Martias \(2020\)](#) results that EVA has no significant negative effect on MVA.

H1: Economic Value Added to Market Value Added has a significant positive effect.

### 3.2. Effect of Return on Assets on Market Value Added

Return on Assets is a profitability ratio used to assess the benefits of utilizing all company assets. The ROA ratio compares earnings before interest and taxes (EBIT) with the company's total assets. A positive ROA indicates that the total assets used for the company's operations can create profits. Meanwhile, a negative ROA indicates that the company's total assets are unable to generate profits and have the potential to lose money. The greater the company's ROA ratio, the greater the opportunity to increase company growth. However, if the company's overall assets cannot generate profit, it will lose money, and its growth will slow down. The greater the company's profit, the more interested investors will be in investing their capital to develop the company. Conversely, if the level of profit earned is low, investors will withdraw their funds. From the side of the company itself, profitability can be used to assess the efficiency of managed commercial entities ([Sambelay et al., 2017](#)). The results of the study ([Mizan, 2018](#); [Nakhaei & Hamid, 2013](#); [Putri & Tumewu, 2019](#); [Sitorus & Pangestuti, 2016](#)) concluded that ROA had no significant positive effect on MVA. Meanwhile, [Martias \(2020\)](#) concludes that ROA has no significant negative effect on MVA. The research of [Mertayasa et al. \(2014\)](#) show that ROA has a significant positive effect on MVA.

H2: Return on Assets on Market Value Added has a significant positive effect.

### 3.3. Effect of Return on Equity on Market Value Added

Return on equity measures the company's capacity to create returns on the value of its shareholders' investment. The higher the ROE, the better the company's financial performance. Investors will be attracted to invest because they feel there will be a high rate of return on their invested capital, which results in increased demand for shares and the creation of market value for the company. ROE is important because it describes the company's rate of return on investment. The better the rate of return that will be given by the company, the more interested investors will be in buying the company's

shares. As a result, there will be more demand for the company's shares, which will affect the share price. If there is no balanced supply to offset the increased demand for the stock, the stock price will rise, increasing the rate of return available to investors. It will indirectly increase the wealth of investors (Hidajat, 2017). The results of the study (Mizan, 2018; Sitorus & Pangestuti, 2016) concluded that ROE had an insignificant positive effect on MVA. The results of the study (Chelsea & Salim, 2020; Nakhaei & Hamid, 2013) concluded that ROE had a significant negative effect on MVA. The research by Akgun et al. (2018) concluded that ROE had no significant negative effect on MVA.

H3: Return on Equity on Market Value Added has a significant positive effect.

### 3.4. Effect of Earning Per Share on Market Value Added

Earnings per share provide an overview of the company's growth prospects. Earnings per share (EPS) is also known as the profit growth rate per share of the company. Earnings per share is used to describe the company's net income per share that is ready to be distributed to shareholders. The greater the EPS, the better the company's financial performance, and the more investors are willing to invest because investors feel that every stock investment will provide a large profit. This will lead to an increase in the demand for company shares, as well as an increase in share prices, resulting in a higher rate of return for investors, or, in other words, maximizing shareholder wealth will be maximized (Mizan, 2018). The results of the study (Sitorus & Pangestuti, 2016) concluded that EPS had an insignificant positive effect on MVA. Meanwhile, research (Chelsea & Salim, 2020) concluded that EPS had a significant positive effect. And research (Mizan, 2018) concluded that EPS had an insignificant negative effect on MVA.

H4: Earnings Per Share on Market Value Added has a significant positive effect.

### 3.5. The Effect of Dividend Per Share on Market Value Added

A dividend per share shows how much income is given to each shareholder of the company as dividends. The greater the DPS, the better the company's performance, with the possibility of large profits being distributed to investors or capital owners. Investors will be interested in investing in the company. If there is an increase in demand for shares, it will cause the company's stock price to rise, and the higher the rate of return that investors will receive. This results in more wealth received by the company's shareholders. The results of the study (Alipour & Pejman, 2015; Sitorus & Pangestuti, 2016) showed that DPS had a significant positive effect on MVA.

H5: Dividend Per Share on Market Value Added has a significant positive effect.

## 4. Research Methods

This research is quantitative, which in this study uses data that is numeric or numeric, which in this study entirely uses secondary data. The data will be analyzed using panel data (cross-section and time series). The research data was obtained from the Indonesia Stock Exchange (www.idx.co.id) and the financial statements of each company. The variables used in this study are Economic Value Added (X1), Return on Equity (X2), Return on Assets (X3), Earning Per Share (X4), and Dividend Per Share (X5) as independent variables. Market Value Added (Y) as the dependent variable.

This research period starts in 2016-2021. The sample in this study was determined using a purposive sampling technique with the following criteria: a) companies that are consistently listed in the LQ45 index during the 2016-2021 period; b) companies that carry out corporate actions in the form of stock splits during the 2016-2021 period; c) companies that carry out corporate actions in the form of reverse splits during the 2016-2021 period; and d) companies that do not distribute dividends during the 2016-2021 period. Based on the considerations for determining the sample, the sample selection criteria can be described in the following table:

**Table 1.** Sample Criteria

Sample Criteria	Total
Companies consistently listed in the LQ45 index during the 2016-2021 period.	38
Companies that carry out corporate actions in the form of stock splits during the 2016-2021 period.	(5)
Companies that carry out corporate actions in the form of reverse splits during the 2016-2021 period	(0)
Companies that do not distribute dividends during the 2016-2021 period	(4)
Total	19

The type of data used in the panel data regression model is a combination of time series and cross-sectional data, which is referred to as "panel data" (pooled data). Cross-sectional data is a unit of analysis at a certain point with observations of a number of variables, while time series data is a numerical sequence where the interval between observations or a number of variables is constant and fixed. The model equation for cross-section data in the panel data model can be stated as follows:

$$Y_i = \alpha + \beta_1 X_i + \varepsilon_i; i = 1, 2, \dots, N \quad (1)$$

where N is the number of cross-sectional data points. The equation for the time series model can be written as follows:

$$Y_t = \alpha + \beta_1 X_t + \varepsilon_t; t = 1, 2, \dots, T \quad (2)$$

where T denotes the number or quantity of time series data. Because panel data is a combination of time series and cross-section data, the equation can be written as follows:

$$Y_{it} = \alpha + \beta_1 X_{it} + \varepsilon_{it}; i = 1, 2, \dots, N; t = 1, 2, \dots, T \quad (3)$$

where Y is the dependent variable, X is the independent variable, N is the number of observations, T is the number of times, and N x T is the number of panel data. So the equation in this study becomes as follows:

$$MVA_{it} = \alpha + \beta_1 EVA_{it} + \beta_2 ROA_{it} + \beta_3 ROE_{it} + \beta_4 EPS_{it} + \beta_5 DPS_{it} + \varepsilon_{it} \quad (4)$$

This research methodology applies three estimation methods for panel data regression, namely the common-effect, fixed-effect, and random-effect models. Then, using the Chow test, Hausmann test, and Lagrange multiplier test, select the best estimator model. Furthermore, regression parameters were tested using simultaneous and partial tests to determine the effect of predictor variables both as a whole and individually.

## 5. Results and Discussion

### 5.1. Chow test

The first stage carried out in the panel data test is the Chow test. The Chow test is used to select the best model from the common-effect model and the fixed-effect model. The probability value of the chi-square cross section (chi-square) can be used to describe the results of the Chow test. [Table 2](#) shows the results of the Chow test:

**Table 2.** Chow test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	8.224689	(17,85)	0.0000
Cross-section Chi-square	105.045931	17	0.0000

The chi-squared cross-section value is less than the 5% significance level ( $0.0001 < 0.05$ ). So it can be concluded that, for the time being, the best model between common-effect and fixed-effect is fixed-effect. Next, choose the best model between fixed-effect and random-effect by performing the Hausman test.

### 5.2. Hausman test

The Hausman test is used to select the best model from the fixed-effect model and the random-effect model. The probability value of chi-square can be used to describe the Hausman test. [Table 3](#) shows the results of the Hausman test.

**Table 3.** Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.014238	5	0.5474

Based on the Hausman test, it can be concluded that the best model chosen is random-effect. This can be explained by using the probability value of a chi-square whose result is more than the 5%

significance level, which is  $0.5474 > 0.000$ . So, in this study, the random-effects model was used to describe the results of the study.

**Table 4.** Random-Effect Panel Data Regression

Variable	Coefficient	t-Statistic	Prob.
C	28113.41	1.934768	0.0558
ROA?	27.82537	12.68843	0.0000
ROE?	705569.5	3.213759	0.0018
EPS?	-9.720946	-0.516107	0.6069
DPS?	25.66151	0.773944	0.4408
EVA?	-496681.5	-3.420775	0.0009
R-squared	0.646771	F-statistic	37.35288
Adjusted R-squared	0.629456	Prob(F-statistic)	0.000000

Table 4, it can be seen that overall, the variables used in this study, namely EVA, ROA, ROE, EPS, and DPS, simultaneously affect the MVA of companies that are members of the LQ45 index. This is demonstrated by the probability value of F-statistics being less than 5% ( $0.000000 < 0.05$ ). Then, if further analyzed partially at a significance level of 5%, all variables have a significant effect, where the probability value of all variables used in the study is less than 5%. In addition, it can also be explained that the value of the coefficient of determination (adjusted R square) from the estimated random-effect panel data regression is 0.646771, which means that the ability of the independent variable in the long term to be able to explain changes in the value of the dependent variable is 64.68% and the rest, 35.32%, is influenced by other factors outside the model.

The regression estimation of random-effect panel data explains that EVA has a coefficient value of -496681.5 and a t-statistic of -3.420775 with a probability of 0.0009. The magnitude of this coefficient means that if each EVA increases by 1%, it will result in a decrease in MVA in companies that are members of the LQ45 index of 496681.5. From the results found, EVA has a significant negative effect on MVA in companies that are members of the LQ45 index. It is possible to conclude that the findings of this study refute Hypothesis 1. The results of this study are supported by research by [Akgun et al. \(2018\)](#) which concludes that EVA has a significant negative effect on MVA. Economic Value Added urges corporate leaders to focus on adding value to the company by reducing non-value-added activities or processes. This allows the company to function properly according to its intended purpose. In addition, it also allows company management to make investments that can maximize returns while minimizing capital costs, thereby creating company value ([Soewito & Kusumawati, 2017](#)). The results of this study are not in line with the results of research ([Mertayasa et al., 2014](#); [Mizan, 2018](#); [Nakhaei & Hamid, 2013](#); [Putri & Tumewu, 2019](#); [Supriani & Pernamasari, 2021](#)) which concluded that EVA had a significant positive effect on MVA. Also, studies ([Chelsea & Salim, 2020](#); [Sofyan & Naomi, 2020](#); [Sunarko & Martini, 2011](#)) conclude that EVA has no significant positive effect on MVA.

The ROA variable has a coefficient value of 27.82537 and a t-statistic of 12.68843 with a probability of 0.0000. The magnitude of this coefficient means that every time ROA increases by 1%, it will result in an increase in MVA for companies that are members of the LQ45 index of 27,82537. It can be concluded that the results of this study do not reject hypothesis 2. The results of this study are supported by research by [Mertayasa et al. \(2014\)](#), which shows that ROA has a significant positive effect on MVA. ROA is a profitability ratio that can be used to assess a company's performance in creating profit from its asset allocation. The better the company's performance is assessed by the ROA ratio, the greater the profits obtained by shareholders. This is because the higher the ROA, the more effective the company is at using assets to generate net profit after tax, and therefore the more attractive the company is to investors. The results of this study are not in line with those ([Mizan, 2018](#); [Nakhaei & Hamid, 2013](#); [Putri & Tumewu, 2019](#); [Sitorus & Pangestuti, 2016](#)) which concluded that ROA had no significant positive effect on MVA.

The ROE variable has a coefficient value of 705569.5 and a t-statistic of 3.213759 with a probability of 0.0018. The magnitude of this coefficient means that if each ROE increases by 1%, it will result in an MVA of 705569.5 for companies that are members of the LQ45 index each ROE increases by 1%, it will result in an MVA of 705569.5 for companies that are members of the LQ45



index. It can be concluded that the results of this study do not reject hypothesis 3. ROE has a significant positive effect on MVA. This result contradicts research (Mizan, 2018; Sitorus & Pangestuti, 2016) concluding that ROE has no significant positive effect on MVA. Also, the studies (Chelsea & Salim, 2020; Nakhaei & Hamid, 2013) that were done showed that ROE had a significant negative effect on MVA. ROE is a parameter that assesses the company's ability to generate returns on the capital invested by investors. The higher the ROE, the higher the rate of return for investors when investing in a particular company. This is due to the fact that the higher the company's rate of return on capital, the more investors are interested in investing their money. This will increase the demand for company shares and encourage the company's market value to increase. It also shows the company's success in increasing shareholder wealth.

The EPS variable has a coefficient value of -9.720946 and a t-statistic of -0.516107 with a probability of 0.6069. The magnitude of this coefficient means that every EPS that increases by 1% will result in a decrease in MVA for companies that are members of the LQ45 index of 9.720946. It can be concluded that the results of this study reject hypothesis 4. The results of this study are in accordance with the results of research (Mizan, 2018), which concludes that EPS has an insignificant negative effect on MVA. Earnings per share, according to Nagiyah et al. (2017), is the net profit that is ready to be distributed to all common shareholders. The greater the EPS value, the greater the return on investment for shareholders. Returns can only show shareholder welfare if the share price goes up and down, not if the company's earnings per share value goes up or down. Because, in essence, EPS is not a determining factor for shareholder welfare. Meanwhile, the results of this study contradict the results of research (Sitorus & Pangestuti, 2016) which concludes that EPS has no significant positive effect on MVA. In addition, the study (Chelsea & Salim, 2020) suggests that EPS has a considerable favorable impact.

The DPS variable has a coefficient value of 25.66151 and a t-statistic of 0.773944 with a probability of 0.4408. The magnitude of this coefficient means that if every DPS increases by 1%, it will result in an increase in MVA for companies that are members of the LQ45 index of 25.66151. It can be concluded that the results of this study reject hypothesis 5. The results of the study differ from the results of research (Alipour & Pejman, 2015; Sitorus & Pangestuti, 2016) which states that DPS has a significant positive effect on MVA. When the company's DPS increases, this indicates that the company's performance is improving. With an increase in the company's performance, investors' expectations will be high for the company, and investors will be eager to invest. The more investors who put their money into a company, the higher the share price, and thus the higher the returns for investors.

## 6. Conclusion

The results of this study conclude that the best model used in this research is the random-effect panel data model. The estimation results show that simultaneously, all variables used in this study (EVA, ROA, ROE, EPS, and DPS) have a significant effect on the MVA of companies incorporated in the LQ45 index with a percentage of 64.68%. The partial estimation results for ROA, ROE, and EVA variables have a significant positive effect on MVA. The DPS variable has no significant positive effect on MVA, and the EPS variable has no significant negative effect on MVA. Future research is expected to expand the object of research, for example, by using all companies listed on the Indonesian Stock Exchange and extending the research period. In addition, future researchers can also add other variables, both financial and non-financial, that can affect the added value of the company's market, so that it is expected to obtain better research results.

## References

- Adhipradana, F., & Daljono, D. (2013). Pengaruh Kinerja Keuangan, Ukuran Perusahaan dan Corporate Governance Terhadap Pengungkapan Sustainability Report. *Diponegoro Journal of Accounting*, 2(2011), 1–10. <https://ejournal3.undip.ac.id/index.php/accounting/article/view/6021/5809>
- Aisyana, M., & Sun, Y. (2012). Analisis Pengaruh Likuiditas, Solvabilitas, dan Profitabilitas terhadap Market Value Added (MVA). *Binus Business Review*, 3(1), 199.

<https://doi.org/10.21512/bbr.v3i1.1294>

- Akgun, A. I., Samiloglu, F., & Oztop, A. O. (2018). The impact of profitability on market value added: Evidence from Turkish informatics and technology firms. *International Journal of Economics and Financial Issues*, 8(4), 105–112.
- Alipour, M., & Pejman, M. E. (2015). The impact of performance measures, leverage and efficiency on market value added: Evidence from Iran. *Global Economics and Management Review*, 20(1), 6–14. <https://doi.org/10.1016/j.gemrev.2015.04.001>
- Brigham, E. F., & Houston, J. F. (2009). Fundamentals Management Of Financial. In *Cengage Learning*.
- Chelsea, E. I., & Salim, S. (2020). Pengaruh Economic Value Added, Return on Equity, Dan Earning Per Share Terhadap Market Value Added Pada Perusahaan Jasa Subsektor Perbankan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2016-2018. *Jurnal Paradigma Akuntansi*, 2(2), 641. <https://doi.org/10.24912/jpa.v2i2.7630>
- Damanik, L. Y. (2017). Pengaruh Kinerja Keuangan dan Karakteristik Perusahaan terhadap Kuantitas dan Kualitas Pengungkapan Sustainability Report di Indonesia Periode 2013-2015. *PROFIT*, 10(3), 228–246.
- Esomar, M., & Tuapattinaja, I. (2019). Analisis Economic Value Added Dan Market Value Added Terhadap Return Saham PT. Mustika Ratu Tbk. *Soso-Q: Jurnal Manajemen*, 7. <https://ojs.unpatti.ac.id/index.php/sosoq/article/view/988>
- Febriyanti, R. (2014). Analisis Pengaruh Return on Equity (ROE), Earning Per Share (EPS), Dividend Per Share (DPS), dan Economic Value Added (EVA) terhadap Market Value Added (MVA) pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi yang Terdapat di Bursa Efek Indonesia . *Jurnal Fakultas Ekonomi*, 1–28.
- Hanafi, M. M., & Halim, A. (2016). *Analisis Laporan Keuangan*. UPP STIM YKPN.
- Harahap, S. S. (2013). *Analisis Kritis atas Laporan Keuangan, Edisi Pertama*. PT Raja Grafindo Persada.
- Hidajat, N. C. (2017). Analisis Pengaruh Economic Value Added, Return on Assets, Return on Equity, Dan Earning Per Share Terhadap Return Saham Perusahaan Sektor Lq-45 Yang Terdaftar Di Bursa Efek Indonesia Periode 2005-2007. *Business Management Journal*, 7(1), 62–75. <https://doi.org/10.30813/bmj.v7i1.694>
- Kasmir. (2018). *Analisis Laporan Keuangan*. Rajawali Pers.
- Martias, A. (2020). Analisa Pengaruh Economic Value Added, Return on Asset dan Return on Ekuitas Terhadap Market Value Added Perusahaan Saham Teraktif Di Bursa Efek Indonesia. *Moneter - Jurnal Akuntansi Dan Keuangan*, 7(2), 214–221. <https://doi.org/10.31294/moneter.v7i2.8731>
- Mertayasa, P., Cipta, W., & Suwendra, I. W. (2014). Pengaruh Return On Asset Dan Economic Value Added Terhadap Market Value Added Pada Perusahaan Perbankan Go Public. *E-Journal Bisma Universitas Pendidikan Ganesha Jurusan Manajemen*, 2.
- Mizan, E. (2018). Pengaruh Pengukuran Return on Asset , Return on Equity , Earning Per Share , Dan Economic Value Added Terhadap Market Value Added. *AKTIVA Jurnal Akuntansi Dan Investasi*, 3(1), 25–43.
- Nagiyah, Pangestuti, I. D., & Mahfudz. (2017). Analysis of The Influences of Economic Based Measurement and Accounting Based Measurement on Shareholders Value (Study on ASEAN Country Manufacturing Companies 2012-2016). Semarang: Diponegoro University.
- Nakhaei, H., & Hamid, N. I. N. B. (2013). Analyzing the relationship between economic value added

- (EVA) and accounting variables with share market value in tehran stock exchange (TSE). *Middle East Journal of Scientific Research*, 16(11), 1589–1598. <https://doi.org/10.5829/idosi.mejsr.2013.16.11.12053>
- Putri, K. A., & Tumewu, J. (2019). Analisis Pengaruh Economic Value Added (EVA) dan Return On Asset (ROA) Terhadap Market Value Added (MVA) pada Perusahaan Manufaktur yang Terdaftar pada Bursa Efek Indonesia. *Liability*, 1(1), 25–42. <https://journal.uwks.ac.id/index.php/liability>
- Reedy, C. V. (2019). An Empirical Analysis of Linkage Between Economic Value Added (EVA) and Market Value Added (MVA). *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3461131>
- Riza, F. (2018). *Pengaruh Corporate Governance, Likuiditas dan Kinerja Keuangan terhadap Nilai Pasar Perusahaan (Studi Empiris Emiten yang Mendapat GCG award IICD Tahun 2010-2012)*. 11(1), 91–105.
- Sambelay, J. J., Rate, P. V., & Baramuli, D. N. (2017). Analisis Pengaruh Profitabilitas Terhadap Harga Saham Pada Perusahaan Yang Terdaftar di LQ45 Periode 2012-2016. *753 Jurnal EMBA*, 5(2), 753–761.
- Sitorus, M., & Pangestuti, I. R. D. (2016). Analisis Pengaruh ROE, ROA, EPS, DPS, DOL, dan DFL terhadap Market Value Added pada Industri Manufaktur di BEI Tahun 2011-2014. *Diponegoro Journal of Management*, 5(3), 1–13.
- Soewito, & Kusumawati, A. (2017). Pengukuran Kinerja Keuangan dengan Pendekatan Economic Value Added (EVA) dan Market Value Added (MVA) Sebelum dan Setelah Merger pada Perusahaan Go Public yang Tercatat di Bursa Efek Indonesia (BEI) Periode 2010-2012. *Jurnal Ilmu Administrasi*, 9(2), 1–9.
- Sofyan, W. W., & Naomi, P. (2020). *Pengaruh EVA, OSS, dan COO Terhadap MVA Perusahaan Otomotif di BEI*. 4(1), 1–23.
- Sudana, I. M. (2015). *Manajemen Keuangan Perusahaan: Teori & Praktik*. Erlangga.
- Sunarko, B., & Martini, S. (2011). Analisis Faktor-Faktor yang Berpengaruh Terhadap Market Value Added (MVA) pada Industri Manufaktur yang Terdaftar di Bursa Efek Indonesia. *PERMORMANCE*, 13(1), 28–49. <https://www.ptonline.com/articles/how-to-get-better-mfi-results>
- Supriani, D., & Pernamasari, R. (2021). Pengaruh Economic Value Added (EVA) dan Kinerja Perusahaan Terhadap Market Value Added (MVA). *Komunikasi Ilmiah Akuntansi Dan Perpajakan*, Vol. 14 No(April), 39–48.
- Syahyunan. (2015). *Manajemen Keuangan perencanaan, analisis dan pengendalian keuangan*. USU Press.
- Tandelilin, E. (2010). *Portofolio dan Investasi Teori dan Aplikasi*. Kanisius.