

# **The Role of Company Value as A Mediating Variable in The Relationship Between Systematic Risk, Financial Performance and Financial Distress on Stock Return in The Indonesia Stock Exchange (IDX)**

## **ABSTRACT**

This research aims to determine the effect of Systematic Risk, Financial Performance, and Financial Distress on stock return either partially or simultaneously and to determine the effect of Systematic Risk, Financial Performance, and Financial Distress on stock return through firm value. The object of research is the Property, Real Estate, and Building Construction Sectors that listed on the Indonesia Stock Exchange in 2016 – 2020 for 99 companies. The sample was selected using the purposive sampling method. The number of samples in this study were 53 companies. The panel data estimation method is used a fixed effect model and sobel test. The results of the study are simultaneously Systematic Risk, Financial Performance, and Financial Distress have a significant effect on stock return. Partially, the three independent variables have no significant effect on stock return. Firm value is able to mediate the relationship between Financial Performance and Financial Distress on Stock Return.

**Keywords: Systematic Risk; Financial Performance; Financial Distress; Firm Value; Stock Return.**

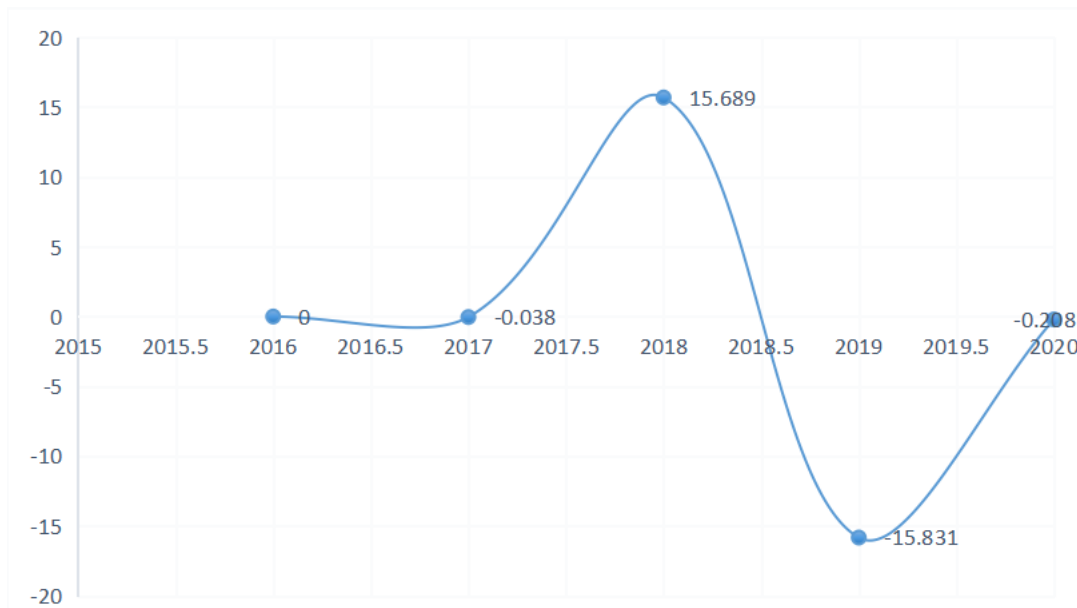
## **1. INTRODUCTION**

Investment in Property, Real Estate, and Building Construction Sector experienced a decline of 10% in the last year from 2017 to 2018 (Central Bureau Statistics, BPS, 2021). However, at the National Coordination Meeting (Rakornas) for Property, the Indonesian Minister of Finance, Sri Mulyani Indrawati stated, "the performance of the property industry sector in the country in the last 5 years has only grown at 3.5%. "Inversely proportional to national economic growth, which is in the range of 5%" (Kadin.id, 2021).

Looking at the performance of the property, real estate and building construction industries, it only grew at 3.5 percent. Therefore, you have to look at the Stock Return Trend itself to see whether it provides attractive profits (Capital Gains) or conversely provides losses (Capital Loss). Below is presented data on the average share returns of property, real estate and building construction companies listed on the IDX during the period 2016 to 2020, shown in Figure 1.

From figure 1, overall stock returns from 2016 to 2020 have decreased. The lowest decrease occurred in 2019 amounting to 15,831 compared to previous years. Even though the index for the property, real estate and building construction sectors continues to decline, the shares of issuers in this sector are still relatively liquid. Investment in the property, real estate and building construction sectors is long term. This sector grows in line with economic growth. Investors are interested in investing in this sector because the prices of land and buildings tend to rise when the supply of land is constant while demand always increases.

The value of the company is either directly or indirectly influenced by systematic risk, companies with high share beta usually have very fluctuating share prices, such shares are not liked by investors, as a result the transaction value and share trading volume will decrease, the transaction value and share trading volume will decrease. Investments that provide a high rate of return will of course also provide high risk. The risk in question is the level of potential loss that arises because the



Source: [www.idx.co.id](http://www.idx.co.id) (Data reprocessed by researchers)

Figure 1. Average Share Returns of Property, Real Estate & Building Construction Sector in Period of 2016 – 2020

expected investment results do not match expectations (Rahardjo, 2006). While, Wibowo's research (2021) proves that Systematic Risk has a significant negative effect on company value. The results of this research are consistent with the statement made by Harry Markowitz (1952) that "the higher the systematic risk of a company, the less attractive it is to investors, which has an impact on decreasing company value". Fama & French (1992) concluded that there is a strong relationship between Beta and stock returns with exceptions when talking about company size and its growth rate.

To be able to know the company's performance, an analytical tool is needed that is related to the health of the company's performance, namely using the Economic Value Added (EVA) analysis approach. This research is a development of several previous studies. Silalahi and Manullang's (2021) research on the effect of EVA on stock returns. Next, Hernawati and Hernawat (2021) how the influence of EVA Analysis, Systematic Risk, and Bankruptcy Prediction using the Grover model on stock returns and Desi's (2018) research on the influence of financial performance, systematic risk, and bankruptcy prediction on Stock Returns in the Property & Real sector Estate and Building Construction. The development and differences in research that will be carried out add a mediator variable, namely company value on the influence of Systematic Risk, EVA, Financial Distress on stock returns. Because based on the literature above, there is a process of increasing or decreasing company value first before arriving at the final influence, namely stock returns, this research was conducted to analyze the influence of systematic risk, financial performance and financial distress on stock returns with company value as an intervening variable. in Property, Real Estate and Building Construction Sector Companies registered on the IDX.

## 2. REVIEW OF LITERATURES

### 2.1. Signal Theory

Signal theory emphasizes the importance of information released by the company on the investment decisions of parties outside the company. If the announcement of the information is a good signal for investors, then there will be a change in stock trading volume. Thus, the relationship between the publication of information, whether financial reports, financial conditions or social politics, and fluctuations in stock trading volume can be seen in market efficiency. In general, signaling theory is closely related to the availability of information.

Financial reports can be used to make decisions. For investors, financial reports are the most important part of a company's fundamental analysis. The ranking of companies that have gone public

is usually based on financial performance analysis. This analysis is carried out to facilitate interpretation of the financial reports that have been presented by management.

## **2.2. Agency Theory**

According to Jensen and Meckling (1976) "agency theory is an agency relationship as a contract in which one or more principals (owners) use other people or agents (managers) to carry out company activities." The principal provides facilities and funds for the company's operational needs, while the agent as manager has the obligation to manage the company as expected by the shareholders (principal) to increase the value of the company. However, in practice, many agents (managers) do not carry out their duties in accordance with the agreed work contract, resulting in an agency conflict (agency problem). Agents have more information than principals, giving rise to information asymmetry, namely a condition where there is an imbalance in information acquisition between management as information providers and shareholders and stakeholders as information users (Iskandar, 2016).

Agency theory shows the importance of separating company management from owners, where this aims to create efficiency and effectiveness by employing professional agents in managing the company. So that management has a responsibility as an agent of the company owner, and the company owner can seek information, develop a better system to ensure that the agent's actions are in the interests of the owner. One way of good corporate governance is more transparent disclosure of information so that it has an impact on reducing conflicts of interest and providing good value for the company.

## **2.3. Return and Risk**

Investment in shares has the characteristics of high risk and high return, but is still in demand among investors. One of the attractions of investing in shares is the level of return (share returns). Stock returns according to Brigham and Houston (2011), namely: "Share returns or stock returns are the difference between the amount received and the amount invested, divided by the amount invested." Meanwhile, according to Hartono (2009) "Share returns are the results obtained from investment". Based on these definitions, it can be concluded that stock return is the rate of return on stock buying and selling transactions. According to Tandelilin (2010), stock returns are one of the factors that motivate investors to invest and are also a reward for the investor's courage to bear the risk of investing.

In investment, risk is the level of potential loss that arises because the expected investment results do not match expectations. According to Fahmi (2012), risk is a form of uncertainty about a situation that will occur in the future with decisions taken based on various current considerations. Systematic risk and unsystematic risk are added together to form total risk and become the basis for consideration by investment managers in making investment decisions. Unsystematic Risk is a risk that can be eliminated by diversification. According to Keown (2011) "Systematic risk is part of the variations in investment returns that cannot be eliminated through diversification by investors." Systematic risk is also usually called market risk where the risk occurs due to events outside the company, for example recession, inflation, interest rates, exchange rates, and so on, so this risk is a risk that cannot be diversified. According to Brealey (2008) market risk is a source of risk from the entire economy (macroeconomics) which affects the stock market as a whole.

Husnan (2005) further explained that systematic risk can be measured by beta. The beta of a security can be calculated using estimation techniques that use historical data. Historical data is data for calculating past beta which is used as an estimate of future beta. Individual security betas tend to have a lower coefficient of determination than portfolio betas. The coefficient of determination shows the proportion of changes in the return value of a stock that can be explained by market returns, so the greater the coefficient of determination, the more accurate the beta estimate.

## **2.4. Economic Value Added (EVA)**

EVA is operating profit after tax minus the capital costs of all capital to produce profits. Operational profit after tax describes the results of value creation (Value) within the company, while capital costs can be interpreted as the sacrifices made in creating this value (Steward, 1997). EVA does not require a comparison with similar companies in the industry nor does it make an analysis of

trends with previous years. This concept places more emphasis on determining the amount of the Cost of Capital. Taking into account the cost of capital over equity is an advantage of the EVA approach compared to traditional accounting approaches in measuring company performance.

EVA analysis is also a new tool for measuring the real profit of a company's operations because in its calculations the cost of capital has been reduced. The thing that makes EVA different from conventional calculation analysis tools is that EVA is economic profit, the opposite of profit in bookkeeping calculations. Without the prospect of economic profit, there will be no wealth creation for investors.

## **2.5. Financial Distress**

Many companies experience financial problems and ultimately risk bankruptcy. Business difficulties are a continuum of conditions starting from mild financial difficulties (liquidity), to more serious difficulties, namely insolvency (debts are greater than assets). In these conditions the company can be said to have gone bankrupt (Hanafi 2016). In general, bankruptcy is defined as the failure of a company to carry out operations to achieve its goals. Rudianto (2013) defines "bankruptcy as the company's inability to pay its financial obligations when they are due, which causes bankruptcy or liquidity difficulties which may be the beginning of bankruptcy".

Subramanyam and Wild (2009) argue that "perhaps the most well-known model of financial distress is the Altman Z-score. Altman's Z-Score uses several ratios to produce bankruptcy predictions. Altman's Z-Score uses statistical techniques (multiple discriminant analysis) to produce predictions that are linear functions of several explanatory variables. This predictor classifies or predicts the probability of bankruptcy or nonbankruptcy". Aswinda Salatin (2013) believes that "the Altman Z-Score Method is a score that applies Multiple Discriminant Analysis. Discriminant analysis then produces several groupings that are a priori or based on theory from actual reality".

## **2.6. Company Value**

In general, company value is measured using valuation ratios or market ratios. The valuation ratio consists of Price Earning Ratio (PER), Price to Book Value (PBV), and Tobin's Q. In this research, Company Value is measured by Tobin's Q. Tobin's Q is calculated by comparing the ratio of the market value of the company's shares with the book value of equity.

"Tobin's Q is one of the most rational ratios and this ratio is considered to provide the best information, because this ratio can explain various phenomena in company activities which compare the market value of shares of a company listed on the financial market with the value of asset turnover. Tobin's Q includes all elements of the company's debt and share capital, not only company equity is included but all company assets" (Sianturi, 2015).

## **2.7. Relationship between research variables and research hypotheses**

### **2.7.1. Relationship between Systematic Risk and Stock Returns**

The relationship between market risk and rate of return is a linear and unidirectional relationship. This means that the greater the risk, the greater the expected return on the investment. But the smaller the risk, the smaller the investor's expected return. In the world of investment, it is known that there is a strong relationship between risk and return, that is, if the risk is high, the return will also be high, and vice versa, if the return is low, the risk will also be low.

Systematic risk is reflected by fluctuations in the share price in question and the average market price of all listed shares. Widodoatmojo (1996) states that the systematic risk of a security or portfolio relative to market risk can be measured by beta. Individual stock beta shows how large or small the rate of change in stock returns is compared to market returns. The higher the beta level, the higher the systematic risk that cannot be eliminated. The conclusion from the relationship pattern between risk and return is that risk and return have a unidirectional and linear relationship. This is reinforced by the results of the research journal Pramesti and Santoso (2021) that systematic risk has a significant positive effect on stock returns in food and beverages companies. Based on the description above, the following hypothesis is formulated:

H1: Systematic Risk has a positive effect on Stock Returns.

### **2.7.2. The Relationship between Economic Value Added (EVA) and Stock Returns**

Brigham (2014) states that if the EVA value is positive, then operating profit after tax exceeds the capital costs required to produce that profit, and management actions add value to shareholders. As a result, investors will be interested in buying shares of companies that have a positive EVA value. If the EVA is higher, the share price will be higher, this is because the company has succeeded in creating wealth for its shareholders, so that share returns also increase. The conclusion from the relationship pattern between economic value added and return is that EVA and return have a unidirectional and linear relationship. This means that the higher the economic value added of an asset, the higher the return on that asset, and vice versa.

This conclusion is in accordance with the research journal Hernawati and Tanvika (2021) which revealed that EVA has a significant positive effect on returns in food and beverages companies. Based on the description above, the following hypothesis is formulated:

H2: Economic Value Added has a positive effect on Stock Returns.

### **2.7.3. The Relationship between Financial Distress and Stock Returns**

Companies that are predicted to go bankrupt have a lower rate of return compared to companies that are not predicted to go bankrupt and have higher fluctuations in stock returns. This will result in investor interest decreasing because they are not interested in companies with small profits (Hanafi, 2007). In general, the relationship pattern between bankruptcy prediction using the Altman Z-Score Method and returns is linear. The Z-Score value will indicate the size of a company's potential for bankruptcy. Companies with a small potential for bankruptcy will attract investors because they can provide greater profits. This shows that the Altman Z-Score model's bankruptcy prediction has a significant positive effect on stock returns.

This relationship is in line with research by Hernawati and Tanvika (2021) which revealed that bankruptcy predictions have a significant positive effect on returns in food and beverages companies. However, Kristanti's (2009) research contradicts the explanation of the relationship between these two variables, where the Altman z-score method has no effect on stock returns of manufacturing companies listed on the Indonesia Stock Exchange in 2012-2016. Therefore, it is important for the author to apply the theory to different companies. Based on the description above, the following hypothesis is formulated:

H3: Financial Distress has a positive effect on Company Value.

### **2.7.3. Relationship between Systematic Risk and Company Value**

Tandelilin (2007) said that risk is the possibility that the actual return will be lower than the minimum expected return. The Systematic Risk of a stock is indicated by beta ( $\beta$ ). Increasing the systematic risk of a stock will increase investors' interest in investing because they think that high risk will give them high returns. Thus, the greater the beta, the greater the expected level of profit. In other words, the riskier an investment is (which is indicated by the beta coefficient), the higher the share price. Husnan (2001) explains that if stock beta shows the level of profit of a stock, then there will be a correlation between stock beta and stock price, because capital gain is the difference in stock price.

Based on the theory above, systematic risk is considered a factor that has a significant influence on company value. This is in line with Prasetya (2014) who found that systematic risk is an important factor for increasing company value. However, this is contrary to the research results of Astuty (2017) which found that the higher the systematic risk, the lower the company value. This research explores these two contradictions to find out whether stock beta is correlated with stock price and company value. Based on the description above, the following hypothesis is formulated:

H4: Systematic Risk has a positive effect on Company Value

### **2.7.4. Relationship between Economic Value Added (EVA) and Company Value**

EVA has become a new method for assessing company performance that focuses on and reflects Company Value. This method considers the contribution of capital costs incurred in an effort to generate company profits. If the company is able to generate a rate of return that is greater than the cost of capital. This indicates that the company has succeeded in creating value for capital owners and can encourage greater demand for company shares so that share prices tend to increase in the capital market. This indicates that the company value is getting better (Kurniawan, 2009). If the EVA value is

positive, the higher the company value, which will have an impact on investor interest in investing in shares, and vice versa, if the EVA value is negative, the company value will be low and result in low investor interest in investing in shares (Septiyani, 2015).

Wilda's (2011) research results state that EVA has a negative and significant relationship to company value, which means that the greater the capital owned by the company, the company value will decrease. Research conducted by Meita Rosy (2012) shows that there is no relationship between EVA and share prices. This research highlights the contradiction between the literature and the results of the research to find out whether Economic Added Value has an effect on Company Value. Based on the description above, the following hypothesis is formulated:

H5: Economic Added Value has a positive effect on Company Value.

### **2.7.5. Relationship of Financial Distress to Company Value**

One of the factors that influences company value is the company's financial health. In Agency Theory, investors act as principals who delegate authority to managers as agents. Financial condition is the result of agent performance. Agents who carry out their duties well will produce healthy financial conditions and this will increase the trust of investors and creditors so that the value of the company will increase. Financial Distress Predictions make it easier for investors to find out the health condition of the company. If the company is in an unhealthy condition (high financial distress), investors will not invest their funds in the company. Thus, predictions of Financial Distress conditions are related to the company's share price which reflects the company's value.

In line with Kanyugi's (2016) research results, Financial Distress using the Altman Z-Score method has a strong positive relationship with Company Value. Contrary to the research above. Tamarani (2015) provides evidence in his research that Financial Distress which also uses the Altman Z-Score method does not have a significant effect on company value. The inconsistency of the results of this research is the reason why researchers are trying to find out how Financial Distress using the Altman Z-Score method affects company value. . Based on the description above, the following hypothesis is formulated:

H6: Economic Added Value has a positive effect on Company Value.

### **2.7.6. The relationship between company value and stock returns**

Company value is investors' perception of the company's level of success which is often linked to share prices. In this research, Company Value is calculated using Tobin's Q. Kurniadi (2013) defines Tobin's Q as an indicator for measuring company performance, especially regarding company value. The use of Tobin's Q is intended to assess the company's ability to manage assets to create profitable capital market value. The greater the value of the Tobin's Q ratio indicates that the company has good growth prospects. This can happen because the greater the market value of the company's assets, the greater the investor's willingness to make more sacrifices to own the company Cahyaningtias (2015).

The higher investor interest, the share price will increase. Good company performance will be considered good by the market so that demand for shares will increase followed by an increase in share prices. This increase in share prices will affect capital gains as an element of share returns. Research by Glan (2016) explains that Tobin's Q simultaneously with other independent variables, namely inflation, interest rates and exchange rates, has a significant effect on stock returns. Based on the description above, the following hypothesis is formulated:

H7: Company value has a positive effect on stock returns.

### **2.7.7. The Influence of Systematic Risk, Economic Added Value, and Financial Distress on Stock Returns with Company Value as an Intervening Variable.**

Stock returns are one of the factors that motivate investors to invest and are also a reward for investors' courage to bear the risks of their investments. There are many variables that influence returns, both externally and internally. Externally, it can be analyzed by looking at the systematic risks that occur in the issuer. Meanwhile, internally it can be analyzed through financial reports using general financial ratios or other analysis methods such as the EVA analysis method and the bankruptcy prediction method (Financial Distress).

Based on the literature that has been presented previously, the three variables above, namely Systematic Risk, Economic Added Value, and Financial Distress, can influence the resulting stock returns. Apart from that, these three variables can also influence company value. Company value is investors' perception of the company's level of success which is often linked to share prices. The more investors who are interested in buying shares in a company, the more the share price will increase, which will lead to an increase in the company's stock returns. Several studies use company value as a mediator between ratios and stock returns to see tiered or indirect relationships.

The results of tests carried out by Situmorang (2015) show that the Profitability Ratios, namely Return on Equity and Net Profit Margin, show that the relationship is actually indirect, where the two ratios are more effective in indirectly influencing stock returns through Company Value as a mediator. High profitability tends to increase share prices because investors prefer companies that have the ability to generate profits. If the value of the company's shares is high, the value of the company will also increase, this will encourage an increase in stock returns that investors will receive. However, this research shows that the Liquidity Ratio is more effective in directly influencing Stock Returns where Company Value is not a Mediator in the relationship between these two variables. Based on the description above, there is a tiered relationship between the variables, so the following hypothesis is formulated:

H8: Systematic Risk, Economic Added Value, Financial Distress have a positive effect on Stock Returns through Company Value.

### **3. METHOD**

#### **3.1. Data**

The data used in the research is secondary data. Secondary data is data obtained indirectly through the relevant institutions. Secondary data generally takes the form of evidence, notes or historical reports that have been compiled in published or unpublished archives. The data used in this research are annual reports of Companies in the Property, Real Estate and Building Construction Sector from 2015 to 2020 which have been published by the Indonesian Stock Exchange (BEI) and the Company itself by accessing the Indonesian Stock Exchange website, namely [www.idx.co.id](http://www.idx.co.id) or via the respective company website.

#### **3.2. Population and Sample**

##### **3.2.1 Population**

In a study, a population is needed that will include the characteristics of the object being studied. According to Sugiyono (2012) "population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn." Based on this definition, in this study the population is 99 companies in the Real Estate Property and Building Construction sectors which are listed on the Indonesian Stock Exchange.

##### **3.2.2. Sample**

The sampling technique used in this research is purposive sampling, with certain criteria as follows:

- Companies listed on the Indonesian Stock Exchange.
- Companies listed in the Property, Real Estate and Building Construction sectors may not be delisted from the Indonesia Stock Exchange from 2016 to 2020.
- Real Estate Property and Building Construction sector companies that have complete financial reports and are listed on the financial performance summary of the Indonesia Stock Exchange from 2016 to 2020.
- Companies in the Real Estate Property and Building Construction sector which have financial report data from the Indonesia Stock Exchange from 2016 to 2020. Based on the criteria in the bag, 54 companies were selected from 99 public companies in the property, real estate and building construction sectors.

### 3.3. Research variables and operational definitions of variables.

In accordance with the problem studied, namely the influence of Systematic Risk, EVA, Altman Z-Score Bankruptcy Prediction on stock returns, there are two variables that will be measured, namely:

#### 3.3.1 Independent Variable (X)

The independent variables in this research are Systematic Risk (X1), EVA (X2) and Bankruptcy Prediction using the Altman Z-Score method (X3).

##### - Systematic Risk (X1)

Systematic Risk, namely risk that affects the entire company (Issuer) so that it cannot be diversified. This risk assessment is measured by the stock's beta. Calculate the stock beta of each company based on the formula:

$$\beta = \frac{n\sum R_{mt} \cdot R_{it} - \sum R_{mt} \cdot \sum R_{it}}{n\sum R_{mt}^2 - (\sum R_{mt})^2}$$

where :

$\beta$  = Beta

n = Number of Data

R<sub>mt</sub> = Market Return

R<sub>it</sub> = Return on Securities

##### - Economic Added Value / EVA (X2)

EVA is an estimate of a business's actual economic profit for a particular year which is obtained from the difference between NOPAT calculations and capital costs. (Brigham and Houston, 2010). The use of EVA in analyzing company performance makes company management focus more attention on creating company value and at the same time EVA can be used to measure the added value generated by the company, as a result of company activities or strategies. The formula for calculating Economic Value Added (EVA) is as follows:

$$\text{EVA} = \text{NOPAT} - \text{Capital Charge}$$

Where:

EVA = Economic Value Added

NOPAT = EBIT(1-T)

Capital Charge = WACC x Invested Capital

##### - Altman Z-Score model

Bankruptcy prediction analysis is an analysis that can help companies anticipate the possibility that the company will experience bankruptcy caused by financial problems. The Third (Modified) Altman Z-Score model calculation can be used by companies that go public or not go public in Indonesia with the following formula:

$$Z = 6,56 X1 + 3,26X2 + 6,72X3 + 1,05X4$$

where:

Z = The third of Model Altman Z-Score (modified)

X1 = Working Capital to Total Asset

X2 = Retained Earning to Total Asset

X3 = Earning before Tax tp Total Asset

X4 = Total Equity to Total Debt

#### 3.3.2. Dependent Variable (Y)

In this research, share returns of Property, Real Estate and Building Construction companies listed on the Indonesian Stock Exchange are the dependent variable. Measuring stock returns uses

Realized Return, which is the return that has occurred which is calculated based on historical data. Systematically the realized return is calculated using the formula:

$$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}}$$

where :

- Rit : Return of share i in period t
- Pit : Closing price of stock i in period t (last period)
- Pit-1 : Closing price of stock i in the previous period (initial)

### 3.3.3. Intervening Variable (Z)

Intermediary variables or mediating variables or intervening variables are factors that theoretically influence the relationship between independent variables and dependent variables. This variable can be measured, but its influence can be inferred from the relationship that exists between the independent variable and the dependent variable (Sandjaja, 2006). In this research, the intermediary variable is Company Value (Z). Tobin's Q is formulated as follows:

$$\text{Tobin's Q} = \frac{\text{ME} + \text{MD}}{\text{Total Asset}}$$

where:

- Tobin's Q = Rasio Tobin's
- ME = Market value of Equity
- MD = Market value of Debt

### 3.4. Selection of Regression Model

Panel data regression model estimation aims to predict the parameters of the regression model, namely the intercept or constant value ( $\alpha$ ) and slope or regression coefficient ( $\beta_i$ ). Using panel data in regression will produce different intercepts and slopes for each company and each time period. The regression model estimation method using panel data can be carried out using three approaches, namely the Common Effect Model; Fixed Effect Model, and Random Effect Model. To determine which of the three models is appropriate to use, model selection tests are carried out, namely the Chow test, Hausman test and Langrange Multiplier test.

### 3.5. Classic Assumption Test

"In research, problems may arise in regression analysis quite often in fitting a prediction model to a model that has been inserted into a series of data. This problem is often referred to as classical assumption testing, which includes tests for normality, heteroscedasticity, autocorrelation and multicollinearity. If the model chosen is common effect or fixed effect, then the classical assumption tests that must be carried out include heteroscedasticity tests and multicollinearity tests. Meanwhile, if the selected model is a random effect, there is no need to test the classical assumptions". (Nachrowi, 2006). However, it is better to test the classical assumptions in the form of autocorrelation, heteroscedasticity and multicollinearity to be carried out on any selected model with the aim of finding out whether the model formed meets the BLUE (Best Linear Unbiased Estimator) requirements.

### 3.6. Hypothesis Testing

#### 3.6.1. F Test

The F test is intended to simultaneously test the regression coefficient (Slope) hypothesis and ensure that the selected model is suitable or not for interpreting the influence of the independent variable on the dependent variable. This test is very important because if it does not pass the F Test then the T Test results are irrelevant.

### 3.6.2. T Test

In contrast to the F test which is used to test regression coefficients simultaneously, the T test is used to test regression coefficients individually. According to Ghazali (2013), “the T test basically aims to show how much influence an explanatory or independent variable individually has in explaining the dependent variable”.

### 3.6.3. Sobel Test

Mediation Hypothesis Testing can be carried out using procedures developed by the Sobel Test. The Sobel test is a test to determine whether the relationship through a mediating variable is significantly capable of acting as a mediator in the relationship. This test is carried out by testing the strength of influence of variable A on B through M. To test how much the Mediator variable mediates the influence of A on B, the Sobel Test formula can be used.

## 4. RESULT AND DISCUSSION

### 4.1. Descriptive Statistics

Descriptive statistics are useful for describing summary research data such as minimum value, maximum value, average value (mean), and standard deviation of each research variable. The research variables include Systematic Risk, EVA, Financial Distress, Company Value, and Stock Returns which are presented in table 1 as follows:

**Table 1. Statistic Descriptive of Research Variables**

Variable	Unit	Minimum	Maksimum	Mean	Median	Deviaion Standard
Systematic Risk (X1)	Ratio	-6.18	6.64	0.873	0.76	1.831
Economic Value Added (X2)	(Billion of Rp)	-11,214	1,881	-0,426	-0,104	1.176
Altman Z-Score (X3)	Ratio	-5.33	32.42	5.436	4.46	5.074
Tobin's Q (Z)	Ratio	0.12	7.96	1.104	0.86	0.925
Return Saham (Y)	Ratio	-0.881	6.6404	-0.019	-0.091	0.557
Number of Observation	Total	265	265	265	265	265

Table 1 above shows the results of descriptive statistical analysis of all the variables used in this study with a total of 265 observations. The test results above show the minimum, maximum, average and standard deviation values for each variable. Among them, the Systematic Risk Variable has a Minimum Value of -6.18, which means that the smallest Systematic Risk value out of 265 observations over 5 years in this research is the Ristia Bintang Mahkota Sejati (RBMS) Company, which indicates that the profit level of RBMS shares increased less than the profit level. total shares in the market. Meanwhile, the maximum Systematic Risk value of 6.64 was achieved by Indonesia Prima Property Tbk (OMRE) Company, which indicates that the profit level of OMRE shares is greater than the overall profit level of shares on the market so that OMRE Shares are the most aggressive shares throughout the 2016 - 2020 period. Systematic has a standard deviation value of 1.831578 which is greater than the mean value of 0.873245. This indicates that the systematic risk variable is heterogeneous.

The EVA variable has a minimum value of -11213618623, which means that the smallest EVA value out of 265 observations in this research is the Lippo Karawaci Tbk Company (LPKR), which indicates that LPKR is the company that creates the least added value in 2020. . Meanwhile, the maximum Economic Value Added value of 1880582309 was achieved by the Bumi Serpong Damai Company (BSDE), which indicates that BSDE was the company that created the most added value for the company during the five year period, which occurred in 2017. The EVA variable has a standard deviation value of 1175772190 which is greater than mean value -425611726. This indicates that there are years where the EVA variable is heterogeneous.

The Stock Return variable has a Minimum Value of -0.881, which means that the lowest Stock Return Value of the 265 Observations in this research is the Sitara Propertindo Tbk (TARA) Company which experienced the largest loss (Capital Loss) during the 2016 – 2020 period, to be precise, in 2020. Meanwhile, the maximum value of Stock Return of 6.64 was achieved by the PP Property Tbk (PPRO) Company which experienced the largest profit (Capital Gain) during the five

year period (2016 – 2020) which occurred in 2016. The Mean and Standard Deviation Values of the Stock Return Variable are -0.01888 and 0.556661 . A standard deviation value that is greater than the mean indicates that the Stock Return variable is heterogeneous.

#### 4.2. Hypothesis Test Results

The estimation model selected in Equation 1 is the Fixed Effect Model (FEM). The results of the regression using the OLS (Ordinary Least Square) method obtained and  $R^2$  (Coefficient of Determination) of 0.92, meaning that the dependent variable, namely Company Value, can be explained by independent variables, including Systematic Risk, Economic Value Added and Financial Distress of 92%, while the remaining 18% is explained. by other factors outside this model. In table 2, the results of research hypothesis testing are presented as follows.

**Table 2. Results of Hypothesis Testing Equation 1 (Fixed Effect Model)**

Dependent Variable: Z				
Method: Panel EGLS (Cross-section weights)				
Total panel (balanced) observations: 265				
Linear estimation after one-step weighting matrix				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.002175	0.003648	0.596269	0.5516
X2	4.21E-11	1.11E-11	3.806478	0.0002
X3	-0.044620	0.005151	-8.662374	0.0000
C	1.362500	0.029036	46.92408	0.0000
R-squared	0.924089	Mean dependent var		3.648479
Adjusted R-squared	0.904113	S.D. dependent var		2.702787
S.E. of regression	0.472683	Sum squared resid		46.69679
F-statistic	46.25884	Durbin-Watson stat		1.362530
Prob(F-statistic)	0.000000			

The t test is used to test individual regression coefficients. In Equation I, this research tries to prove whether Systematic Risk, Economic Value Added, and Financial Distress have a partial effect on Company Value. Based on table 1 above, it is known that the Systematic Risk Probability Value (X1) is greater than the significance level, namely  $0.5516 > 0.005$ ,  $H_0$  is accepted where systematic risk has no partial effect on Company Value. The Prob Economic Valued Added (X2) value is  $0.0002 < 0.005$ , so  $H_0$  is rejected, which means that EVA has a partial effect on Company Value. The Prob Financial Distress (X3) value is  $0.0000 < 0.005$ , then  $H_0$  is rejected, which means that Financial Distress (X3) has a partial effect on Company Value.

The F test is needed to see whether all the independent variables together (simultaneously) can influence the dependent variable. The F test is used with a significance level of 0.05. The results obtained from the F Test in Equation I based on the table above show that the Probability value is smaller than the significance level, namely  $0.0000 < 0.05$ . This means that at the level  $\alpha = 0.05$ , Systematic Risk, Economic Value Added (EVA) and Financial Distress together (simultaneously) have an effect on Company Value.

Based on table 3 above, it is known that the Probability Value of Company Value (Z) is smaller than the significance level, namely  $0.0000 < 0.05$ ,  $H_0$  is rejected where Company Value has a partial effect on Stock Returns. The value of Systematic Risk Probability (X1) is greater than the significance level, namely  $0.6339 > 0.005$ ,  $H_0$  is accepted where systematic risk has no partial effect on Stock Returns. The Prob Economic Valued Added (X2) value is  $0.1755 > 0.05$ , so  $H_0$  is accepted, which means that EVA has no partial effect on Stock Returns. The Prob value of Financial Distress (X3) is  $0.2812 > 0.05$ , so  $H_0$  is accepted, which means that Financial Distress (X3) has no partial effect on Stock Returns.

**Table 3. Results of Hypothesis Testing Equation 2 (Fixed Effect Model)**

Dependent Variable: Y  
 Method: Panel EGLS (Cross-section weights)  
 Total panel (balanced) observations: 265  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Z	0.292239	0.047673	6.130012	0.0000
X1	0.002872	0.006021	0.476955	0.6339
X2	-1.69E-11	1.24E-11	-1.359338	0.1755
X3	0.007976	0.007383	1.080356	0.2812
C	-0.394538	0.076620	-5.149259	0.0000
R-squared	0.384594	Mean dependent var		-0.169384
Adjusted R-squared	0.218907	S.D. dependent var		0.624319
S.E. of regression	0.542547	Sum squared resid		61.22636
F-statistic	2.321214	Durbin-Watson stat		2.376059
Prob(F-statistic)	0.000009			

The results obtained from the F Test in Equation II based on the table above show that the Probability value is smaller than the significance level, namely,  $0.000009 < 0.05$ . This means that at the level  $\alpha = 0.05$ , Company Value, Systematic Risk, Economic Value Added and Financial Distress together (simultaneously) influence stock returns. The Godness of fit test shows how the coefficient of determination (R<sup>2</sup>) value reflects how much variation in the dependent variable Y can be explained by variable X (Nachrowi and Hardius, 2006). . In Equation 2, the selected model is the Fixed Effect Model. The results of the regression using the OLS (Ordinary Least Square) method obtained an R<sup>2</sup> (Coefficient of Determination) of 0.38, meaning that the dependent variable in the model, namely Stock Returns, can be explained by independent variables including Company Value, Systematic Risk, Economic Value Added, Financial Distress of 38%, while the remaining 62% is explained by other outside factors.

### Mediation Test with Sobel Test

The Sobel test is a test to determine whether the relationship through a mediating variable is significantly capable of acting as a mediator in the relationship. The Z value can be obtained using the mediation tool test which also produces a probability value so that it can be compared with the level of significance in emphasizing whether the mediator variable is able to mediate between the three independent variables (X1, X2 and X3) and Y. The results of the sobel test can be seen in the table 4.

From the Sobel test calculation, we get a Z value (Sobel test) of  $0.61 < 1.96$  with a Probability Value of  $0.54 > 0.05$  (significance level), thus proving that Company Value (Z) is unable to mediate the relationship between Systematic Risk (X1) and Stock Return (Y). Company Value (Z) is able to mediate the relationship between the Economic Value Added variable (X2) and Stock Returns (Y). The Z value (Sobel test) is  $3.22 > 1.96$  with a Probability Value of  $0.001 < 0.05$  (significance level). and share returns through company value. The results of the Sobel test calculation show a Z value (Sobel test) of  $4.9849 > 1.96$  with a Probability Value of  $0.00 < 0.05$ , thus proving that Company Value (Z) is able to mediate the relationship between Financial Distress (X3) and Stock Returns (Y).

**Table 4. Sobel Test Results**

Risiko Sistematis (X1) dengan Return Saham (Y)			
Variabel	Nilai	Hasil Sobel Test	Nilai <i>p-Value</i>
<i>a</i>	0.0022	0.6081	0.5431
<i>b</i>	0.2922		
SE <i>a</i>	0.0036		
Se <i>b</i>	0.0477		
Economic Value added (X2) dengan Return Saham (Y)			
Variabel	Nilai	Hasil Sobel Test	Nilai <i>p-Value</i>
<i>a</i>	4.21E-11	3.22472886	0.00126092
<i>b</i>	0.2922		
SE <i>a</i>	1.11E-11		
Se <i>b</i>	0.0477		
Financial Distress (X3) dengan Return Saham (Y)			
Variabel	Nilai	Hasil Sobel Test	Nilai <i>p-Value</i>
<i>a</i>	-0.0446	4.984919	6.2E-7 (0.00000062)
<i>b</i>	0.2922		
SE <i>a</i>	0.0052		
Se <i>b</i>	0.0477		

## 4.2. Discussion

Based on multiple linear regression analysis, it shows that Economic Value Added (EVA) has a significant positive effect on Company Value (Z). The measurement produces an EVA value that increases every year followed by an increase in the company's value. Previous research by Wedyanthi & Darmayanti (2016) stated that EVA has a positive and significant effect on company value. EVA shows a more realistic company value creation effort. This is a good managerial implication by fairly considering the expectations of shareholders and creditors so that the goal of maximizing company value is achieved.

Financial Distress has a significant negative effect on Company Value (Z). This means, if financial distress decreases, the company value will experience a significant increase. Research conducted by Dwiyantri and Annisa (2019) on manufacturing companies shows that Financial Distress has an effect on company value. This research uses the same method in assessing financial performance, namely the Altman Z score method by combining 4 types of ratios so that it is more detailed and accurate in assessing the company. Andriawan (2016) proves that the Altman method can be implemented in detecting the possibility of bankruptcy in manufacturing companies and influencing share prices.

The findings of this research reveal that company value has a significant positive effect on stock returns. This means that the higher the Company Value as proxied by Tobin's Q, the higher the Share Return. Tobin's Q does not only compare share prices with earnings or book value, but involves all company assets so that Tobin's Q is one of the most accurate measurement tools in measuring the condition of a company's investment opportunities or the company's growth potential. This is in line with research by Arif Kurniadi, Noer Azam, and Hendro Sasangko (2013) that company value as proxied by Tobin's Q has a significant positive effect on stock returns in the agricultural sector. Previous research by Vadieli and Hosseini (2012) explained that there was a significant relationship between Tobin's Q and stock returns.

Based on the results of statistical tests, it shows that there is an indirect influence of the EVA variable on stock returns. This is because EVA has a direct influence on company value as a mediating variable but has no influence on stock returns. When tested using the Sobel test, EVA has a more effective indirect effect on stock returns. It can be concluded that company value can mediate

the relationship between economic added value (EVA) and stock returns. The results of this research explain that when the EVA value increases, this indicates that the company's financial performance is able to create EVA for the company so that it will respond with an increase in company value.

Based on the results of statistical tests, it shows that there is an indirect influence of Financial Distress on stock returns. This is because Financial Distress has a significant negative effect directly on company value as a mediating variable but has no effect on stock returns. When tested using the Sobel test, financial distress has a more effective indirect effect on stock returns. This shows that there is perfect mediation in the relationship between financial distress and stock returns through company value. In accordance with Signaling Theory, information related to the financial situation that is free from Financial Distress can provide a positive signal for investors to invest so that the company value will increase. The further a company declines or moves away from bankruptcy, the better it reflects the company's financial management which influences share prices. A high share price reflects high company value, the company shows good growth so that there is an increase in share returns. Therefore, there is a cascading influence between Financial Distress, Company Value and Stock Returns.

## 5. CONCLUSION

Based on the results of hypothesis testing in this research, Economic Value Added (EVA) has a significant positive effect on Company Value, this means that if EVA increases, Company Value will experience a significant increase. However, EVA does not have a significant positive effect on stock returns in Property, Real Estate and Building Construction companies for the 2016 - 2020 period. Financial Distress as proxied by the Altman Z Score has a significant negative effect on Company Value, this means that if Financial Distress decreases, the Company Value will experience a significant increase. However, Financial Distress does not have a significant positive effect on stock returns. Company value has a significant positive effect on stock returns, this means that if company value increases, stock returns will experience a significant increase. Company Value can mediate the relationship between Economic Value Added (EVA) and Financial Distress with stock returns. These two independent variables have a more effective indirect effect on stock returns when mediated by Company Value.

For the company, it is necessary to consider economic added value or Economic Value Added (EVA) as a more realistic method of measuring financial performance because it takes into account the cost of capital which can explain whether the company is able to generate profits in excess of its capital level so that it can increase the value of the company and have an impact on the rate of return on shares also exceeds the level of capital. Furthermore, this research shows that the independent variables, namely Systematic Risk, Economic Value Added (EVA), and Financial Distress partially do not have a direct influence on stock returns, so there are many ratios or other financial performance measures that need to be considered in influencing stock returns.

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