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## The Effect of Investment Risk and Company Size On Stock Returns

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**Abstract.** This study aims to analyse and provide empirical evidence of the effect of investment risk and company size on stock returns. This type of research is quantitative associative using secondary data taken from the IDX website, company website, finance yahoo website, and PEFINDO beta stock website. The population in this study is textile and garment industry companies listed on the Indonesia Stock Exchange for the 2015-2020 period. The sample selection procedure in this study was to use the purposive sampling method, only 72 company data met the criteria. The data analysis technique used is multiple linear regression analysis using Eviews version 9.0. The results of this study state Systematic Risk and Company Size affect Stock Returns, while Business Risk and Financial Risks have no effect on Stock Returns; Systematic Risk, Business Risk, Financial Risk, and Company Size simultaneously affect Stock Returns.

**Keywords:** Systematic Risk; Business Risk; Financial Risk, Company Size; Stock Returns

### A. INTRODUCTION

The economic uncertainty that has arisen in recent years, leaves an impact on developing countries, especially Indonesia. The economic slowdown experienced by Indonesia in 2015 due to the impact of the global economic crisis affected industrial growth, one of which was the textile and garment industry. Unstable and unpredictable economic conditions are one of the factors causing the decline in business activities that occur in the capital market in this country. Investors as market participants certainly expect maximum returns or returns from the investments made. Investing in stocks carries risks and investors need to look for financial measures that have a significant impact on stock returns (Jogiyanto, 2003). Investors invest their funds by buying shares in the company to maximize profits in the form of expected returns. And this return is the result that investors get (Fahmi, 2012:189). Although the investor does not yet know the exact result that will be obtained, this circumstance means that the investor will face risks in the investments he makes by considering how much profit is expected and what the possible difference is between the actual return received and the expected return.

Investors need clear information to assess the ability of a company to run its business. One of the sources of information that is indispensable for the basis of investment

decision-making is financial statements. The Financial Statements based on PSAK no.1 consist of several components, namely: a statement of financial position at the end of the period, a comprehensive income statement during the period, a statement of changes in equity during the period, a statement of cash flows at the end of the period, a note to the financial statements containing a summary of important accounting policies, other explanatory information and a comparative statement of financial position. The purpose of people investing is basically to get a more decent life in the future, protection, and a sense of security to develop their funds. Unsystematic risk is a risk that occurs from within the company itself or several similar issuers related to the liquidity of the company's shares. So that to collect funds from investors or the public, the company is obliged to maintain the company's financial condition properly and commemorate the company's liquidity, leverage, profitability, and performance.

Systematic risks are closely related to the company's share price. To measure this risk can use a beta value that describes the expected return of the stock. Beta ( $\beta$ ) is the right gauge of a market index because the risk of well-diversified security is largely determined by the sensitivity of each stock to market changes, namely the beta ( $\beta$ ) of the stock. Beta ( $\beta$ ) is security in response to market profit movements, the higher the beta level, the higher the risk that cannot be eliminated due to diversification. Beta ( $\beta$ ) is also a systematic risk gauge, which is a measure of the volatility of a security's return or portfolio return to market returns. Investment risk analysis can be carried out on systematic risks or commonly called market risks. Return and risk are two things that cannot be separated, because the consideration of investment is trades off of these two factors and has a positive relationship, the greater the risk that must be borne, the greater the return compensated (Tandelilin, 2010). Stock Beta numbers, there are positive and negative, if the beta is positive, then the movement of the stock price is in the same direction as the movement of the market index. If Beta  $<1$  in the long run the volatility of the stock's return will be in the same direction as the market index, but with less volatility (Ayu dan Gerianta, 2018). Company size is a scale to classify the size of a company as measured by total assets, the number of sales, and share value (Risma dan Regi, 2017). Also describes the size of a company which is indicated by the total assets or the number of sales and a reflection of the total assets owned by the company. The greater the total assets, the number of sales or capital of a company, the greater the size of a company (Susilo, 2012 ;06).

The Textile and Garment Industry is regulated in the Regulation of the Ministry of Industry No. 970 of 2019 (<http://jdih.kemenperin.go.id/>). Textile industry companies have good prospects as investment targets because the output of this industry is favored and needed by all circles of society and has a demand that tends to be stable despite the economic crisis. Investors see that the textile and garment sector industry is a relatively safe sector to do business in the manufacturing industry because is able to boost exports and make a large contribution to the national economy. Although in the past five years the exports of this industry have grown by only 1%, the textile and garment industry is still the third largest manufacturing sector. Textile and garment consumption is believed to continue to grow along with population and lifestyle growth. National textile and garment industry players taking advantage of this moment must work hard to increase productivity, quality, and efficiency through the application of more modern technology in the digital world.

The movement of stock prices on the Indonesia Stock Exchange shows how much interest investors are in buying shares of each Textile and Garment Industry company in Indonesia. The fluctuating movement of stock prices in each company indicates that the purchase of shares from investors will certainly pose risks. In The Industry and Garments, risk factors will continue to be seen along with changes in the industry itself or the dynamics

of the company, but the company's risk management always manages so that the company can continue to grow and develop.



Measures to overcome emerging risks need to be strengthened so that the stability of the company's financial system is maintained. A stable financial system is certainly resistant to economic shocks so it can make payments and control risks correctly. This risk control is carried out by companies to provide comfort and satisfaction to investors, therefore many financial experts analyze the correlation between returns and risks. In a perfect market, the law of a positive relationship between return and risk applies. The higher the return the higher the risk. Return is the profit obtained by companies, individuals, and institutions from the results of investment policies made.

## B. LITERATURE REVIEW

### 1. Systematic risks

The relevant risk is considered for investors in decision making, namely systematic risk because investors can eliminate unsystematic risks through the formation of an investment portfolio, while systematic risk cannot be avoided because it has a nature that has a relatively similar effect on all stocks in the market so that this risk is also called market risk. This study uses Beta Market where Beta which is calculated with market data is called market beta. The equation produced by the data will produce a beta coefficient that is assumed to be stable over time during the period of observation. The longer the observation period used in the regression equation used to estimate beta can use the single index model or the CAPM model. CAPM is the relationship between risk and the level of profit expected by a company.

To obtain the Beta value we use a regression model between the market return and the stock return of each company. In this case, beta is a measure of the systematic risk of the enterprise estimated by the market model. The beta coefficient is obtained from the regression between stock returns and market returns as used in the study (Idrus, 2017; Niar, 2015). Beta can be calculated by the following formula:

$$R = \alpha + \beta R_{mt} + \varepsilon$$

- $R_i$  : Return Saham Individual  
 $\alpha_i$  : Variabel acak yang menunjukkan komponen return saham ke-  $i$   
 $\beta_i$  : Beta Saham (indikator/koefisien risiko sistematis)  
 $R_m$  : Tingkat *return* dari indeks pasar

### Pefindo Beta Stock

Stock beta is a statistical measure of the sensitivity of a certain level of volatility of a stock's return to market volatility. Stock beta is one of the components needed in calculating the discount rate, to calculate the valuation of stock prices with the income approach and the Capital Asset Pricing Model method. For investors who use a fundamental approach, it is suitable to use the PEFINDO beta stock report. PEFINDO stock beta report was created to provide additional information for capital. The company is based on the definition of capital, which corresponds to the definition of capital, and uses an asset pricing model. The stock beta report can provide additional information on the systematic risk of stocks compared to the Jakarta Composite Index. The beta value in PEFINDO's beta stock report is determined by the following criteria and methodology:

has been listed and traded on the Indonesia Stock Exchange for at least 36 months. Raw is not negative, intervals are based on time series data for the past 3 years with rolling returns. For 4 weeks. Beta = 1 in the long run the volatility of a stock's return will be in the same direction as the market index, with volatility equal to market volatility.

## 2. Nonsystematic Risks

### 3.

#### a. Business Risk

It is an uncertainty inherent in the projected return on invested capital, uncertainty in the company's future operating income forecast. Business risk according to Philanthropist (2007:152) risk of uncertainty in the level of EBIT to be obtained.

According to Brigham and Houtson (2001:10), operating leverage is how much-fixed costs are used in the operation of a company. Irawati (2006: 173) stated that operating leverage is the use of assets with fixed costs which aims to generate sufficient income in order to cover fixed costs and variable costs and can increase profitability. Hanafi (2004:327) states Operating Leverage is defined as how much a company uses fixed operating expenses. This indicates that operating leverage relates to the sale of the company and profit before interest and taxes. The operating leverage measure of the operating leverage level is called the Degree of Operating Leverage (DOL). To calculated by the following formula:

$$DOL = \frac{\% \text{ perubahan EBIT}}{\% \text{ perubahan Penjualan}}$$

DOL : Degree of Operating Leverage (tingkat operasi leverage)

% Perubahan EBIT : Laba tahun  $t$  – laba tahun  $t-1$

% Perubahan : Penjualan tahun  $t$  – penjualan tahun  $t-1$

Sales

#### b. Financial Risk

Financial risk is a risk that arises from the internal company, this risk is also called unsystematic risk. Financial Risk according to Brigham and Houston (2006) is the increase in risk borne by shareholders above the company's business risks caused by the use of financial leverage. Financial leverage occurs due to existing debt in the company. Leverage is also commonly called leverage ratio which is used to measure how good an investment structure a company is. The measure commonly used to measure the high and low financial

risk of a company is to use the Debt to Equity Ratio (DER) ratio. Debt to Equity Ratio (DER) is an indication of the relationship between the number of long-term loans provided by creditors and the amount of own capital provided by the owner of the company and this is used to measure the financial leverage of a company (Syamsudin, 2004:54). Calculating the Debt to Equity Ratio, which is the division between the company's debt and shareholders' equity. The debt to equity ratio formula (Brealy, 2001 in Michell Suharli, 2005) is:

$$\text{Debt To Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\%$$

DER : Rasio Hutang dibanding Modal  
 Total Debt : Total Hutang Perusahaan  
 Total Equity : Total Modal Pemilik Perusahaan

### c. Company Size

The variable size of the company can be measured through the size of assets, net sales, and market capitalization. Usually, companies in meeting the information needs of their creditors or investors, and companies that grow up have other greater obligations that can be seen from a more detailed annual report (Subiyantoro, 1997). The size of the company that describes the size of a company can be seen from the size of the capital used, the total assets owned or the total sales obtained (Windy and May, 2018). The size of a company is measured using the natural logarithm of the whole or total assets of the company. The form of the logarithm is generally used because the asset value of a company is very large, therefore it is necessary to uniformize the value with other variables the value of the sample asset is then first changed to the form of a logarithm. The size or not of a company can be seen from the total assets owned by a company, because the company's total assets are worth billions of rupiah, it needs to be simplified by transforming into a natural logarithm (Ln). Natural logarithms are used to reduce the significant difference between the size of a company that is too large and the size of a company that is considered small, therefore from the number of assets, a natural logarithm is formed which aims to make data on the number of assets distributed normally (Mita, 2018).

$$\text{Size} = \text{Log } n \times \text{total asset}$$

Size : Ukuran Perusahaan  
 Ln : Logaritma Natural  
 TA : Total Aktiva

### 4. Stock Returns

According to Jogiyanto (2009: 199), returns are the results obtained from an investment. The difference between the selling price of shares and the purchase price of shares plus other cash (for example dividends) is called stock returns. Stock returns can be positive and they can also be negative. According to (Fahmi, 2012) return is the profit obtained by companies, individuals, and institutions from the results of investment policies made. Eduardus Tandelilin (2001; 47) stated, "Return is one of the factors that motivate investors to interact and is also a reward for the investor's courage to bear the risk for the investment he makes". The return obtained from this share ownership can be in the form of dividends or capital gains (losses). Dividends are profits obtained by the company that is distributed to shareholders according to the number of shares they own (Baridwan, 2005).

Dividends consist of two, namely cash dividends whose distribution is in the form of cash in a certain amount for each share, and non-cash dividends whose dividend distribution



is in the form of additional new shares owned by shareholders. Meanwhile, in capital gains (loss) the difference is more (less) between the purchase price of shares and the selling price of shares (Rusdin, 2006). Return is the rate of return that can be owned by investors due to an excess investment. Without the profit obtained from an investment, of course, investors will not want to invest. Stocks are one of the investment instruments that many investors have to get a return on investment. Stock return is the sum of two components, namely current income, and capital gains or losses (Susilowati and Turyanto, 2011).

Investment income in these stocks is the profit obtained from buying and selling shares, where the profit is called capital gains, and if not profit/loss is called a capital loss. In the financial statements, it is known that the closing price of the company every year and the closing share price of this most textile and garment industry companies there is stagnant at the same price. (www.idx.co.id). To calculate the return on a stock use the formula:

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

$P_{it}$  : Harga Penutupan Saham pada periode t

$P_{it-1}$  : Harga Penutupan Saham pada periode sebelumnya

## Research Hypothesis

### *Effect of Systematic Risk on Stock Returns*

Systematic risk is a risk that affects all companies and cannot be minimized or eliminated through diversification of asset portfolio formation. The parameter that can be used to measure the level of systematic risk of an enterprise is beta. Beta shows the sensitivity of securities' returns to changes in market returns (Yusma and Holiawati, 2019; Niar, 2013). The higher the beta of a security, the more sensitive it is to market changes.

*H1 : It is suspected that there is a positive influence of systematic risks on stock returns.*

### *Effect of Business Risk on Stock Returns*

The uncertainty inherent in the projected return on invested capital, the uncertainty in the company's future operating income forecast is called business risk. Business risk according to Philanthropist (2007:152) is the risk of uncertainty of the EBIT level to be obtained. To achieve the desired level of profit, companies must consider business risks (Zainuddin et al., 2014)

*H2 : It is suspected that there is a positive influence of business risk on stock returns.*

### *The Effect of Financial Risk on Stock Returns*

Financial risk is a risk that arises from the internal company, this risk is also called unsystematic risk. Financial Risk according to Brigham and Houston (2006) is the increase in risk borne by shareholders above the company's business risks caused by the use of financial leverage. Financial leverage occurs due to existing debt in the company. Leverage is also commonly called leverage ratio which is used to measure how good an investment structure a company is.

*H3 : It is suspected that there is a positive influence of financial risk on stock returns.*

### *The Effect of Company Size on Stock Returns*

Company size is a scale on which a company can be classified in various ways, including: total assets, total sales, total capital, market capitalization value, log size, stock market value, and others. According to Yuliantarai and Sujana (2014), the size of the Company is obtained by cataloguing the total asset value of the issuer. Research conducted by Prasetyo (2018) and Kadek, Dwiana (2016) stated that the size of the company has no effect on stock returns and this research supports research conducted by Setyono (2016). Meanwhile, research conducted by Ulan Dewi and Sudiarta (2019) on beverages and foods

companies states that the size of the company has a positional effect on stock returns. And this shows that the bigger and more established a company will have a greater chance of becoming a capital market. And the larger the size of the company, the more able it is to increase the return on the company's shares. The results of this study are also in accordance with research conducted by Devi Kusumayanti (2014) and Andika and Sujana (2016). Based on the above exposure, the hypothesis that will be proposed is:

*H4 : Company size positively affects Stock Returns.*

### C. RESEARCH METHODOLOGY

#### Design and Object of Research

This research includes quantitative associative analysis because this research refers to the calculation of data in the form of numbers to describe the state of the company and then analyzed based on existing data. This research is ex-post facto research, a study conducted to examine events that occur, then trace back to find out the factors that can give rise to these events (Sugiyono, 2011). The object of research is the influence between independent and dependent variables on textile and garment companies listed on the IDX in 2015-2020.

#### Research Variables

##### Independent Variables (Free Variables)

##### 1. Systematic Risk

Systematic Risk is a risk that is marketed as a whole related to the changes that occur. Systematic risk can be seen by beta coefficients which are coefficients used to measure changes in individual stocks due to market shifts.

$$R_i = \alpha_i + \beta_i \cdot R_m$$

##### 2. Business Risk

Business risk is a risk with a level of uncertainty that is closely related to the income of an investment and the ability of an investment to pay a certain amount of return (interest, principal, dividend) to investors.

$$DOL = \frac{\% \text{ Perubahan EBIT}}{\% \text{ Perubahan Sales}}$$

##### 3. Financial Risk

Financial Risk is an increase in the risk borne by shareholders in addition to business risks resulting from the use of debt or financial leverage (Brigham and Houston, 2006). The DER ratio is used to measure the amount of debt-to-equity used by a company. A high Debt to Equity ratio will have a bad impact on the company's performance, because the higher the debt level, the greater the interest expense that can reduce profits.

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\%$$

##### 4. Company Size

The variable size of the company can be measured through the size of assets, net sales and market capitalization. Usually companies in meeting information needs for their creditors or

investors, large-growing companies have greater liabilities than others which can be seen from a more detailed annual report (Subiyantoro, 1997).

$$Size = Ln (TA)$$

The research method is written in the form of flowing paragraphs (no numbering is made). Research method Describes the research design used (methods, types of data, data sources, data collection techniques, data analysis techniques, variables and variable measurement)

### Data Collection Sources and Techniques

In this research, researchers collected data in the form of quantitative data, namely data measured on a numerical scale. The type of data used is secondary data. This secondary data is primary data that is processed first, for example in the form of tables, graphs, diagrams, drawings and so on so that other parties who use it can be more informative (Umar, 2003). The www.idx.co.id site is the site where the researcher obtains secondary data.

### Population And Sample

The population of 19 textile and garment industry companies listed on the IDX in 2015-2020, the sample used the purposive sampling method so that only 12 (twelve) companies were contained in this study.

### Design Analysis and Hypothesis Test

In quantitative research, data analysis is an activity after data from all data sources are collected. The analysis method used is in a descriptive quantitative way that describes the data obtained using linear regression analysis to describe the phenomena and characteristics of a data, which is to provide an overview of the influence of systematic risks, business risks, financial risks and company size on stock returns. The data method is analyzed using the eviews application program version 9.0.

## D. RESULTS AND DISCUSSION

### Descriptive Analysis

Before further analyzing the estimated effect of systematic risk, business risk, financial risk and company size on stock returns, it is necessary to describe each of the variables used in this study. The description of the statistical data of all variables can be shown in the following table 1 :

Tabel 1 : Analisis Deskriptif

<u>Sample : 2015-2020</u>					
	Return Saham	Risiko Sistematis	Risiko Bisnis	Risiko Finansial	Ukuran Perusahaan
Mean	0.02	0.31	1.74	3.04	21.14
Median	0.00	0.00	0.50	1.48	20.39
Maximum	0.67	10.56	111.566	114.289	27.778
Minimum	-0.23	-2.164	-57.620	-5.115	14.298
Std. Dev	0.15	1.603	15.578	13.588	3.860
<b>n = 72</b>					

Source : Output Eviews Statistik v9.0, 2021



Based on the table above, it shows the number of observations as many as 72 data obtained from the multiplication of the time series of 6 years with the number of samples of textile and garment industry companies 12 companies listed on the Indonesia Stock Exchange obtained the average value, middle value, maximum value, minimum value and standard deviation of each research variable. The following is the description of each of them:

- a. The table above shows the variable Y Return Shares have a minimum value of -0.238800 owned by PBRX companies in 2019, it means that the minus value of PBRX company stock returns indicates Capital Lost or loss and the maximum value of 0.678000 owned by STAR 2019 companies is positive value indicating getting a profit or Capital Gain. Stock Return has an average value of 0.020617. The average is smaller than the standard deviation of 0.154530 indicating that the stock return variable has a low level of data variation.
- b. The table above shows the variable X1 Systematic Risk has a minimum value of -2.164200 owned by an ERTX company, a minus value indicates that the shares of this ERTX company have a market movement opposite to the market direction and a maximum value of 10.56990 owned by a STAR company indicates that the stock has a very responsive or aggressive movement to the market. Systematic Risk has an average value (mean) of 0.314950 which indicates that the stock price in the textile and garment industry has a sensitivity that is in the same direction as the market return. This shows that if the market return has a positive trend, it will also be followed by an increase in the individual return of the stock while the company's systematic risk deviation standard is 1.603496.
- c. The table above shows the variable X2 Business Risk has a minimum value of -57.62068 owned by TRIS companies in 2020, it means that the EBIT value of TRIS companies minus or experiencing losses in 2020 and a maximum value of 111.5664 owned by SSTM 2018 companies with a positive value indicates that the EBIT or Sales in 2018 are greater. Business Risk has an average value of 1.747743. The standard deviation of 15.57867 is greater than the average value indicating a large variation in business risk variable data.
- d. The table above shows the variable X3 Financial Risk has a minimum value of -5.115834 owned by ARGO companies in 2015, it is interpreted that the value of the Debt to Equity Ratio of ARGO companies minus indicates that argo companies in 2015 are not healthy because they experience accumulated losses that exceed their equity and a maximum value of 114.2896 owned by MYTX 2020 companies of positive value indicates that this company is healthy and able to pay its obligations if this company is liquidated. Financial Risk having an average value of 3.041385 indicates that the ratio of long-term debt to equity is 30.4%. A standard deviation of 13.58830 that is greater than the mean indicates a deviation that occurs or a large gap between the maximum value and the minimum value.
- e. The table above shows the variable X4 Company Size has a minimum value of 14.29779 owned by MYTX companies in 2016 and a maximum value of 27.77762 owned by TRIS 2018 companies. The average value is 21.14689 and the standard deviation is 3.860982. The size of the company shows the magnitude of the company size existence ratio on average 21.14% that on average the presence of the company size in the company is 21.14%.

## 1. Testing and Data Analysis Results

### a. Chow Test

Table 2 : Chow Test

Redundant Fixed Effect Test			
Effect Test	Statistic	d.f	Prob
Cross-section F	0.788441	(11.56)	0.6503
Cross-section	10.367256	11	0,4977

n = 72

Source : Output Eviews Statistik v9.0, 2021

Based on the chow-test conducted above, the chosen method is the common effect method. However, this is not the final result of data processing because it has not been statistically tested. Then it is necessary to look at the existing results from other methods, namely the common effect method by testing using the langrange test.

### b. Hausman Test (Fixed effect vs Random Effect)

Table 3 : Hausman Test

Correlated Random Effect- Hausman Test			
Test Summary	Statistic	d.f	Prob
Cross-section random	1.083597	4	0.8969

n = 72

Source : Output Eviews Statistik v9.0, 2021

And if the Hausman test is still carried out, the Prob Chi Square is seen in the table  $> 0.05$  , so this model cannot be used.

### c. Langrange Multiplier Test

Table 4: Langrange Multiplier Test

Langrange Multiplier Tests for Random Effect			
	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	0.401370	2.312011	2.713380
	(0.5264)	(0.1284)	(0.0995)

n = 72

Source :Output Eviews Statistik v9.0, 2021

Based on table 4 above, the p value is shown by a number of  $0.0995 > 0.05$ , so that the langrange multiplier test shows that accepting  $H_0$  means a temporary conclusion in this study that the best estimation method is the common effect model.

### d. Conclusion of the model

The following is the conclusion of the estimation results of the three models, namely fixed effect, common effect and random effect shown in table 5 as follows:

Table 5 : Panel Data Regression Model Testing Conclusions

No	Metode	Pengujian	Hasil
1.	Chow-Test	Common Effect vs Fixed Effect	Common Effect
2.	Hausman Test	Fixed Effect vs Random Effect	Random Effect
3.	Langrange Multiplier (LM-test)	Common Effect vs Random Effect	Common Effect

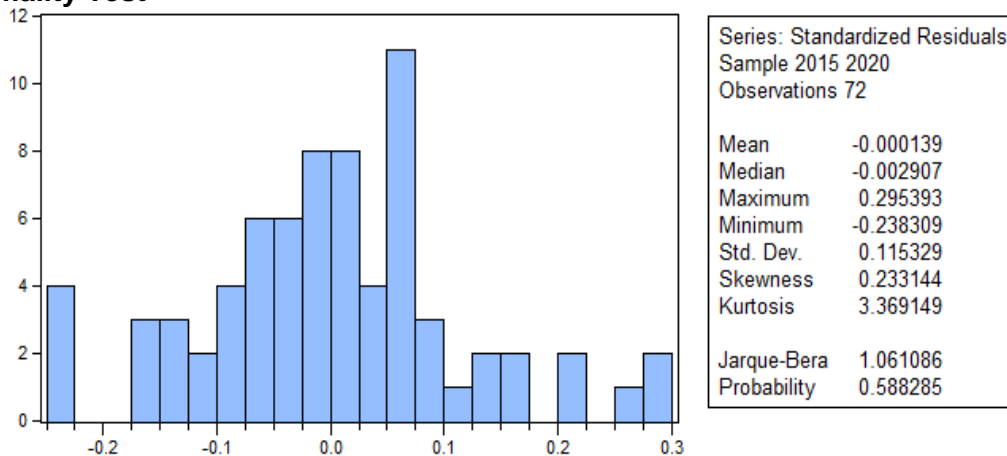
Source : The conclusion of the panel data regression estimate

Based on paired tests of the three panel data regression models, the chow test showed that the best panel data regression estimation results were common effects, while the langrange multiplier test showed the best estimation results were common effects as well. In this study, the researcher concluded that the common effect method is the best estimation method compared to other methods, because the chow test shows the same results stating that the common effect method is the best model estimate that will be used further in estimating the effect of investment risk and company size on the return of stocks sampled in this study during the period 2015-2020.

## 2. Regression Model Assumption Test Results

After determining the data panel regression model to be used, the next step is to test and fulfill the assumptions needed to test a data panel. This test uses a panel data regression model, so the problems that may occur in this model are inseparable from 4 violations of assumptions, namely normality, autocorrelation (autocorrelation), multicholinearity (multicollinearity) and heterokedasticity (heterocedasticity).

### a. Normality Test



Picture 1 : Normality Test

Source :Output Eviews Statistik v9.0, 2021

The normality test based on the Jarque-Fallow probability value (JB) can be declared normal if the probability value  $> 0.05$ . And from the results of processing the data obtained the probability value is  $0.588285 > 0.05$ , it can be concluded that the data from the model is normally distributed.

## b. Multicollinearity Test

Table 6 Multikolinieritas Result Test

	Risiko Sistematis	Risiko Bisnis	Risiko Finansial	Ukuran Perusahaan
Risiko Sistematis	1.000000	-0.13256	-0.035502	0.121465
Risiko Bisnis	-0.132564	1.000000	0.003394	0.054420
Risiko Finansial	-0.035502	0.003394	1.000000	-0.241231
Ukuran Perusahaan	0.121465	0.054420	-0.241231	1.000000

n = 72

Source :Output Eviews Statistik v9.0, 2021

From the results of the Eviews output in table 4.6 above, it shows that there is no independent variable that has a correlation coefficient above 0.80 so it can be concluded that the data is free from multicollinearity problems.

## c. Autocorrelation Test

Table 7. Autocorrelation Test Result

Test	Statistic
Durbin-Watson	2.130948

n = 72

Source :Output Eviews Statistik v9.0, 2021

Based on the table above, the value of Prob.Chi-squared (which is Obs\*R-squared) is 2.130948 > 0.05 then there is no autocorrelation problem. And with the detection of the Durbin Watson test (Ali, 2016), if  $(4-dw) > dU$  then there is no negative autocorrelation. Based on table 4.7 above that the dw value is  $(4-2.130948) = 1.869052 > DU: 1.73664$  it can be concluded that the data does not have negative autocorrelation.

## d. Heteroskedasticity Test

Table 4.8 Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.535789	Prob. F(4,67)	0.7099
Obs*R-squared	2.231707	Prob. Chi-Square(4)	0.6932
Scaled explained SS	7.273519	Prob. Chi-Square(4)	0.1221

n = 72

Source :Output Eviews Statistik v9.0, 2021

Breusch- Pagan-Godfrey results show that the value of F- statistics is greater than that of Alpha (0.05) which is 0.535789 > 0.05 so it can be concluded that there is no heteroskedasticity problem in this data.

## 3. Analysis of Model Determination Test Results (Goodness of Fit)

### a. Coefficient of Determination (R2)

The coefficient of determination test (R2) is a test carried out to measure how far the model's ability to explain the variations in dependent variables is. The higher the coefficient of determination (R2) the higher the ability of the independent variable to explain the dependent variable. The value of the coefficient of determination is between zero and one. A small R2 value means that the ability of independent variables to explain dependent

variables is very limited. However, if the R2 ratio is close to one, it means that the independent variable can provide all the information needed to predict the variation of the dependent variable (Gozali, 2016). The following are the results of the determination coefficient test in the data of this study using Eviews 9.0 which is shown in table 4.9 as follows:

**Table 9. Coefficient of Determination Test Result (R2)**

	R Square	Adjust R Square	S.E of Regression
Y	0.413809	0.378812	0.121794
n = 72			

Source :Output Eviews Statistik v9.0, 2021

The Adjusted R-squared value of 0.378812 > 0.05 means that the variation in Y (Stock Return) can be explained by the variables Systematic Risk, Business Risk, Financial Risk and Company Size of 38%, while the rest (100% - 38% = 62%) is explained by other variables outside the model.

#### b. Overall Significance Test (Statistical Test F)

**Table 10. Overall Significance Test (Statistical Test F)**

Model	F Statistic	Prob (F-Statistic)	Kesimpulan
Regression	11.82429	0.000000	<u>Signifikan</u>
n = 72			

Source :Output Eviews Statistik v9.0, 2021

In table 10 above, you can see the value of F count 11. 82429 > F table 2.51 and prob (F-statistic) value of 0.000000 < 0.05, it can be concluded that the prob regression coefficient (F-Statistic) of 0.00 < 0.05 so that the variables Systematic Risk (Beta), Business Risk (DOL), Financial Risk (DER) and Company Size (Size) together (simultaneously) affect stock returns (RS).

#### c. Individual Significance Test (Statistical Test t)

**Table 11. Individual Significance Test (Statistical Test t)**

Variabel	Coeffient	Std. Error	t-Statistik	Prob.
Risiko Sistematis	0.052520	0.009087	5.779468	0.0000
Risiko Bisnis	1.10E-05	4.49E-05	0.244363	0.8077
Risiko Finansial	-0.000125	0.001097	-0.113561	0.9099
Ukuran Perusahaan	0.011021	0.003909	2.819019	0.0063
N = 72				

Source :Output Eviews Statistik v9.0, 2021

Based on Table 11 above the testing of variables X1 (Beta), X2 (DOL), X3 (DER) and X4 (size) against Y(Stock Return) resulted in:

1. Systematic Risk Variables to Stock Returns show the result of the calculated t value > t table (5.779468 > 1.995) with a probability value of 0.0000 < 0.05 then the systematic risk can be concluded to have a significant positive effect on the Return of this stock meaning that hypothesis 1 is accepted.
2. The Business Risk Variable to Stock Return shows the result of the calculated value of > t table 0.244363 < 1.995) with a probability value of 0.80 > 0.05 then the systematic risk can be concluded not affects stock returns which means that hypothesis 2 is rejected.
3. The Variable Financial Risk to Stock Returns shows the result of the calculated t value > t table -0.113561 < 1.995) with a probability value of 0.90 > 0.05 then the systematic risk can be concluded to have no effect on the Return of the stock which means that hypothesis 3 is rejected.



4. The Variable Company Size to Stock Return shows the result of the calculated t value  $> t$  table  $2.819019 > 1.668$  with a probability value of  $0.00 < 0.05$  then the systematic risk can be concluded to have a significant positive effect on the Return of this stock means that hypothesis 4 is accepted.

This study aims to reveal the effect of Investment Risk and Company Size on Stock Returns with a predetermined hypothesis after a hypothesis test is carried out, then the explanation of each variable will be described as follows:

### **1. Effect of Systematic Risk ( $\beta$ ) on Stock Returns**

Alternative 1 (H1) states that systematic risk has a positive effect on Stock Returns. The results of the regression test showed that the Systematic Risk variable has a calculated t value result  $> t$  table ( $5.779468 > 1.995$ ) with a probability value of  $0.0090 < 0.05$  then the systematic risk can be concluded to have a positive effect on stock returns. This suggests that H1 is supported so that hypothesis 1 is accepted. And the results of this study show that systematic risk has a positive and significant effect on Stock Returns. Consistent with the results of research conducted by Niar 2015 which states that investment risk has a positive and significant effect on stock returns. And this result is in accordance with the theories put forward that the higher the market risk / beta, the higher the return obtained by the company (high risk high return).

The conditions experienced by a company caused by changes in market conditions and situations beyond the company's control (Fahmi, 2010;69) and the market risk of a stock are determined by Beta ( $\beta$ ).

### **2. Effect of Business Risk (DOL) on Stock Returns**

Alternative 2 (H2) states that business risk has a positive and significant effect on Stock Returns. The results of the regression test showed that the Business Risk (DOL) variable had a calculated t value of  $< t$  table  $0.244363 < 1.995$  with a probability value of  $0.80 > 0.05$  then the business risk can be concluded to have no effect on stock returns. This suggests that H2 is not supported so hypothesis 0 is accepted and hypothesis 2 is rejected.. And the results of this study show that systematic risks have no effect on Stock Returns. In line with research conducted by As'ad, s. (2018) which states that Degree Operating Leverage has no effect on Stock Returns.

Operating leverage shows the effect of revenue or sales on the company's operating profits. Knowing the level of operating leverage, management can assess changes in operating profit as a result of changes in sales. This indicates that operating leverage relates to the sale of the company and earnings before interest and taxes have no effect on the number of shares acquired. Sales growth indicates the company's ability to generate profits, this will increase investor confidence to invest. With a lot of demand for the company's shares, the stock price will increase, so it will increase the return on shares for the company's shareholders. As'ad, s. (2018) also stated that operating leverage does not contribute to stock returns because the companies studied are not companies whose capital is very high and has a small workforce.

### **3. Effect of Financial Risk (DER) on Stock Returns**

Alternative 3 (H3) states that business risk has a positive and significant effect on Stock Returns. The results of regression testing show that the variable X3 (DER) against Y (Stock Return) shows the result of the calculated t value  $< t$  table  $-0.113561 < 1.995$  with a probability value of  $0.90 > 0.05$ , then financial risk can be concluded to have no effect on stock returns. In line with research conducted by Ulan Dewi and Siduartha (2019) which states that Leverage (DER) does not have a significant effect on stock returns.

In her research, Ulan Dewi and Siduartha (2019) stated that Leverage is a relationship between the company's debt to capital and assets. Debt to Equity Ratio (DER) is a ratio that compares total debt with total own capital.

#### **4. Effect of Company Size on Stock Returns**

Alternative 4 (H4) states that the size of the company has a positive and significant effect on Stock Returns. The results of the regression test showed that the variable X4 (Size) against Y (Stock Return) showed the result of the calculated t value  $> t$  table  $2.819019 > 1.995$  with a probability value of  $0.00 < 0.05$ , then the size of the company can be concluded to have a significant positive effect on stock returns. In line with research conducted by Ulan Dewi and Siduartha (2019) which states that the size of the Company has a positive effect on stock returns. Although in research conducted by Setiyono and Amanah (2016) stated that the Size of the Company has no effect on stock returns.

Ulan, Dewi and Siduartha (2019) also stated that the size of the company shows that the bigger and more established a company will have a greater opportunity to the capital market, and vice versa.

The more efficient the market, the more convincing the information about increasing the size of the company will be able to increase stock returns. When viewed from the relationship, the size of the company and stock returns have a positive relationship (unidirectional). The statement shows that the larger the size of the company can result in the company's stock returns increasing as well. The results of this study show that the size of the company is able to increase stock returns.

#### **5. Effect of Systematic Risk ( $\beta$ ), Business Risk (DOL), Financial Risk (DER) and Company Size (Size) on Stock Returns**

Based on the results of the study described from the results of simultaneous tests, it is known that F counted 11.82429 while F table was 2.507. So F calculates the  $> F$  of the table which is  $11.82429 > 2.507$  and the significance value of  $0.0000 < 0.05$ , so that H5 is accepted meaning that the variables of systematic risk, business risk, financial risk and company size have a significant effect on stock returns together (simultaneously).

### **E. CONCLUSIONS AND SUGGESTIONS**

The author made this study aimed to determine the effect of systematic risk, business risk, financial risk and company size on stock returns. Based on the discussion and research results, the following conclusions can be drawn: Based on the t-test, systematic risk affects stock returns, Based on the t-test, business risk has no effect on stock returns, Based on the t-test, financial risk has no effect on stock returns, Based on the t test, the size of the company affects the return on shares, based on the results of the F test, that systematic risk, business risk, financial risk and the size of the company together (partially) have a positive effect on stock returns.

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