

## How to Cite

Purnami, A. A. S., Giri, N. P. R., Jayanti, L. S. E., & Amertha, I. M. S. (2020). Effect of macroeconomic factors and fundamental factors of the stock systems risk in manufacturing companies in Indonesia stock exchange. *International Journal of Business, Economics & Management*, 3(1), 108-116. <https://doi.org/10.31295/ijbem.v3n1.137>

# Effect of Macroeconomic Factors and Fundamental Factors of the Stock Systems Risk in Manufacturing Companies in Indonesia Stock Exchange

## Anak Agung Sri Purnami

Warmadewa University, Denpasar, Indonesia

Corresponding author email: [agungpurnami@yahoo.com](mailto:agungpurnami@yahoo.com)

## Ni Putu Rediatni Giri

Warmadewa University, Denpasar, Indonesia

Email: [rediatnigiri@gmail.com](mailto:rediatnigiri@gmail.com)

## LGP Sri Eka Jayanti

Warmadewa University, Denpasar, Indonesia

## I Made Suniastha Amertha

Warmadewa University, Denpasar, Indonesia

Email: [msuniastha@gmail.com](mailto:msuniastha@gmail.com)

**Abstract**---The capital market trades a variety of securities, where the capital market has an important role in supporting the economy because the capital market can connect those who need funds with those who have funds. Stock is one of the securities that have a high risk. High risk in stocks is reflected in uncertain returns. If the investor wants a higher return, then he must also be prepared to bear a higher risk as well. For this reason, investors in investing in the capital market are very important to understand the factors that affect the systematic risk of shares both macroeconomic factors and corporate fundamentals. The purpose of this study is to determine the direct and indirect effects of macroeconomic variables and corporate fundamental factors on the systematic risk of shares in manufacturing companies on the Indonesia Stock Exchange. The population of this research is all companies in the manufacturing sector that are listed consistently on the Indonesia Stock Exchange from 2014 to 2018, and this study uses the stratified proportional random sampling method in determining the sample. Based on this method, the number of samples in this study was 20 manufacturing companies every year for 5 years. Macroeconomic and internal variables of the company are operated as independent variables, while the systematic risk is operated as the dependent variable. Direct and indirect effects of macroeconomic factors and corporate fundamental factors on systematic risk are carried out by path analysis. After analysis and discussion, the results are obtained that macroeconomic factors and corporate fundamental factors affect the systematic risk, both directly and indirectly. So, investors, potential investors, and issuers must pay attention to these two factors in investing, especially in the capital market as a consideration in minimizing systematic risk in investing in the capital market.

**Keywords**---corporate fundamentals, Indonesia stock exchange, macroeconomics, manufacturing companies, systematic risk.

## Introduction

The capital market has an important role in supporting the economy because the capital market functions as an institution that can connect parties who need funds with those who have funds. Besides, the capital market can

encourage the efficient allocation of funds because investors can choose investment alternatives that provide the most optimal return.

Investors who invest in stock securities not only take into account the returns obtained but the risks of the investments also need to be taken into account. Generally, the risk of investing in stock securities can be divided into two, namely systematic risk and unsystematic risk. Unsystematic risk can be eliminated by forming a good portfolio, but the systematic risk cannot be eliminated even by forming a good portfolio, because these risks occur outside the company. Variation of time and beta instability becomes a gap to do research and look for macroeconomic relationships and influencing company fundamentals (Thiede *et al.*, 2012; Gebauer *et al.*, 2011).

The objectives of this study are: (1) To determine the direct influence of macroeconomic factors on systematic risk in manufacturing companies on the Indonesia Stock Exchange. (2) To determine the indirect effect of macroeconomic factors on systematic risk in manufacturing companies on the Indonesia Stock Exchange. (3) To analyze the direct influence of fundamental factors of manufacturing companies on the Indonesia Stock Exchange (Soni & Chandak, 2017; Gebauer *et al.*, 2005).

## Research Method

### *Return Stock*

*Return Stock* is the level of profit received by an investor on an investment in shares made. According to Halim (2003), returns can be divided into two namely:

- a) Returns that have occurred can be realized returns
- b) The return which is expected to be in the form of return expectations

*Return* realization is calculated based on historical data. Realized return is important because it is used as one of the performance measurements of the company. This historical return is also useful as a basis for determining future expectations and risk returns.

### *Systematic Risk*

The systematic risk or better known as market risk is the risk associated with changes that occur in the market as a whole. In other words, systematic risk is a risk that cannot be diversified. The high or low systematic risk for companies as a result of changes in macroeconomic conditions is highly dependent on the company's internal conditions. A financially healthy company may not have a big impact, but for companies that are not healthy, their financial condition can be the opposite. Companies that are not the healthy financial condition will have difficulty developing their business, so that performance decreases, which in turn will reduce the value of the company (Sudiyatno, 2010).

According to Hartono (2013), Beta is a measure of the volatility of a security's return or portfolio's return to the market. Volatility can be defined as the fluctuation of a security's return over some time. Thus, beta is a systematic risk gauge from security to market risk. Beta can be calculated using historical data in the form of market data (securities returns and returns), accounting data (company profits and market index earnings), or fundamental data (using financial variables).

### *Macroeconomic Factors*

In conducting a security analysis, investors can carry out top-down fundamental analysis to assess investment prospects. The macroeconomic environment is an environment that can affect the company's daily operations (Krueger *et al.*, 2016; Bertola, 2000; Fuchs-Schündeln & Hassan, 2016). The ability of investors to understand and predict changes in macroeconomic conditions in the future will be beneficial for making investment decisions that will be made (Tandelilin, 2010). Some macroeconomic factors that influence investment in a country are:

- a) *Gross domestic product*
- b) *Unemployment* (unemployment rate)
- c) *Inflation rate* (inflation rate)
- d) *Interest rate* (interest rate)
- e) *The budget deficit* (deficit budget)
- f) *Market sentiment* (market sentiment)
- g) *Exchange rate* (currency exchange rates)

*Company internal factors (Fundamental factors of the company)*

Investors in taking every investment decision trying to minimize various risks that arise. Investors must decide what actions will be taken and what strategies will be applied from changes in micro and macro conditions to keep getting the desired return (Fahmi, 2012; Yang & Pangastuti, 2016; Cahaya & Riwayati, 2016). Micro conditions can be in the form of information from the company's financial statements which is one type of information that can provide an overview of the company's performance, which in turn can provide the basis for investment decisions.

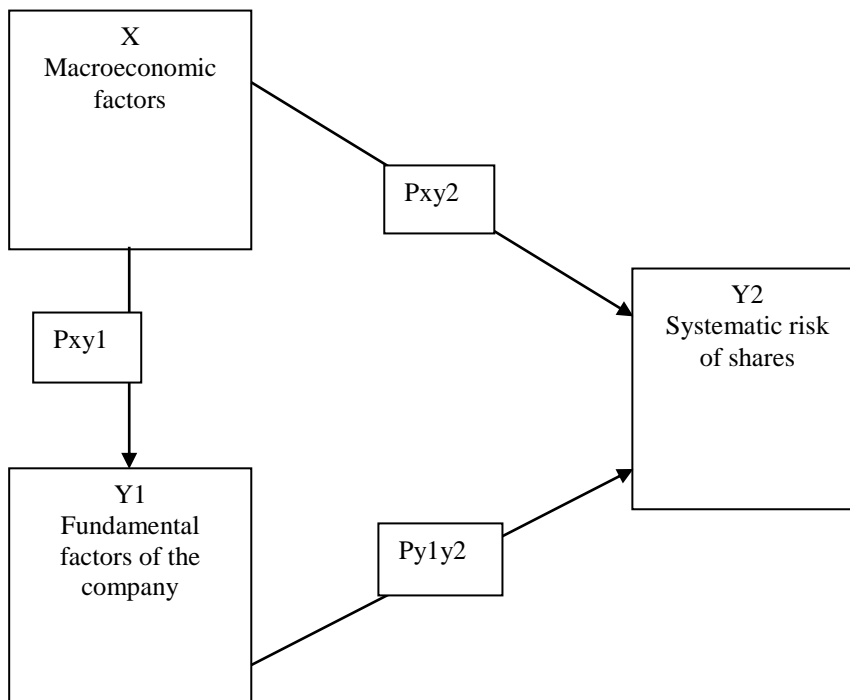
In fundamental analysis, only financial performance is assessed for performance. Some financial performance assessments recommended in the company's internal analysis are:

- a) *Leverage ratio*
- b) *Liquidity ratio*
- c) *Price to Book Value*
- d) *Assets Size*
- e) *Earning Variability*

*DC Method*

This study uses secondary data types or time-series data (time series). Data were obtained from the Indonesia Stock Exchange through the Indonesia Capital Market Directory and Indonesian Economic and Financial Statistics for the past 5 years (Dewi & Dewi, 2017; Angelia & Suryaningsih, 2015). The study population is all companies in the manufacturing sector that are listed consistently on the IDX. The sample in this study was determined by the stratified proportional random sampling method. In this study, macroeconomic factors are proxied by the exchange rate, inflation rate, and gross domestic product based on 2000 constant prices. While the fundamental factors of the company are proxied by leverage ratio, price to book value, and earnings variability.

The data analysis method used in this study is path analysis. Path analysis is used to determine the magnitude of the influence of a variable on other variables both direct and indirect influence. The step in conducting data analysis using path analysis. The magnitude of the effect of independent variables on the dependent variable is called the path coefficient.



## Information:

- X = Macroeconomic factors  
 Y1 = The company's fundamental factors  
 Y2 = Systematic risk of shares  
 Pxy1 = The path coefficient of macroeconomic factors to the company's fundamental factors  
 Py1y2 = Path coefficient of the company's fundamental factors to the systematic risk of the stock  
 Pxy2 = path coefficient of macroeconomic factors on the systematic risk of stocks

Because the path coefficient does not have a unit, it can be concluded that the greater the path coefficient the greater the influence given by the variable. Required conditions are:

- 1) The relationship between variables is linear
- 2) All residual variables do not correlate with each other
- 3) The pattern of relationships between variables is recursive
- 4) The scale of measurement for both the independent variable and the dependent variable is at least interval.

## Results and Discussion

*Calculate the correlation coefficient between independent variables*

In the following table 1 presents the correlation coefficient, coefficient of determination, and strong categories of weak relationships between independent variables.

Table 1  
Correlation coefficient and determination of free variables

No	Variable	Correlation Coefficient (r)	Coefficient of Determination (r <sup>2</sup> )	Information
	X1 - X2	-0,768	58.9824%	STRONG
	X1 - X3	0.441	19,448%	MEDIUM
	X1 - X4	-0.269	7.2361%	WEAK
	X1 - X5	0.424	17.9776%	MEDIUM
	X1 - X6	-0,131	1.7161%	VERY WEAK
	X1 - X7	0.440	19,600%	MEDIUM
	X1 - X8	-0,077	0.5929%	VERY WEAK
	X2 - X3	0.471	22.1841%	MEDIUM
	X2 - X4	0.010	0.0100%	VERY WEAK
	X2 - X5	-0,802	64.3204%	STRONG
	X2 - X6	0.152	2.3104%	VERY WEAK
	X2 - X7	-0,561	31.4721%	MEDIUM
	X2 - X8	0.004	0.0016%	VERY WEAK
	X3 - X4	-0.146	2.1316%	VERY WEAK
	X3 - X5	0.159	2.5281%	VERY WEAK
	X3 - X6	-10,110	1.2100%	VERY WEAK
	X3 - X7	0.011	0.0121%	VERY WEAK
	X3 - X8	-0.313	9.7969%	WEAK
	X4 - X5	-0,586	34.3396%	MEDIUM
	X4 - X6	0.070	0.4900%	VERY WEAK
	X4 - X7	-0,099	0.9801%	VERY WEAK
	X4 - X8	0.008	0.0064%	VERY WEAK
	X5 - X6	-0,082	0.6724%	VERY WEAK
	X5 - X7	0.205	4.2025%	WEAK
	X5 - X8	-0,089	0.7921%	VERY WEAK
	X6 - X7	-0,073	0.5329%	VERY WEAK
	X6 - X8	0.063	0.3969%	VERY WEAK
	X7 - X8	-0,150	2.2500%	VERY WEAK

Based on table 4.1 above it appears that the majority of independent variables have a very weak correlation. Based on the Guilford classification there are 17 pairs of independent variables that correlate very weakly, namely:

- 1) Exchange rate (X1) with the price to book value (X6)  
The correlation between these two variables is shown by the correlation coefficient of -0.131. The exchange rate can explain the variation in price to book value of 1.7161 percent, and vice versa the price to book value can explain the variation of the exchange rate of 1.7161 percent.
- 2) Exchange rate (X1) with earnings variability (X8)  
To rate can explain the variation of earnings variability of 0.0016 percent, the correlation of these two variables is shown by the correlation coefficient of -0.077. The exchange rate can explain the variation of earning variability by 0.5929 percent, and vice versa earning variability can explain the variation of the exchange rate of 0.5929 percent.
- 3) Inflation rate (X2) with leverage ratio (X4)  
The correlation between these two variables is shown by the correlation coefficient of 0.010. The inflation rate can explain variation in a leverage ratio of 0.0100 percent, and vice versa, the leverage ratio can explain the variation of the inflation rate of 0.0100 percent.
- 4) Inflation rate (X2) with the price to book value (X6)  
The correlation between these two variables is shown by the correlation coefficient of 0.152. The inflation rate can explain variations in price to book value of 2.3104 percent, and vice versa, price to book value can explain variations in the inflation rate of 2.3104 percent.
- 5) Inflation rate (X2) with earnings variability (x8)  
The correlation between these two variables is shown by the correlation coefficient of 0.004. The inflation rate can explain variation in earnings variability of 0.0016 percent, as well as earnings variability can explain variation in the inflation rate of 0.0016 percent.
- 6) Gross domestic product (X3) with leverage ratio (X4)  
The correlation between these two variables is shown by the correlation coefficient of -0.146. The gross domestic product can explain the variation of the leverage ratio of 2.1316 percent, and vice versa ratio leverage can explain the variation of the gross domestic product of 2.1316 percent
- 7) Gross domestic product (X3) with liquidity ratio (X5)  
The correlation between these two variables is shown by the correlation coefficient of 0.150, the Gross domestic product can explain the variation of the liquidity ratio of 2.5281 percent, and vice versa, the liquidity ratio can explain the variation of the gross domestic product of 2.5281 percent.
- 8) Gross domestic product (X3) with the price to book value (X6)  
The correlation between these two variables is shown by the correlation coefficient of -0.110. The gross domestic product can explain variations in price to book value of 1.2100 percent, likewise in contrast price to book value can explain variations in the gross domestic product of 1.2100 percent.
- 9) Gross domestic product (X3) with assets size (X7)  
The correlation between these two variables is shown by the correlation coefficient of 0.011. The gross domestic product can explain variations in asset size of 0.0121 percent, and vice versa, asset size can explain variations in the gross domestic product of 0.0121 percent.
- 10) Leverage ratio (X4) with the price to book value (X6)  
The correlation between these two variables is shown by the correlation coefficient of 0.070. The leverage ratio can explain variations in price to book value of 0.4900 percent, and vice versa price to book value can explain variations in a leverage ratio of 0.4900 percent.
- 11) Leverage ratio (X4) with assets size (X7)  
The correlation between these two variables is shown by the correlation coefficient of -0.099. Leverage can explain variations in assets size 0.9801 percent and vice versa assets size can explain variations in a leverage ratio of 0.9801 percent.
- 12) Leverage ratio (X4) with earnings variability (X8)  
The correlation between these two variables is shown by the correlation coefficient of 0.008. The leverage ratio can explain variation in earnings variability of 0.0064 percent, and vice versa, earning variability can explain the variation of the leverage ratio of 0.0064 percent.
13. Liquidity ratio (X5) with the price to book value (X6)  
The correlation between these two variables is shown by the correlation coefficient of -0.082. Liquidity ratio can explain variations in price to book value of 0.6724 percent, likewise vice versa, price to book value can explain variations in liquidity ratio of 0.6724 percent.

## 14. Liquidity ratio (X5) with earnings variability (X8)

The correlation between these two variables is shown by the correlation coefficient of -0.089. Liquidity ratio can explain the variation of earnings variability of 0.7921 percent, and vice versa, earning variability can explain the variation of liquidity ratio of 0.7921 percent.

## 15. Price to book value (X6) with assets size (X7)

The correlation between these two variables is shown by the correlation coefficient of -0.073. Price to book value can explain variations in asset size of 0.5329 percent, and vice versa, asset size can explain variations in price to book value of 0.5329 percent.

## 16. Price to book value (X6) with earnings variability (X8)

The correlation between these two variables is shown by the correlation coefficient of 0.063. Price to book value can explain the variation of earnings variability of 0.3969 percent, and vice versa, earning variability can explain the variation of price to book value of 0.3969 percent

## 17. Assets size (X7) with earnings variability (X8)

The correlation between these two variables is shown by the correlation coefficient of -0.150. Assets size can explain the variation of earning variability by 2.2500 percent, so on the contrary, earning variability can explain variations in assets size of 2.2500 percent.

Table 1 also shows that there are 3 pairs of independent variables that are weakly correlated, namely:

## 1) Exchange rate (X1) with leverage ratio (X4)

The correlation between these two variables is shown by the correlation coefficient of -0.269. The exchange rate can explain the variation of the leverage ratio of 7.2361 percent, and vice versa, the leverage ratio can explain the variation of the exchange rate of 7, 2361 percent.

## 2) Gross domestic product (X3) with earnings variability (X8)

The correlation between these two variables is shown by the correlation coefficient of -0.313. The gross domestic product can explain variation in earning variability by 9.7969 percent, and vice versa, earning variability can explain variation in the gross domestic product by 9.7969 percent.

## 3) Liquidity ratio (X5) to assets size (X7)

The correlation between these two variables is shown by the correlation coefficient of 0, 205. The liquidity ratio can explain variations in asset size of 4.2025 percent. Vice versa, asset size can explain the variation of liquidity ratio of 4.2025 percent.

The independent variables which are moderately correlated are 6 pairs, namely:

## 1) Exchange rate (X1) with the gross domestic product (X3)

The correlation between these two variables is shown by the correlation coefficient of 0.441. The exchange rate can explain the variation of the gross domestic product of 19.44481 percent, and vice versa, the gross domestic product can explain the variation of the exchange rate of 19.44481 percent.

## 2) Exchange rate (X1) with liquidity ratio (X5)

The correlation between these two variables is shown by the correlation coefficient of 0.424. the rate can explain variation in liquidity ratio of 17.9776 percent, and vice versa, liquidity ratio can explain the variation of the exchange rate of 17.9776 percent,

## 3) Exchange rate (X1) with assets size (X7)

The correlation between these two variables is shown by the correlation coefficient of 0.440. The exchange rate can explain the variation in asset size of 19.3600 percent, and vice versa, the asset size can explain the variation of the exchange rate of 19.36 percent.

## 4) Inflation rate (X2) with the gross domestic product (X3)

The correlation between these two variables is shown by the correlation coefficient of 0.471. The inflation rate can explain the variation of the gross domestic product of 22.18441 percent, and vice versa, the gross domestic product can explain the variation of the inflation rate of 22.1841 percent.

## 5) Inflation rate (X2) with assets size (X7)

The correlation between these two variables is shown by the correlation coefficient of -0.561. The inflation rate can explain the variation of the gross domestic product of 31.4721 percent, and vice versa, the gross domestic product can explain the variation of the inflation rate of 31.4721 percent.

## 6) Leverage ratio (X4) with liquidity ratio (X5)

The correlation between these two variables is shown by the correlation coefficient of -0.586. The leverage ratio can explain the variation of liquidity ratio of 34.33396 percent, and vice versa, liquidity ratio can explain

the variation of the leverage ratio of 34.33396 percent.

Independent variables that are strongly correlated are 2 pairs, namely:

- 1) Exchange rate (X1) with inflation rate (X2)

The correlation between these two variables is shown by the correlation coefficient of -0.768. The exchange rate can explain the variation of the inflation rate of 58.9824 percent, and vice versa, the inflation rate can explain the variation of the exchange rate of 58.9824 percent.

- 2) Inflation rate (X2) with liquidity ratio (X5)

The correlation between these two variables is shown by the correlation coefficient of -0.802. The inflation rate can explain variations in liquidity ratio of 64.3204 percent, and vice versa, liquidity ratio can explain variations in the inflation rate of 64.3204 percent.

*Calculating the direct effect, the indirect effect, and the effect of the total independent variable on the dependent variable*

Based on formulas 20 and 21, the results obtained are direct and indirect effects of independent variables on the dependent variable, respectively. The total effect is obtained by adding up the direct and indirect effects.

Table 2  
The effect of independent variables on the dependent variable

Variable	Direct influence	Indirect influence through								Total effect
		X1	X2	X3	X4	X5	X6	X7	X8	
X1	0.0197		-0.0335	-0.0364	-0.0003	-0.0143	-0.0004	-0.0271	-0.0006	-0.093
X2	0.0963	-0.0335		-0.0859	0.0000	0.0597	0.0011	0.0765	0.0001	0.114
X3	0.3456	-0.0364	-0.0859		0.0008	0.0224	0.0015	0.0028	0.0107	0.261
X4	0.00004	-0.0003	0.0000	0.0006		0.0009	0.0000	0.0003	0.0000	0.002
X5	0.0575	-0.0143	0.0597	0.0224	0.0009		0.0005	0.0216	0.0012	0.150
X6	0.0006	-0.0004	0.0011	0.0015	0.0000	0.0005		0.0008	0.0001	0.004
X7	0.1929	-0.0271	0.0765	0.0028	0.0003	0.0216	0.0008		0.0038	0.272
X8	0.0034	-0.0006	0.0001	0.0107	0.0000	0.0012	0.0001	0.0038		0.019
Total										0.728

*Testing the significance of the correlation*

Based on the t table, with the degree of freedom (df) = 100-2 = 98 and  $\alpha = 0.05 / 2$ , the value of t table is between 1,980 and 2,000, after being interpolated to 1.990. Based on formula 22, the t value is obtained as presented in table 4.2 Rejection and acceptance criteria of  $H_0$ , namely:

If  $-1.990 \leq t \text{ count} \leq 1.990$  then  $H_0$  is accepted

If  $t \text{ arithmetic} < -1,990$  or  $t \text{ arithmetic} > 1.990$  then  $H_0$  is rejected

Table 3  
Testing the significance of the correlation

No	Variable	Correlation Coefficient (r)	t count	Information
1	X1 - X2	-0,768	-11.8711	Ho Rejected
2	X1 - X3	0.441	4.864226	Ho Rejected
3	X1 - X4	-0.269	-0.76488	Ho Received
4	X1 - X5	0.424	4.634604	Ho Rejected
5	X1 - X6	-0,131	-0.30811	Ho Received
6	X1 - X7	0.440	4.850544	Ho Rejected
7	X1 - X8	-0,077	-0.76453	Ho Received
8	X2 - X3	0.471	5,285667	Ho Rejected
9	X2 - X4	0.010	0.099	Ho Received
10	X2 - X5	-0,802	-13.2916	Ho Rejected

11	X2 - X6	0.152	1.522413	Ho Received
12	X2 - X7	-0,561	-6.70876	Ho Rejected
13	X2 - X8	0.004	0.039598	Ho Received
14	X3 - X4	-0.146	-1.46098	Ho Received
15	X3 - X5	0.159	1.594301	Ho Received
16	X3 - X6	-10,110	-1,09559	Ho Received
17	X3 - X7	0.011	0.108901	Ho Received
18	X3 - X8	-0.313	-0.26247	Ho Received
19	X4 - X5	-0,586	-7.15911	Ho Rejected
20	X4 - X6	0.070	0.694669	Ho Received
21	X4 - X7	-0,099	-0.98489	Ho Received
22	X4 - X8	0.008	0.077218	Ho Received
23	X5 - X6	-0,082	-0.8145	Ho Received
24	X5 - X7	0.205	1.073432	Ho Received
25	X5 - X8	-0,089	-0.88457	Ho Received
26	X6 - X7	-0,073	-0.7246	Ho Received
27	X6 - X8	0.063	0.62491	Ho Received
28	X7 - X8	-0,150	-1.50192	Ho Received

#### *Testing the significance of simultaneous effects*

Based on the F-snedecor distribution table with degrees of freedom (df) = (9-1) and (100-9) = 8 and 91 and  $\alpha = 0.05$  the F table value of 2.13 is obtained. The criteria for Ho's rejection and acceptance are:

If F arithmetic  $\leq 2.13$ , Ho is accepted

If F count  $> 2.13$ , Ho is rejected

Based on formula 23, the calculated F value is 26.767 so that Ho is rejected.

#### *Testing the significance of partial influences*

Based on the distribution table T, with degree of freedom (df) =  $100 - 2 = 98$  and  $\alpha = 0.05 / 2$ , the value of t table ( $t_{\alpha / 2; n-2}$ ) is between 1,980 and 2,000, after being interpolated to 1,990. As presented in table 4. The criteria for Ho's rejection and acceptance are:

If  $-1.990 \leq t \text{ count} \leq 1.990$  then Ho is accepted

If t arithmetic  $< -1,990$  or t arithmetic  $> 1.990$  then Ho is rejected

Table 4  
Testing the significance of partial influences

Variable	T-count value	Criteria	Decision
X1	1,453754	$-1,990 < t < 1,990$	Ho Received
X2	3.585028	$-1,990 < t < 1,990$	Ho Rejected
X3	-4.47852	$-1,990 < t < 1,990$	Ho Rejected
X4	0.064731	$-1,990 < t < 1,990$	Ho Received
X5	-2,06632	$-1,990 < t < 1,990$	Ho Rejected
X6	0.229455	$-1,990 < t < 1,990$	Ho Received
X7	-3.51248	$-1,990 < t < 1,990$	Ho Rejected
X8	0.574639	$-1,990 < t < 1,990$	Ho Received

## **Conclusion**

Based on the formulation of the problem, research objectives, theoretical studies, research methods, research results, and discussion, conclusions can be made as follows.

- 1) There is a correlation between independent variables consisting of the exchange rate, inflation rate, gross domestic product, leverage ratio, liquidity ratio, price to book ratio, asset size, and earnings variability. Significance testing with t-test statistics shows that there are 8 pairs of variables that have a significant



correlational relationship. The pair is an exchange rate with inflation rate (classification of strong relationships), the exchange rate with the gross domestic product (classification of moderate relationships), the exchange rate with assets size (classification of moderate relationships), inflation rate with the gross domestic product (classification of moderate relationships), inflation rate with liquidity ratio (classification of strong relationships), inflation rate with assets size (classification of moderate relationships), and leverage ratio with liquidity ratio (classification of moderate relationships).

- 2) The independent variable consisting of the exchange rate, inflation rate, gross domestic product, leverage ratio, liquidity ratio, price to book value, asset size, and earnings variability simultaneously influence the systematic risk. Based on the results of data processing, the coefficient of determination is 0.728, which means that the independent variable consisting of the exchange rate, inflation rate, gross domestic product, leverage ratio, liquidity ratio, price to book value, asset size, and earning variability together affect the systematic risk of 72.80 percent. Systematic risk is influenced by variables other than those operated in the model by 27.20 percent.
- 3) Partially only variables inflation rate, gross domestic product, liquidity ratio, and asset size have a direct effect on systematic risk. The inflation rate has an indirect effect on systematic risk through gross domestic product, liquidity ratio, and asset size. Gross domestic product has an indirect effect on systematic risk through earnings variability. Liquidity has an indirect effect on systematic risk through asset size.

## References

- Angelia, D., & Suryaningsih, R. (2015). The effect of environmental performance and corporate social responsibility disclosure towards financial performance (Case study to manufacture, infrastructure, and service companies that listed at Indonesia stock exchange). *Procedia-Social and Behavioral Sciences*, 211, 348-355. <https://doi.org/10.1016/j.sbspro.2015.11.045>
- Bertola, G. (2000). Macroeconomics of distribution and growth. *Handbook of income distribution*, 1, 477-540. [https://doi.org/10.1016/S1574-0056\(00\)80012-3](https://doi.org/10.1016/S1574-0056(00)80012-3)
- Cahaya, Y. F., & Riwayati, H. E. (2016). The Effect of Banking Company Performance toward Good Corporate Governance Listed in Indonesia Stock Exchange. *Procedia-Social and Behavioral Sciences*, 219, 486-492. <https://doi.org/10.1016/j.sbspro.2016.05.024>
- Dewi, I. G. A. A. O., & Dewi, I. G. A. A. P. (2017). Corporate social responsibility, green banking, and going concern on banking company in Indonesia stock exchange. *International journal of social sciences and humanities*, 1(3), 118-134. <https://doi.org/10.29332/ijssh.v1n3.65>
- Fahmi, I. (2012). Introduction to the Capital Market. Bandung: CV. Alfabeta.
- Fuchs-Schündeln, N., & Hassan, T. A. (2016). Natural experiments in macroeconomics. In *Handbook of Macroeconomics* (Vol. 2, pp. 923-1012). Elsevier. <https://doi.org/10.1016/bs.hesmac.2016.03.008>
- Gebauer, H., Fleisch, E., & Friedli, T. (2005). Overcoming the service paradox in manufacturing companies. *European management journal*, 23(1), 14-26. <https://doi.org/10.1016/j.emj.2004.12.006>
- Gebauer, H., Gustafsson, A., & Witell, L. (2011). Competitive advantage through service differentiation by manufacturing companies. *Journal of business research*, 64(12), 1270-1280. <https://doi.org/10.1016/j.jbusres.2011.01.015>
- Halim, A. (2003). Investment Analysis, First Addition, Salemba Empat Publisher, Jakarta,
- Hartono, J. (2013). Teori Portofolio dan Analisis Investasi. Edisi 7. Yogyakarta: bpf.
- Krueger, D., Mitman, K., & Perri, F. (2016). Macroeconomics and household heterogeneity. In *Handbook of Macroeconomics* (Vol. 2, pp. 843-921). Elsevier. <https://doi.org/10.1016/bs.hesmac.2016.04.003>
- Soni, S., & Chandak, G. (2017). Fundamental analysis of car manufacturing companies in India for 1.4. 2005 to 31.3. 2016. *International research journal of management, IT and social sciences*, 4(1), 39-52.
- Sudiyatno, B. (2010). The Role of Company Performance in Determining the Influence of Macroeconomic Fundamental Factors, Systematic Risk, and Company Policy on Company Value, Dissertation, Doctoral Program in Economics, Diponegoro University.
- Tandelilin, E. (2010). *Portofolio dan Investasi: Teori dan aplikasi*. Kanisius.
- Thiede, S., Bogdanski, G., & Herrmann, C. (2012). A systematic method for increasing the energy and resource efficiency in manufacturing companies. *Procedia CIRP*, 2, 28-33. <https://doi.org/10.1016/j.procir.2012.05.034>
- Yang, A. S., & Pangastuti, A. (2016). Stock market efficiency and liquidity: The Indonesia Stock Exchange merger. *Research in International Business and Finance*, 36, 28-40. <https://doi.org/10.1016/j.ribaf.2015.09.002>