

The Impact of Liquidity, Solvability, Activity, Profitability, Asset Growth, and Sales Growth to Systematic Risk With Firm Size as Moderating Variable on Consumer Non-Cyclicals Company Listed in Indonesia Stock Exchange 2017-2021

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Abstract

Investors need useful information as a signal to decide on investment because investment activity contains risk of uncertainty that will occur in the future that can not be handled by diversification which is called systematic risk. Systematic risk is calculated by beta stock which the companies have different beta values. Therefore, this research aims to analyze the impact of financial information on the beta stock in sector consumer non-cyclicals listed on Bursa Efek Indonesia (BEI) with the observation period 2017-2021. Respon variables in this research are liquidity, solvability, activity, profitability, asset growth, and sales growth, with firm size as the moderating variable. Population in this research was 103 companies, then got 40 companies after doing the purposive sampling method, so there were 200 units of analysis with five years of analysis. Data analysis method using SEM-PLS analysis with software SmartPLS. The results show that liquidity has a significant negative impact on systematic risk. Solvability, profitability, and sales growth significantly positively affect systematic risk. Activity and asset growth are not relevant to systematic risk. The moderation test result proves that firm size significantly adequates the impact of liquidity, profitability, and sales growth on systematic risk. Firm size does not significantly adequate the impact of solvability, activity, and asset growth on systematic risk.

Keywords: Financial Ratio, Systematic Risk; Firm Size.

1. Introduction

Stock is one of the investments that can provide return but also contains risk. Investors can use risk-related information to assess the nature and level of risk and make investment decisions (Bui et al., 2017). Investment theory states that investors only consider risks that cannot be disguised by diversification, called systematic risk (Puspitaningtyas, 2017). Systematic risk is calculated by stock beta, where each company has a different value, and a relatively stable beta is considered more useful for investors (Khamidatuzzuhriyah, 2020). For this reason, it is necessary to analyze what affects the beta of the stock so that it will be useful in determining decisions.

Systematic risk comes from several market characteristics of the company's stock and its fundamental factors (Ko'imah & Damayanti, 2020). The company's fundamentals present financial information that can use to determine the value of systematic risk (Puspitaningtyas, 2017). Financial information in this research is in the form of financial ratios consisting of liquidity, solvability, activity, profitability, asset growth, and sales growth. Liquidity plays an important role in measuring the company's ability to meet its financial obligations and pay dividends; to attract investors (Caeli et al., 2020). A company is said to be solvable if it has sufficient wealth to cover its debts, which is what investors expect (Rosyida et al., 2020). The activity ratio can calculate the company's impactiveness in using assets to create sales and earn profits for a better future (Kusuma, 2016). High profitability can improve the company's performance in reducing financial instability, which is expected to reduce systematic risk (Lasmana & Wahyudin, 2021). Asset growth is an influential fundamental factor because it explains how much the company's

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expansion activities affect investor interest (Nainggolan, 2016) . Sales growth is a calculate of the financial stability of a company where in a stable condition, the profits obtained by investors will also increase (Tresnawati et al., 2021)

According to Bui et al (2017) , liquidity has a negative impact which means the company in a stable condition can create lower risk. Unlike other results Fahira et al (2020) , the liquidity ratio has a positive impact. According to Bui et al (2017) , leverage has a negative impact explaining that high debt levels can increase profits that attract investors. Another result Gesaputri et al (2021) proves that solvability positively affects. According to Bui et al (2017) , profitability has a negative impact where high profitability allows the company to reduce its financial instability. Khamidatuzzuhriya (2020) states that profitability has a positive impact. According to Bui et al (2017) , operating efficiency has a positive impact because in a bullish market, the company prefers to increase the proportion of retained earnings rather than distribute dividends so that investor interest decreases. Activity ratio in research Nguyen et al (2019) has a negative impact. Bui et al (2017) shows that firm size has a positive impact because large companies are in a more sensitive situation, increasing risk. Firm size negatively affects to systematic risk based on research Rosyida et al (2020) . According to research Aruna & Warokka (2013) , asset growth has a positive impact because companies that grow quickly are more susceptible to economic fluctuations and internal pressures. Nguyen et al (2019) has a negative impact. According to Prasetyo (2020) , sales growth has a positive impact indicating that investors do not favor excessive income flows.

Based on the results of the research backgorund, there are still inconsistent results, so researchers are interested in continuing the results of research from Bui et al (2017) in Indonesia about the impacts of financial ratios in the form of liquidity, solvability, activity, profitability and adding variables of asset growth and sales growth using firm size as a moderating variable that is thought to have a role in clarifying the impact of financial information on systematic risk.

2. Literature Review

2.1. Signalling Theory

Relevant information that the company publish will be a signal for investors to make investment decisions. This signal will impact investor interest in a company's shares and affect the stock's beta calculation. The higher the investor confidence in a company, the longer it will take to sell its shares. This reaction is reflected in the stable level of stock prices (Rosyida et al ., 2020) . The amount of beta shares of each company is different and is used by investors in analyzing investment decisions. If the stock's beta value is high, it will signal to investors its systematic risk is high.

2.2. Capital Asset Pricing Model (CAPM)

CAPM is an accounting model that provides an overview of the relationship between risk and returns using only one variable, stock beta, which was developed separately by Sharpe, Litner, and Mossin (Ko'imah & Damayanti, 2020) . CAPM is based on Markowitz's portfolio theory model, which assumes that investors diversify and choose the optimal portfolio based on their preference for risk and return (Kustini & Pratiwi, 2012) . Sharpe, also the winner of the Nobel Economics, stated that using beta stock to calculate equity risk is highly recommended for investors who invest in equities. In market equilibrium, the higher the systematic risk, the higher the expected return.

2.3. Stock Beta

Systematic risk caused by most businesses, such as war, inflation, interest rates, and other factors known as market risks (Ferranti & Yunita, 2015) . In the CAPM concept, systematic risk is calculated using the beta, calculated using a single index model formula. It assumes returns between correlated impacts of two or more that move together and show the same response to one factor or indicator included in the model. The stock beta (Caeli et al., 2020) is divided into three categories; $\beta < 1$ means the change in the level of the stock is smaller than what occurs in the market; $\beta > 1$ means the change in stock level is greater than what occurs in the market; $\beta = 1$ means changes in stock levels are the same as those in the market. This approach is used in reference journal research (Bui et al ., 2017) with the first stage is calculating the rate of return from each stock and market index, secondly performing a regression stock returns and market index, then finally doing an adjusted beta to normalize raw beta.

2.4. Liquidity

Liquidity is the ability of a firm to meet its short-term obligations with liquid funds in a short period of time (Jazuli & Witiastuti, 2016) . Biase D'Apolito argues that high liquidity not only shows the ability to cover short-term debt, but

also indicates that the company is in a solid financial position, thus creating a lower level of risk (Bui et al. , 2017) . Meanwhile, according to (Fahira et al. , 2020) , high liquidity reflects the number of idle funds where the use of cash is inefficient that will increase the risk. The liquidity ratio used in this research is the quick ratio which focuses on providing a detailed calculate of liquidity because assets are more liquid than inventory (Januardi & Afrianto, 2017) .

2.5. Solvability

Solvability is the company's ability to pay all debts using all of its assets and describes the extent to which the company's assets are financed by its debts, how much the company's debt is compared to its assets (Wiyono & Mardijuwono, 2020) . The higher the solvability ratio, the higher the company's financial risk and the risk of being unable to pay debts (Kusuma, 2016) . Meanwhile, according to (Nguyen et al., 2019) , companies with high debt levels in favorable business conditions will increase profitability so that the company's prospects are better and the level of risk decreases. In this research, the debt to total asset ratio was used.

2.6. Activity

Activity ratio is the company's ability to utilize capital to generate revenue by comparing total sales with total assets (Susanto et al. , 2010) . If the more efficient the operation, the more profit will be created, and the less risk will be (Iqbal & Shah, 2012) . Meanwhile, if the market is in a bullish state, although operating efficiency increases, the profits obtained will not be fully distributed in dividends but will increase retained earnings to expand their business scale, which is not favored by investors (Susanto et al. , 2010) . This research uses Total Assets Turn Over (TATO) to show how impactively the company uses assets to create sales and earn profits (Kusuma, 2016) .

2.7. Profitability

Profitability is the ability of a company to generate profit which is the basic concern of shareholders (Sujana, 2017) . The success of a company depends on the company's ability to generate profits, and companies with good profitability will have little systematic risk. A high ratio can show the level of management efficiency so that the risk is lower (Julduha & Kusumawardhani, 2013) . Whereas (Khamidatuzzuhriyah, 2020) , the higher the profitability, the better the company's position, followed by an increase in stock prices so that it impacts the expected return, which will result in a higher beta value of the stock. Research (Fahira et al. , 2020) uses Return on Equity (ROE) to calculate the return on investment of shareholders in a company.

2.8. Asset Growth

Asset growth is a ratio that defines changes in the annual growth rate of total assets (Khamidatuzzuhriyah, 2020) . An increase in the value of a company's assets is a good sign to the company that developing in line with increasing earnings and that investors will continue to invest in the company's stock (Jazuli & Witiastuti, 2016) . However, increasing assets will also associated with increased risk if the company fails to deliver expected profits., thereby increasing systematic risk (Gesaputri et al. , 2021) .

2.9. Sales Growth

Sales growth is a ratio that describes the company's sales ability to maintain its revenue position amid business economic growth (Tresnawati et al. , 2021) . Revenue growth is a calculate of a company's financial health, and if revenue growth increases and costs can be controlled, more profits will be available to investors (Tresnawati et al. , 2021) . However, high sales growth will also attract new companies to enter the industry, which has an impact on increased risks for old companies, which are feared that they will not be able to compete, so the risk of bankruptcy can affect unstable prices (Prasetyo, 2020).

2.10. Firm size

Firm size is a ratio that reflects the size of a company's business and represents the company's financial strength and health (Wiyono & Mardijuwono, 2020) . A company with high total assets indicates that its cash flow has reached a maturity stage that is considered profitable in the long run. It also indicates that the company is relatively stable and highly profitable (Khamidatuzzuhriyah, 2020) . When unstable economic conditions, large-scale companies have a greater risk impact than small-scale companies because large companies are more sensitive to conditions of the universe and involve many stakeholders (Wiyono & Mardijuwono, 2020) . The Natural Logarithm of total assets calculate the firm size used in research (Prasetyo, 2020) .

Hypothesis

1) Liquidity Against Systematic Risk

Companies with a high level of liquidity can pay short-term obligations with existing current assets, which the more liquid a company is, the lower its systematic risk (Ko'imah & Damayanti, 2020). This information is a signal that the company has good prospects, so it affects the interest of investors to continue to invest in the company's shares which are reflected in a stable stock price. This statement is the same as the results of research (Bui et al., 2017), which shows the impact of liquidity on systematic risk negatively; hypotheses are:

H1: Liquidity has a negative impact on systematic risk

2) Solvability Against Systematic Risk

Solvability is calculated by the number of assets financed by debt. The higher the level of debt, the investors will think that the company has a low ability to pay dividends because the company prioritizes paying debt and interest (Rosyida et al., 2020). This information is a negative signal for investors who consider the company's sustainability questionable because assets cannot cover the debt, so it can increase systematic risk. The results of research (Gesaputri et al., 2021) show the positive impact of solvability on systematic risk; hypotheses are as follows:

H2: Solvability has a positive impact on systematic risk

3) Activity Against Systematic Risk

The activity ratio shows the impactiveness of using assets to generate sales; the higher this ratio, the higher the profit generated so that the systematic risk is reduced (Iqbal & Shah, 2012). It could be a positive signal for investors that the company will likely be profitable. A research by (Nguyen et al., 2019) showed the negative impact of activity ratio on systematic risk. Based on the literature above, the hypotheses taken are as follows:

H3: Activities have a negative impact on systematic risk

4) Profitability Against Systematic Risk

Profitability in a company is generally a calculate of the success of a company, where the increase in company profits will have an impact on the higher beta value of the stock due to high fluctuations in stock prices due to public interest (Sarumaha, 2017). The results of the research (Khamidatuzzuhriyah, 2020) show the positive impact of profitability on systematic risk; the hypotheses are:

H4: Profitability has a positive impact on systematic risk

5) Asset Growth Against Systematic Risk

An increase in asset growth gives a positive signal that the company will develop to increase profits that will attract an investor to continue to invest in company shares (Jazuli & Witiastuti, 2016) which will decrease systematic risk. Research (Nguyen *et al.*, 2019) shows that asset growth negatively affects systematic risk; the hypotheses are follows:

H5: Asset growth have a negative impact on systematic risk

6) Sales Growth Against Systematic Risk

Sales growth is a calculated by the company's financial position where the company can compete and maintain its position in the industrial world. The higher the growth rate, the higher the risk of bankruptcy (Prasetyo, 2020). High sales growth attracts new firms to enter the industry, so a lack of competitiveness can increase the risk of bankruptcy for older firms. Research (Prasetyo, 2020) shows that profit growth positively affects beta stock. Based on the literature above, the hypotheses taken are as follows:

H6: Sales growth has a positive impact on systematic risk

7) Firm Size Adequates the Impact of Liquidity on Systematic Risk

Large companies have large assets that increase their ability to meet liquidity and have a higher probability of surviving (Restiya Hasari, 2016). Research (Restiya Hasari, 2016) states that large companies have greater assets to fulfil liquidity levels and avoid risk. On the other hand, the large company have greater access to obtain loans from creditors so that companies have short-term liabilities (Restiya Hasari, 2016), which has an impact on decreasing the level of liquidity so that it can increase the level of systematic risk of the company's shares. So the size of the company can strengthen or weaken the impact of liquidity on the systematic risk of shares; the hypotheses are :

H7: Firm size adequates the impact of liquidity on systematic risk

8) Firm Size Adequates the Impact of Solvability on Systematic Risk

Large companies can obtain more funding from external companies and bear a fixed burden (L & Basana, 2020), so they are at risk of being unable to cover the debt with their assets. On the other hand, large companies with the opportunity to grow with high sales and profitability tend to have low leverage (L & Basana, 2020) and decrease systematic risk. So the firm size can strengthen or weaken the impact of solvability on the stock's systematic risk. Based on the literature above, the hypotheses taken are as follows:

H8: Firm size adequates the impact of solvability on systematic risk

9) Firm Size Adequates the Impact of Activity on Systematic Risk

Large companies can expand market share to increase sales by maximising operational activities with their assets (Julietha & Natsir, 2021) to decrease systematic risk. Large companies with high asset values indicate that they are currently expanding, but if good sales do not accompany them, they will increase risk because the company's expenses will increase to cover the return on expansion costs (Jazuli & Witiastuti, 2016), which has an impact on increasing systematic risk. So the size of the company can strengthen or weaken the impact of the activity ratio on the stock's systematic risk. Based on the literature above, the hypotheses taken are as follows:

H9: Firm size adequates the impact of activities on systematic risk

10) Firm Size Adequates the Impact of Profitability on Systematic Risk

Large companies will find it easier to raise capital from outside; the greater the capital, the higher the profit (Kartikasari & Merianti, 2016). Companies with good profitability will make investors continue to invest their shares in the company, which is reflected in a stable stock price that does not experience a spike. Large companies also make it easier to obtain funding so that companies are burdened with obligations and large fixed interests, reducing the profitability level and being a bad signal for investors. So the firm size can strengthen or weaken the impact of profitability on the stock's systematic risk. Based on the literature above, the hypotheses taken are as follows:

H10: Firm size adequates the impact of profitability on systematic risk

11) Firm Size Adequates the Impact of Asset Growth on Systematic Risk

Big companies come with growing assets which means doing business expansion activities that affect investor interest in investment decisions (Caelli et al., 2020). On the other hand, large companies with good asset growth, if not accompanied by good sales, can increase the risk due to fixed costs borne by the company. So the size of the company can strengthen or weaken the impact of asset growth on the stock's systematic risk; the hypotheses are :

H11: Firm size adequates the impact of asset growth on systematic risk

12) Firm Size Adequates the Impact of Sales Growth on Systematic Risk

Large companies allow to maximize assets to increase sales from year to year; the higher the growth rate, the higher the risk of bankruptcy (Prasetyo, 2020). High sales growth will attract new companies to enter the industry so that it can increase the risk of bankruptcy of the old company due to not being able to compete. On the other hand, large companies generally have relatively stable sales with a wide range of consumers and are considered more credible (L & Basana, 2020) with careful management planning to maintain sales growth rates. So the size of the company can strengthen or weaken the impact of sales growth on the stock's systematic risk; hypotheses taken are as follows:

H12: Firm size adequates the impact of sales growth on systematic risk

3. Methods

3.1. Research Variable

The dependent variable in this research is systematic risk calculated by BETA, which data provided on the website PEFINDO. The independent variables in this research are liquidity calculated by QR, solvability calculated by DTA, activity calculated by TATO, profitability calculated by ROE, asset growth and sales growth. The moderation variable is firm size calculated with Logarithm Natural of total asset. The data are taken from the company's financial report, which is provided on the Indonesia Stock Exchange (IDX) website.

3.2. Research Scope

The population in this research was 103 companies listed in the sector consumer non-cyclicals IDX during 2017-2021. The number of samples amounted to 40 (forty) after using the purposive sampling method with criteria; company listed during 2017-2021; company using IDR report; and company's beta stock provided on the PEFINDO website.

3.3. Research Framework

The research model described from the above description is as follows:

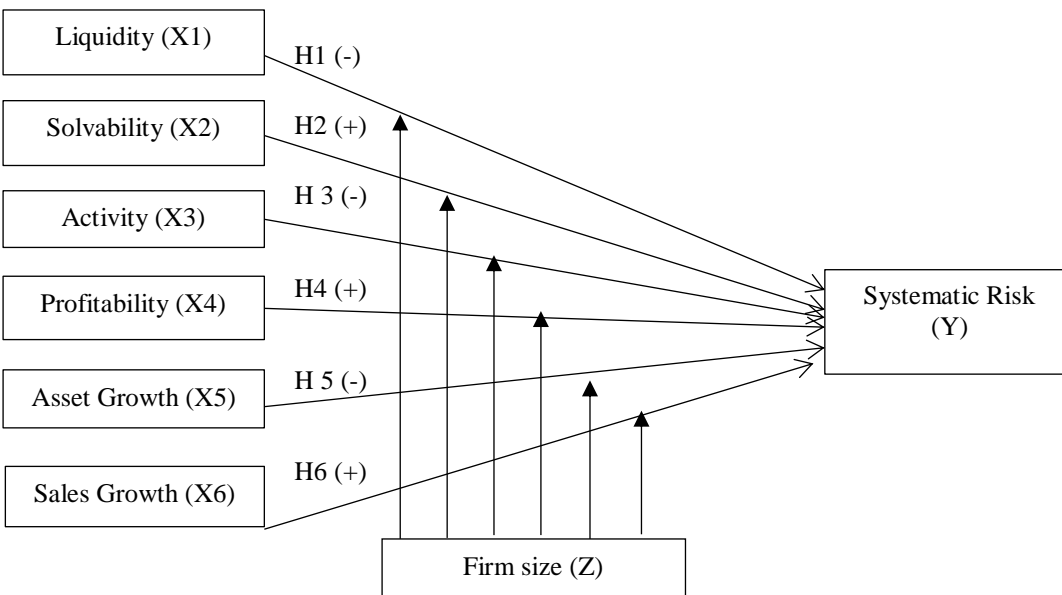


Figure 1. Research Model

3.4. Analysis Method

The data analysis technique uses Structural Equation Modeling Partial Least Square (SEM-PLS). Mahfud dan Ratmono (2013) stated that there were no significant differences between the two estimation results for SEM-PLS and CB-PLS. According to Wold, the developer, PLS is a powerful analytical method because it doesn't rely on many assumptions like normal distribution data. The stage of PLS is an outer model test for testing validity and reliability; an inner model test for testing prediction and relevance; and a hypothesis test to describe a relation between variables.

4. Result and Discussions

4.1. Descriptive Analysis

Based on the Table 1 liquidity has 0.0441 as a lowest ratio and 11.8303 as highest, an mean of 1.574 with a mean squared error of 1.632. The solvability ratio has a minimum of 0.0068 and a maximum of 1.9253, an mean of 0.525 with a mean squared error of 0.313. The activity ratio has 0.0276 as a lowest ratio and 3.1575 as a highest, an mean of

1.100 with a mean squared error of 0.765. Profitability has of -2.2444 as a lowest ratio and 1.9455 as a highest, an mean of 0.037 with a mean squared error of 0.523. Asset growth has -0.3714 as a lowest ratio and 1.6761 as a highest, an mean of 0.065 with a mean squared error of 0.188. Sales growth -0.7078 as a lowest ratio and 1.5314 as a highest ratio, an mean of 0.093 with a mean squared error of 0.270. Firm size has 26.624 as a lowest ratio and 32.820 as a highest, an mean of 29.383 with a mean squared error of 1.485. It proves that the examples of companies in the primary consumer goods sector are large companies with a total asset value of more than Rp. 10 billion or an Ln value of more than 23.03. Stock Beta have 0.3114 as lowest ratio and 2.1980 as highest and mean of 0.872 with a mean squared error of 0.391.

Table 1. Descriptive Analysis

Variable	Minimum	Maximum	mean	Mean squared error
Liquidity (X1)	0.0441	11.8303	1,574	1,632
Solvability (X2)	0.0068	1.9253	0.525	0.313
Activity (X3)	0.0276	3.1575	1,100	0.765
Profitability (X4)	-2.2444	1.9455	0.037	0.523
Asset Growth (X5)	-0.3714	1.6761	0.065	0.188
Sales Growth (X6)	-0.7078	1.5314	0.093	0.270
Firm size (Z)	26,624	32,820	29.38	1.485
Stock Beta (Y)	0.3114	2.1980	0.872	0.391

4.2. Evaluation of Outer Model

The outer model test is to specify the relationship between variables and their indicator that must be valid dan reliable.

Table 2. Outer Model Results

Variables	Loding Factor	AVE	CR	CA
QR(X1)	1,000	1,000	1,000	1,000
DTA (X2)	1,000	1,000	1,000	1,000
TATO (X3)	1,000	1,000	1,000	1,000
ROE (X4)	1,000	1,000	1,000	1,000
AG (X5)	1,000	1,000	1,000	1,000
SG (X6)	1,000	1,000	1,000	1,000
BETA (Y)	1,000	1,000	1,000	1,000
SIZE (Z)	1,000	1,000	1,000	1,000

Based on Table 2, the loading factor value is $1 > 0.7$ means that it is accepted as per (Hair, 2014) state loading factor that has a value greater than 0.7 is said to be valid. Mean Variance Extracted (AVE) has value $1 > 0.5$ means that it is accepted that this value illustrates that one variable can explain more than half the variance of the indicator with a minimum value of 0.5. Composite Reliability (CR) has value $1 > 0.7$ means that it is accepted and shows the indicator's consistency in measuring the expected value of more than 0.7. Cronbach's alpha (CA) has a value $1 > 0.7$ means it is accepted to reflect the reliability of all indicators in the model with a minimum magnitude of 0.7.

4.3. Evaluation of Inner Model

The inner model test is to show how much variation is given by the independent variable to the dependent variable, how much predictive relevance and how fit the model.

Table 3. Inner Outer Results

Variables	R Square Adjusted	Q ² (=1-SSE/SSO)	SRMR
Stock Beta (Y)	0.403	0.314	0.004

Based on table 3, shows that the R-square value of the systematic risk variable (Y) is 0.403, which is good enough to predict the relationship between variables. According to (Hair, 2014), the R-squared value of 0.75, and 0.35 shows that the PLS model is in the weak category. Q-square 0.314 > 0, can state that this model has predictive relevance and can be used to test the research hypothesis. The value of the goodness fit of SRMR was 0,004 < 1 means the model is fit.

4.4. Hypothesis Test

Hypothesis testing is carried out to explain the direction of the relationship between variables.

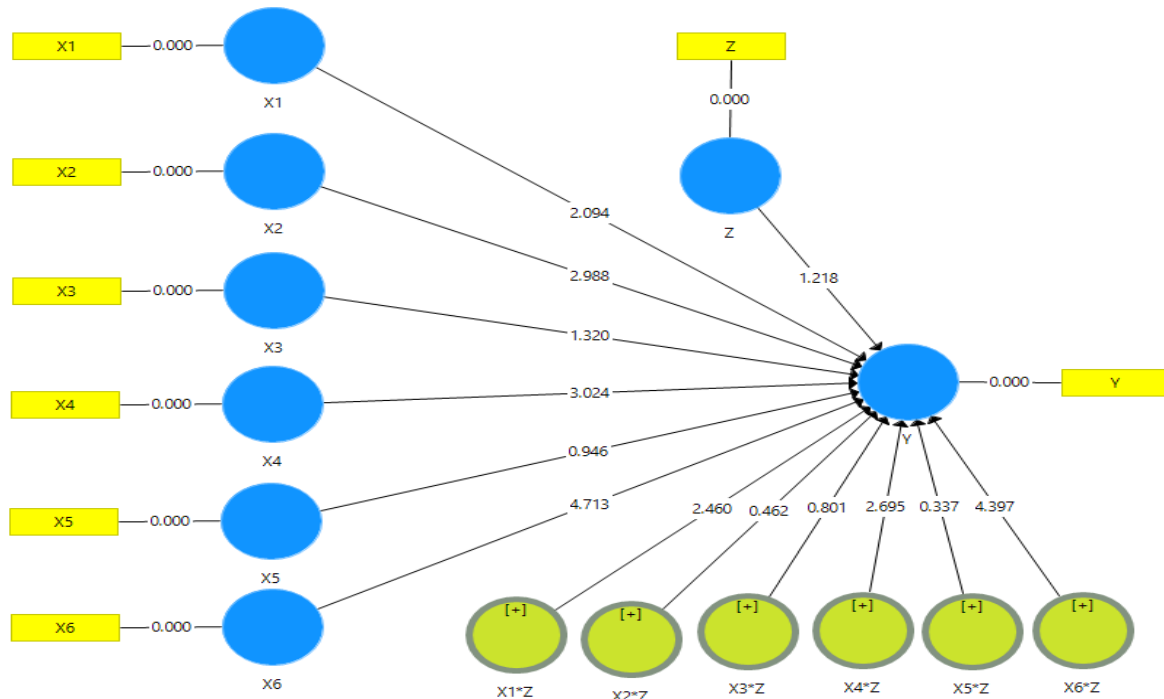


Figure 2. Path Analysis

Table 4. Significant Test of Impact

	Original Sample (O)	Sample Mean (M)	Mean squared error (STDEV)	T Statistics (O/STDEV)	P Values
X1 -> Y	-0.124	-0.123	0.059	2,094	0.037*
X1*Z -> Y	-0.206	-0.204	0.084	2,460	0.014*
X2 -> Y	0.230	0.239	0.077	2,988	0.003*
X2*Z -> Y	-0.035	-0.033	0.077	0.462	0.644
X3 -> Y	0.090	0.079	0.068	1,320	0.187
X3*Z -> Y	-0.063	-0.061	0.079	0.801	0.423
X4 -> Y	0.259	0.259	0.086	3,024	0.003*
X4*Z -> Y	-0.290	-0.303	0.108	2,695	0.007*
X5 -> Y	-0.053	-0.066	0.056	0.946	0.345
X5*Z -> Y	-0.016	-0.026	0.047	0.337	0.736
X6 -> Y	0.348	0.343	0.074	4,713	0.000*
X6*Z -> Y	0.390	0.379	0.089	4,397	0.000*
Z -> Y	0.198	0.194	0.074	1.218	0.018*

(*) significant at 5%

Table 4 show liquidity (X1) has a significant and negative impact to stock beta (Y) with p-values = 0.037 <0.05 and Original Sample = -0.124. Solvability (X2) has a important and positive impact on stock beta (Y) with p-values = 0.003 <0.05 and Original Sample = 0.230. Activity (X3) has no significant impact on stock beta (Y) with p-values = 0.090 > 0.05. Profitability (X4) has a important and positive impact to stock beta (Y) with p-values = 0.003 <0.05 and Original Sample 0.259. Asset growth (X5) has no significant impact on beta (Y) with p-values = 0.345 > 0.05. Sales growth (X6) has a important and positive impact on stock beta (Y) with p-values = 0.000 <0.05 and Original Sample 0.390.

Table 4 shows that firm size (Z) has a significant positive impact on stock beta (Y) with P-values = 0.018 <0.05 and Original Sample 0.198. Firm size (Z) significantly adequate the impact of liquidity (X1) to stock beta (Y) with P-values = 0.014 > 0.05. Firm size (Z) does not adequate the impact of solvability (X2) on stock beta (Y) with P-values = 0.644 > 0.05. Firm size (Z) does not adequate the impact of activity (X3) to stock beta (Y) with P-values = 0.423 > 0.05. Firm size (Z) significantly adequate the impact of profitability (X4) on stock beta (Y) with P-values = 0.007 <0.05. Firm size (Z) does not adequate the impact of asset growth (X5) on beta (Y) with P-values = 0.736 > 0.05. Firm size (Z) significantly adequate the impact of sales growth (X6) on stock beta (Y) with P-values = 0.000 <0.05.

4.5. Discussion

H1 accepted that liquidity has a important and negative impact on systematic risk. The more liquid a company is, the lower its systematic risk (Ko'imah & Damayanti, 2020) . A company with high liquidity not only shows that it can cover its current liabilities also shows that the company's financial situation is relatively stable and can avoid high systematic risk. This research's results align with research Bui et al (2017).

H2 accepted that solvability has a important and positive impact on systematic risk. The higher the level of debt, the investors will think that the company has a low ability to pay dividends because the company prioritizes paying debt and interest (Rosyida et al. , 2020) , which will increase systematic risk. This research's results align with research (Gesaputri et al., 2021) .

H3 rejected that the activity ratio has no significant impact on systematic risk. It means that the level of activity ratio during the observation period does not affect systematic risk due to the weakness of the TATO ratio. It can not represent the whole profit, which only represents the relationship between sales and assets. Another reason is that zero book value assets can also cause a high level of TATO. This research's results align with research (Kusuma, 2016) .

H4 accepted that profitability has a significant positive impact on systematic risk. An increase in company profits will impact the higher beta value of the stock due to high fluctuations in stock prices due to public interest (Sarumaha , 2017) .This confirms the investment theory; high risk high return, where the relationship of return is proportional to risk. This research's results align with research (Wiyono & Mardijuwono, 2020) .

H5 declined that wealth growth had no material impact on systematic risk. This means that the level of asset growth has no impact on systematic risk. Wealth growth information does not prompt investors to dump or buy stocks immediately, as investors tend to make subjective judgments when making decisions. As such, there is no return change that affects beta. The results of this research are in line with research (Gesaputri et al ., 2021) which has no significant impact.

H6 accepted that sales growth has a significant positive impact on systematic risk. The higher the growth rate, the higher the risk of bankruptcy (Prasetyo, 2020) . High sales growth attracts competitors to enter the same industry because they think it has good prospects, thereby increasing the risk of bankruptcy due to the inability to compete with new competitors. This research's results align with research (Prasetyo, 2020) .

H7 is accepted where firm size can adequate the impact of liquidity on systematic risk. Large companies have large assets that increase their ability to meet liquidity and have a higher probability of surviving (Restiya Hasari, 2016).

H8 was rejected, indicating that firm size could not adequate the impact of solvability on systematic risk. Large companies can get more funding from external companies and bear a fixed burden (L & Basana, 2020) that increases risk. However, in this sector which is a large company listed, the mean solvability was only 50% which means there are other factors supporting solvability's impact on systematic risk.

H9 rejected where firm size cannot adequate the impact of activity ratio on systematic risk. Large companies can expand their market share to increase sales because the company can maximize operational activities with its assets (Julietha & Natsir, 2021) . However, in this research, a large firm size does not reflect a high activity ratio seen from

the mean activity ratio of 1,1 smaller than the industry standard ratio in general, meaning that the assets owned are not able to increase sales much.

H10 accepted which proves that firm size can adequate the impact of profitability against systematic risk. Large companies will find it easier to raise capital from outside; the greater the capital, the higher the profit (Kartikasari & Merianti, 2016) , which increases systematic risk.

H11 rejected where firm size could not adequate the impact of asset growth on systematic risk. The firm size does not influence asset growth because asset growth can also occur in small companies. The mean asset growth in this company was only 0,065 means other factors can influence it.

H12 accepted which proves that firm size can adequate the impact of sales growth on systematic risk. A large company can maximize assets to increase sales from year to year, the higher the growth rate, the higher the risk of bankruptcy (Prasetyo, 2020) . High sales growth will attract new companies to enter the industry so that it can increase the risk of bankruptcy of the old company due to not being able to compete.

5. Conclusions

The test results show that liquidity significantly negatively affects systematic risk because the company can immediately pay current debts, decreasing systematic risk. Solvability has a significant positive impact on systematic risk which means that the company is at a high risk of bankruptcy which will increase systematic risk. Profitability and sales growth have a significant positive impact on the systematic risk because competitors will see this as an attraction to enter the same industry, thereby increasing the chances of the old company going bankrupt if it cannot compete with the new company. Activity ratio and asset growth do not show a significant impact where it is not an important point for investors in making decisions for stock investment. The moderation test shows that firm size can adequate the impact of liquidity on systematic risk where large companies have more opportunities to have high liquidity, which affects systematic risk. Firm size can adequate the impact of profitability on systematic risk where large companies have funding opportunities to boost operations to increase profits, which will affect the high systematic risk. Firm size can adequate the impact of sales growth on systematic risk, where large companies have more opportunities to experience sales growth by maximizing existing assets so that it will affect systematic risk. But firm size does not mitigate the impact of solvency, activity and asset growth to systematic risk.

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