

The Effect of Risk on Cement Industry Stock Return in Indonesia Stock Exchange

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Abstract- This study aimed to find empirical evidence about the effect of risk on stock return in cement industry which listed in Indonesia Stock Exchange. In this study risk was divided into two categories, systemic risk and unsystemic risk. Samples used in this study are public firms in cement subsector listed in Indonesia Stock Exchange during 2011-2016, which selected by purposive sampling. The model was evaluated by Structural Equation Modeling (SEM) and linear regression. The result of this study from both analysis has shown that systemic risk has significant effect on stock return. On the other side, unsystemic risk didn't have significant effect on stock return. This was because the unsystemic risk can be diversified, neither did systemic risk.

Index Terms- systemic risk, unsystemic risk, stock return, cement industry

I. INTRODUCTION

The uncertainty of the emerging world in recent years, leaving an impact for developing countries in the world. Indonesia is one of the developing countries also feeling the effects, in the third quarter 2016 Indonesia's economic growth not as strong as expected. BPS recorded that Indonesia's economic growth in the fourth quarter of negative 1.67 percent in 2016 (QoQ) and 5.19 (YoY), so that the overall Indonesian economy in 2016 grew by 5.08 percent (BPS 2016). A country's economic growth needs to be supported by the development of the real sector as well as a good investment climate. The cement industry in Indonesia is one of the emerging industries today. Government work plan (RKP) NawaCita2016 also aims to boost the industrial sector to maximize the development of industrial estates and revitasisasi structures and infrastructure. The need for cement as the main raw materials is expected to continue to increase along with a vigorous infrastructure development undertaken by the current government.

On the other hand, the economic slowdown experienced by Indonesia during 2015 due to the impact of the global crisis effect on the ability of the company in financing and influence the growth of the industry, one of which the cement industry. Stocks as one source of financing the company has run into difficulty due to the disruption of the real sector as well as the perception of the inherent uncertainty as risk. The condition causes the majority of companies listed on the stock exchange world experienced a decline in stock prices (Bartram and Bodnar, 2009) including stock price of cement industry in Indonesia. Economic conditions are unstable and unpredictable is one factor

that causes a decrease in business activity that occurred in the Indonesian capital market. Investors as market participants will expect the rate of return or a maximum of investment activities undertaken. Each investor expect a maximum return of investment, but still need to consider the risks covered (Revelation & Fajri 2014). Investment risk is a deviation level of benefits with the expected profit rate (Paramitasari 2011). Absari (2013) states that in investing in the stock market investors in addition to the gain factor should also review the risk factors.

In general, the risk can be divided into two, namely the systemic risk and unsystemic risk (Kusbianto 2001). Bodie et. al (2014) explain that the systemic risk of so-called market risk, where risk occurs because of events outside the company. Meanwhile, the unsystemic risk arises from the influence of micro factors that have an influence on the particular company and therefore is unique that this risk can be offset by the positive things happening in the company of others. This risk can be diversified in the portfolio and is influenced by the quality of the internal control (Heidarpoor & Shahrivar 2015).

Nowadays the Indonesian government tried to encourage the development of infrastructure to encourage economic growth in Indonesia. The cement industry is an industry that support infrastructure development in terms of raw materials. It can be pointed out as a good signal for investors to be able to invest their shares in the cement industry. However, on the other hand investors also need to consider the risks that may occur, in addition to the investor is often difficult to determine the level of risk that may occur. Risk is the primary factor that determines the amount of value return (Nugroho, 2013). Based on this, the goal of this research is:

1. Analyze the effects of systemic risk on stock returns of cement industry listed on the Stock Exchange
2. Analyze the effect of unsystemic risk on stock returns of cement industry listed on the Stock Exchange.

II. IDENTIFY, RESEARCH AND COLLECT IDEA

This study was conducted to give a description of the systemic risk and unsystemic risk and analyze the impact on stock returns cement industry listed in Indonesia Stock Exchange in the period 2011-2016. The data will be used in this research is secondary data over a six year period, namely 2011-2016. Data will be collected from various main reference i.e. www.idx.co.id and www.yahoofinance.com to cement industry's stock price, www.bi.go.id for inflation, BI rate, exchange rate and economic growth (GDP). The population of this research is the cement industry sub-sectors listed in Indonesia Stock Exchange during the last 6 years (2011-2016). This study uses a purposive

sampling technique where sampling is done with certain considerations. Criteria used to determine the sample in this study are:

- 1) Listed as an issuer in the cement subsector in Indonesia Stock Exchange in 2011-2016,
- 2) Companies already doing Initial Public Offering (IPO) in the period 2011-2016,
- 3) never delisting and relisting during the years 2011-2016.

Based on these criteria, there are three companies that meet the criteria to be used as example in this study as presented in Table 1.

Table 1 Companies that serve as examples of research

No	Company Name
1.	PT Indocement Tungal Prakarsa, Tbk
2.	PT Semen Indonesia (Persero), Tbk
3.	PT Holcim Indonesia, Tbk

Source: IDX, 2016

III. RESULTS AND DISCUSSION

Analysis of Structural Equation Modeling – Partial Least Square

The analysis is performed using the Partial Least Square (PLS) is processed using SmartPLS 3.0. PLS does not require the assumption of normality, based variances that do not require large amounts of samples, as well as PLS can also be used to confirm the theory and explain whether there is any relationship between the latent variables. Selection of PLS as a tool of analysis of this study seems right because the sample size is not large. PLS model evaluation is done by assessing the outer model or measurement model and inner model or structural model.

Measurement Model Evaluation (Outer Model)

All indicators in this study model essentially reflective so that should be a outer model analysis using five criteria namely Convergent Validity, Composite Reliability, Average Variance Extracted (AVE), AVE square root, and Cross Loading (Ghozali 2015). The initial model image of this study can be seen in Figure 1.

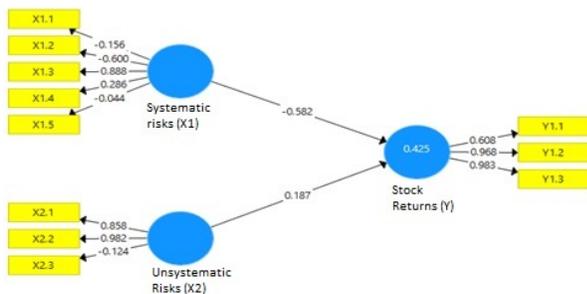


Figure1 The results of the analysis of the initial model study

The analysis of the initial model (Figure 1) shows that the indicator X1.1 (-0156), X1.2 (-0600), X1.4 (0286), X1.5 (-0044), and X2.3 (- 0.124) has loading factor value below 0.7, these

The analytical tools used to help the processing of the data in this study are Microsoft Excel 2013 and SmartPLS 3.0.

Research Variable

The research variables and indicators used in this study can be seen in Table 2.

Table 2 Research variables and indicators

No	Latent Variables	Indicator
1	Systemic risk (X1)	a. Inflation (X1.1)
		b.Exchange Rate Against Dollar(X1.2)
		c.BI Rate (X1.3)
		d.Economic Growth (X1.4)
		e.Beta Industry (X1.5)
2	Unsystemic risk (X2)	a.Variance returns ofINTP(X2.1)
		b.Variance returnsof SMGR (X2.2)
		c. Variancereturnsof SMCB (X2.3)
3	Stock returns (Y)	a. Stock returns of INTP (Y1)
		b.Stock returns of SMGR (Y2)
		c.Stock returns of SMCB (Y3)

four indicators therefore should be excluded from the model. So in the end all that remains is an indicator with a loading factor value above 0.7 . The end model study after the iteration can be seen in Figure 2.

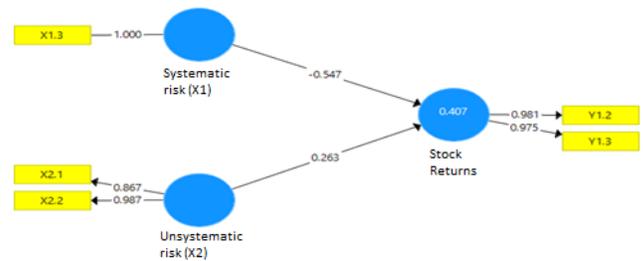


Figure 2 The results of the final model after dropping variables

Figure 2 shows that all indicators on the model already has a loading factor value of more than 0.7, which means that these indicators are valid as indicators measuring constructs (Ghozali 2015). Aside from loading factor values, convergent validity can also be seen from the Average Variance Extracted (AVE). Then the reflective variables also need to be tested by cross loading discriminant validity. Another method that can be used to test the discriminant validity is to compare the value of the square root of AVE by the correlation between the constructs. The final step in evaluating the outer model is a unidimensional test validity. Test the validity unidimensional done using the composite indicator of reliability and Cronbach's alpha with a cut off value of 0.7 to 0.6 for the composite reliability and Cronbach's alpha. The results of the overall assessment criteria and standard values reflective model in this study can be seen in Table 3.

Table 3Results of the research assessment and standard value of reflective model

No	Criteria	Standard	Research results	Conclusion
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N o	Criteria	Standard	Research results	Conclusion
1	Loading factor	≥ 0.7	X1.3 = 1.000 X2.1 = 0.867 X2.2 = 0.987 Y1.2 = 0.981 Y1.3 = 0.975	Meet the standard
2	Average Variance Extracted (AVE)	≥ 0.5	Systemic risk = 1.000 Unsystemic risk = 0.863 Stock return = 0.956	Meet the standard
3	Square root of AVE	Greater than the correlation value between constructs	All of the AVE square root values of the construct are already greater than the correlation between each construct	Meet the standard
4	Cross Loading	Indicators must have a greater loading value for any latent variables compared with other indicators of latent variables	All values of the loading indicator of each latent variable are already greater than the other latent variables	Meet the standard
5	Cronbach's Alpha	≥ 0.6	Systemic risk = 1.000 Unsystemic risk = 0.874 Stock return = 0.954	Meet the standard
6	Composite Reliability	≥ 0.7	Systemic risk = 1.000 Unsystemic risk = 0.926 Stock return = 0.977	Meet the standard

Source: Processed data results with SmartPLS (2017)

Table 3 indicates that this model has good validity and reliability.

Structural Model Evaluation (Inner Model)

On the inner models, testing conducted on two criteria, named R² of endogenous latent variables and the estimated path coefficients. The results of research and assessment standard value of innermodel can be seen in Table 4.

Table 4 Results of standard assessment and inner models value

N o	Criteria	Standard	Research result	Conclusion
1	R ² of the endogenous latent variables	Substantial R ² = 0.67 R ² moderate = 0.33 The weak of R ² = 0.19	Stock return = 0.348	R ² moderate
2	Estimation of path coefficient	The real effect if t-count > t-table. <i>alpha</i> 5 percent, t-table value is 1.96	Evaluation of the magnitude of the t-statistic, p-value and the original value bootstrappingsa mple of the results presented in Table 12.	

Source: Processed data results with SmartPLS (2017)

Influence systemic risk and unsystemic risk model on stock returns value R² of 0348, which can be interpreted that construct variability stock returns can be explained by the construct variability systemic risk and unsystemic risk amounted to 34.8 percent, while 65.2 percent is explained by other variables which are not included in this study. At the time of investment, investors need to regard to the risk to be borne. More likely the difference between actual returns received by expected returns exhibits greater investment risk. An investment that has a significant risk would not provide a definite advantage (Utomo 2007). Therefore, investors need an accurate measure of risk in order to generate a return in accordance with the expected level. The next test path coefficient estimated by comparing the value of t-statistics on the output bootstrapping to assess the significant influence of a construct and path coefficient valuet to see how much influence. For how much influence can be seen in the original sample (Table 5).

Table 5 Results of testing the *inner bootstrapping models*

Effect	Original Sample	T Statistics (O / STDEV)	P-value
Systemic risk to return	-0547	3,977	0001
Unsystemic risk to return	0263	0968	0343

Source: data processed by SmartPLS (2017)

The results also show the influence of systemic risk on stock returns is negative, namely in terms of the value of its original sample at -0547, so it can be stated that the systemic risk can lower stock returns. The real impact of systemic risk on stock returns according to research conducted by Machdar (2015). Systemic risk can be a negative influence over the invested asset which has a high degree of volatility. The uncertain economic conditions make investors shift their investment allocation on asset which has lower risk of such bonds. Thus, it can decrease the return on the stock market. Investors who do not like big risks will select asset such as bonds, because it has a greater interest rate and a lower risk and also generate a higher return.

Meanwhile, the results of this study also show the influence of unsystemic risk on stock returns is not real, it can be seen from the value t < t-table. The results are analogous with research conducted by Purba (2016), Rostami and Basirat (2016), and Pinayani (2002) where the unsystemic risk does not have a significant influence on stock returns. Unsystemic risk is the risk that can be minimized by the diversification of the portfolio, so better diversification done within the portfolio investment, it can reduce unsystemic risk.

IV. CONCLUSION

Based on the results and discussion of research that has been obtained, it can be concluded that:

1. Systematic risk of a significant negative effect on stock returns of cement industry. Changes in economic growth

(GDP) will impact on the return of their respective companies.

2. Unsystematic risk has no effect on stock returns, because this risk can be diversified by investors and companies to have a combination of a diverse portfolio and make good on the internal management of the company.

V. SUGGESTION

Based on the results and discussion of research described previously, there are several things that can be recommended, there are:

1. The Company is expected to be more sensitive to changes in the market is mainly related to the economic growth that occurred in Indonesia in order to minimize systemic risk.
2. Although unsystematic risk did not significantly affect the return, the company still needs to implement good corporate management, especially with regard to labor, because labor is the largest asset owned by the company.
3. For investors or prospective investors who will conduct stock transactions in Indonesia Stock Exchange in particular the cement company, has taken notice of the level of risk in accordance with the expected profit rate.
4. For further research, it can be extended by adding the effect of the company's performance and can also be done for other industries, as well as on indices listed on the Indonesia Stock Exchange for each industry or index is unique so that research results can differ from one another.

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