The Analysis of Exposure Economic on the Value of Manufacturing and Mining Industry

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Keywords: Economic Exposure, Firm Size, Market to Book Ratio, Quick Ratio, Export Ratio, Debt to Asset Ratio, Earning Variability, Hedging, Value of Company

Abstract: Economic exposure is a measure of change in exchange rates that effect the company's value as measured in the present value as measured in the present value of cash flows that aims to maximize shareholder wealth. The purpose of this research is to find out and analyze the effect of the economic exposure of manufacturing and mining company. The independent variables of research are firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earning variability and hedging against value companies with economic exposure as intervening variable in Manufacturing and Mining Industry. This research is a statistical study of associative. Method of data collection is done through study of documentation. The Population of this research is the Manufacturing and Mining industries that are listed in the Indonesia Stock Exchange in accordance with the specified criteria as much as 171 companies consisting of 132 manufacturing company and 39 mining companies. Methods of data analysis used is using path analysis software with E-views 7.0. The research of the first substructure is show firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earning variability and simultaneously hedging exposure to economics in Manufacturing and Mining companies. The export ratio partially positive and significant effect against the economic exposure. The second substructure result show firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earning variability, hedging and economic exposure simultaneously affect the company's value in manufacturing and mining companies. Partially only debt to asset ratio and earning variability which have positive and significant influence to company value. Economic exposure is not an intervening variables the influence of firm sixe, market to book ratio, quick ratio, the export ratio, debt to asset ratio, earning variability and hedging against the value of the company.

1 INTRODUCTION

The rapid development process of the world economy has increased the relationship of interdependence and sharpened world business competition. This international trade activity not only benefits producers but as a means of meeting unlimited consumer needs. Moreover, at this time it will take effect and the system of the Asean Economic Community (MEA) will take place which supports international economic activities.

This greatly affects the income and expenditure of companies that use foreign currencies in export or import transactions. The fluctuation of the rupiah exchange rate against the USD also affects stocks (Hudiwinarti, 1998) In addition, the actions of foreign investors who use shares as a means to take advantage of currency speculation also influence the value of these shares so that the value and performance of the company is affected by foreign exchange rates (Kuncoro, 2000). According to (Faisal, 2001) there are three types of exposures caused by changes in exchange rates, namely economic translation and economic transaction. Translation and transaction exposure are explained in accounting calculations defined by the book value of assets and liabilities nominated in foreign currencies. While economic exposure is the sensitivity of a company's value to changes in exchange rates.

According to (Bodnar, a professor from John Hopkins University), economic exposure is the total impact of changes in a macroeconomic variable on the company's market value, where changes in exchange rates will affect the nominal value of contracts in future contracts which will affect cash flows company.

Researchers who have carried out research on

Panjaitan, I., Sadalia, I. and Fachrudin, K.
The Analysis of Exposure Economic on the Value of Manufacturing and Mining Industry.
DOI: 10.5220/0009509806230627
In *Proceedings of the 1st Unimed International Conference on Economics Education and Social Science (UNICEES 2018)*, pages 623-627
ISBN: 978-989-758-432-9

economic exposures such as the (Pritamani, Shome dan Singal, 2004) study prove that the company's total economic exposure is negatively related to the level of stock returns, these variables are proxied as variables needed for hedging.

(He dan Ng, 1998) use the Quick Ratio variable as a determinant of the level of economic exposure faced by a company. Quick Ratio is a proxy variable to reduce the level of hedging carried out by the company. Other variables, namely Debt to Equity Ratio, can be proxied as a variable needed for hedging purposes.

(Wulandari, 2013) one of them is the mining industry because this industry still relies on imported raw materials. This strengthening of the exchange rate causes local mining products to become more expensive so that they are not competitive with similar products from competing countries.

Based on the description of the background, the researcher was interested in researching about economic exposures with the title "Analysis of Economic Exposures to Firm Values in the Manufacturing and Mining Industry in the Indonesia Stock Exchange". The time period examined is from 2010-2015.

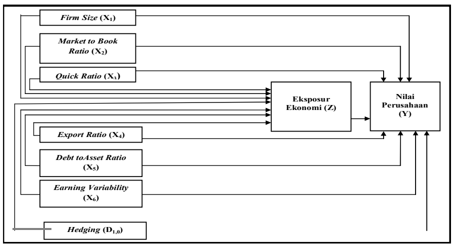
2 THEORICAL FRAMEWORK

(Kanagaraj dan Sikarwar, 2011) conducting research under the title "A Firm Level Analysis of the Exchange Rate Exposure of Indian Firms", this study examined the level of foreign exchange exposure and determinants for samples of Indian companies. For this purpose, the relationship between exchange rates and stock returns for a sample of 361 non-financial companies in India with the period April 2006 - March 2011. The study found that only 16 percent of companies were affected by exposure where 10 percent were significant. Furthermore, from companies that have significant exposure 86 percent of companies have a negative influence by Rupee appreciation which confirms that Indian companies are exporters.

(Susilowati, 2015) conducted a research with the title "Rupiah Exchange Rate Exposures and Stock Returns on Companies Listed on the Kompas 100 Index". This study aims to determine the effect of changes in the real exchange rate index on company stock returns. Stock return is used as a proxy for company value. The exchange rate exposure of the company varies depending on the management carried out by the company. Therefore this study also aims to analyze the influence of the level of foreign operations and explanatory variables of the company's hedging policy on the rupiah exchange rate exposure faced by the company. The research sample was focused on companies listed on the Kompas 100 Index in the period 2009 to 2013. Based on the selection of samples by purposive sampling, the number of samples in this study were 43 companies. This study uses multiple linear regression analysis as a test tool. From the multiple linear regression test in the regression model equation 1, the beta values of each company are obtained which indicate the level of exposure of the company's exchange rate. The beta value was tested in the equation 2 regression model with the ratio of exports, firm size, long-term debt ratio, dividend payout ratio, quick ratio, book to market value of equity. The results showed that changes in the real effective exchange rate index had a significant positive effect on stock returns. Companies that have export activities benefit when the rupiah exchange rate depreciates against the currencies of Indonesia's main trading partners. Exchange rate exposure will increase along with the increase in the ratio of exports owned by the company. This study also found empirical evidence that two hedging explanatory variables namely dividend payout ratio and long-term debt ratio affect the level of exposure.

(Nur, Binti dan Ahmad, 2015) carried out research under the title "Foreign Exchange Exposure and Its Determinants Among Some Listed Companies From Selected Sectors in Malaysia". This study analyzes the exchange rate exposures of 90 Malaysian companies in various sectors such as the agricultural sector, consumer product sector and industrial sectors listed on Bursa Malaysia for the period January 2008 to December 2012. The results of this study indicate that the agricultural sector is more affected by exposure than the sector consumption and industrial sector. Besides that company size, liquidity, debt, asset turnover, profit, diversification of currencies and diversification of foreign subsidiaries were found to be insignificant in explaining the factors that might influence foreign exchange exposure.

The Model Framework in this research is below:



Source: (Kurniawati Sri Lestari & Anggraeni, 2004) (Data processed, 2016)

Figure 1: Research Design

3 RESEARCH METHOD

This study is an associative study in which research links two or more variables (Ginting Paham & Syafrizal Situmorang, 2008).

This research was conducted in the Manufacturing and Mining Industry on the Indonesia Stock Exchange. The observation period from 2010 to 2015 was examined on the official website www.idx.co.id. The planned time to conduct the study was October 2015 to September 2016.

The population of 132 Manufacturing Industry companies and 39 Mining Industry companies.

4 RESULTS

The following is a summary of the test results of the significance of the simultaneous influence as follows:

Table 1: Test for the Significance of Simultaneous Influence for Equation I Structure and Substructure II for the Manufacturing and Mining Industry.

Equation	Prob. Value (F-Statistik)	F-Account	F- Table	Interpretation
MANUFACTURING INDUSTRY				
Substructure Equation I	0.0000	3,829	2,171	Firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earning variability and hedging simultaneously / together have a positive and significant effect on economic exposure in the Manufacturing Industry on the Indonesia Stock Exchange
Substructure equation II	0,0000	17,702	2,083	Firm size, market to book ratio, export ratio, debt to asset ratio, earning variability, hedging and economic exposure simultaneously/together have a positive and significant effect on firm value in the Manufacturing Industry on the Indonesia Stock Exchange
MINING INDUSTRY				
Substructure Equation I	0.0114	2,227	2,389	Firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earning variability and hedging simultaneously have positive and not significant effects on economic exposure in the Mining Industry on the Indonesia stock exchange
Substructure equation II	0.0000	6,242	2,312	Firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earning variability, hediging and economic exposure simultaneously/together have a positive and significant effect on firm value in the Mining Industry on the Indonesian Stock Exchange

The following is a summary of the results of the partial effect tests as follows:

Table 2: Test the Significance of Partial Influence with Probability Value (Sig.) For Equation I Structure in Manufacturing and Mining Industry.

Variable	Prob. value	T___> 1,979	interpretation	Prob. value	T___> 2,036	Interpretation
	MANUFACTUTING INDUSTRY			**MINING INDUSTRY**		
Firm size	0,990	-0,012	*Firm size* has no significant negative effect on economic exposure **(Prob>0,05)**	0,429	-0,792	*Firm size* has no significant negative effect on economic exposure **(Prob>0,05)**
Market to book ratio	0,756	0,311	*Market to book ratio* has no significant positive effect on economic exposure **(Prob>0,05)**	0,390	0,861	*Market to book ratio* has no significant positive effect on economic exposure **(Prob>0,05)**
Quick ratio	0,927	0,092	*Quick ratio* has no significant positive effect on economic exposure **(Prob>0,05)**	0,426	0,796	*Quick ratio* has positive but not significant effect on economic exposure **(Prob>0,05)**
Export ratio	0,631	-0,480	*Export ratio* has negative and not significant effect on economic exposure **(Prob>0,05)**	0,005	2,816	*Export ratio* has positive and significant effect on economic exposure **(Prob<0,05)**
Debt to asset ratio	0,117	-0,156	*Debt to asset ratio* has negative and not significant effect on economic exposure **(Prob>0,05)**	0,893	0,134	*Debt to asset ratio* has positive and not significant effect on economic exposure **(Prob>0,05)**
Earning variability	0,753	-0,314	*Earning variability* has negative and not significant effect on economic exposure **(Prob>0,05)**	0,251	-1,150	*Earning variability* has negative and not significant effect on economic exposure **(Prob>0,05)**
Hedging	0,574	0,593	*hedging* has positive and not significant effect on economic exposure **(Prob>0,05)**	0,049	1,972	*hedging* has positive and significant effect on economic exposure **(Prob<0,05)**

5 CONCLUSIONS

1. Based on the results of the study of economic exposure analysis on the value of the company in the manufacturing and mining industries on the Indonesian stock exchange, it can be concluded that: Firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio and earnings variability simultaneously have a positive and significant effect on economic exposure in the manufacturing and mining industries in the Indonesian stock exchange;
2. Firm Size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earnings variability and economic exposure simultaneously have a positive and significant effect on firm value in the manufacturing and mining industries in the Indonesian stock exchange;
3. Economic exposure is not an intervening variable (intermediary) capable of mediating the influence of firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio, earnings variability, and hedging of firm value in manufacturing and mining industries on the stock exchange Indonesia;
4. There are differences in the influence of firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio and earnings variability on economic exposures that do hedging and no

hedging in the manufacturing and mining industries in the Indonesian stock exchange;
5. There is a difference in the influence of firm size, market to book ratio, quick ratio, export ratio, debt to asset ratio and earnings variability on the value of the company through economic exposure to hedging and non-hedging in the manufacturing and mining industries in the Indonesian stock exchange.

6 SUGGESTION

Based on the conclusions from the results of the research as stated earlier, the suggestions that can be given are as follows

1. The firm size of the manufacturing and mining industry companies can be seen from the research results that firm size has a positive and significant impact on the value of the company. There is a good idea for the company to control its firm size if it wants to develop the company even more in the international trade arena. the greater the firm size of the company, the greater the risk of being exposed to economic exposures because the company carries out international trade cooperation with foreign companies and the inflow of cash and assets in foreign currencies will increase, so the management of the company must be able to cast a watch on the movement of the rupiah the company does not carry out policies in hedging, the company will be at greater risk of being exposed to economic exposure which will result in a decrease in the value of the company.
2. In this study, the market to book ratio has a positive but insignificant effect on firm value and economic exposure for the manufacturing and mining industries, this might occur if at the time of the year examined some of the company's conditions were not good because economic movements in the country were experiencing a crisis so that the company's ability to increase its growth rate is very difficult. Moreover, people's purchasing power is declining, which makes the sale of production from the manufacturing industry very bad, as well as companies that do certain materials to make their products by importing raw materials from other countries, of course, the cost of production costs will be impact on the sale of these products. So that manufacturing and mining companies can take a way by carrying out various promotional strategies in increasing sales to cover large operational costs so as not to have a significant impact on the company's growth.
3. In this study more quick ratios have a negative and insignificant impact on economic exposure but there are also those that have a negative and significant impact on the value of the company in the mining industry. of course this is very worrying for some companies because it is how well the company fulfills its obligations, this has a negative impact on exposure because if the amount of assets or cash in foreign currencies is very risky when they want to make liabilities to other companies. This can be anticipated by carrying out hedging policies when conducting work agreements, so that the value of sales or purchases of raw materials that we do are not subject to increases or decreases in the exchange rates of these currencies.
4. The mining industry must pay more attention to the export ratio and continue to monitor its progress so that it is still in good condition and under control because the export ratio is a variable that influences economic exposure and also affects the value of the company. Where in maintaining stability, companies engaged in the mining industry must better understand and master the techniques of using derivative instruments such as SWAP and Hedging, where hedging is a variable that plays an important role in economic exposure for companies that conduct international trade. But in this study hedging has no significant effect on economic exposure in the manufacturing industry only in the mining industry hedging has a positive and significant effect on economic exposure and on the value of the company through economic exposure. Mining is more significant because Indonesia is rich in natural products in the form of mining materials such as gold, aluminum, coal, nickel and so on. However, some companies have not directly processed it into finished goods and have chosen to export raw materials and re-import after being semi-finished goods so that mining more often applies hedging policies to protect the value of export sales and import activities from their mining products.
5. This research is expected to be able to complement previous research related to economic exposures and can add references or knowledge about economic exposure in a subsequent scientific work by adding more extensive independent variables.
6. This research is expected to be an input for financial managers to pay more attention to any

company internal factors that influence the occurrence of economic exposure in its operational activities.

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