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FINANCIAL PERFORMANCE ANALYSIS: MANUFACTURING COMPANIES IN INDONESIA BEFORE AND POST THE 2008 GLOBAL ECONOMIC CRISIS

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Abstract

This study aims to analyze the financial performance of Indonesian manufacturing companies before and after the global economic crisis in 2008. In this study, financial performance is measured by Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). By comparing the average ROA, ROE, and NPM before and after the crisis, the results of the descriptive analysis were tested. It can be seen that ROA, ROE and NPM after the crisis were higher than before the crisis. As a result, post-crisis financial performance has improved compared to before the crisis. Based on the descriptive analysis, it is known that the financial performance of manufacturing companies after the crisis is better than before the crisis. Based on the t test, the results of ROA, ROE and NPM tests were obtained as follows. First, Post-crisis ROA is higher than before the 2008 global economic crisis, and the increase is said to be large. Second, post-crisis return on equity appears to be higher than before the global economic crisis, but this is not statistically significant. Third, post-crisis NPM also appears to be larger than before the crisis, but not statistically significant. The results of the t test show that financial performance as measured by ROA has improved after the crisis compared to before the crisis.

Keywords: Global crisis, Return on Assets, Return on Equity, Net Profit Margin

Introduction

Globalization has brought such rapid changes. In economics and commerce, markets that were originally divided into unified markets remove the physical barriers of regions, regions, countries and continents (Assapari, 2014). Currently, the market is merging with the global or international market. With the existence of an international market, companies in a country can use it to expand their market share not only domestically, but also to other countries or continents, resulting in global international business activities (Hartanto, 2018).

Import and export activities carried out can bring benefits to a country, make it possible to increase national income, introduce a country's products to the global market, expand production (Natalina, 2021). With the existence of international markets in the era of globalization, the concept of trade has changed. What was originally a local trade concept became an international or global trade concept (Mayasari, 2019). At present the

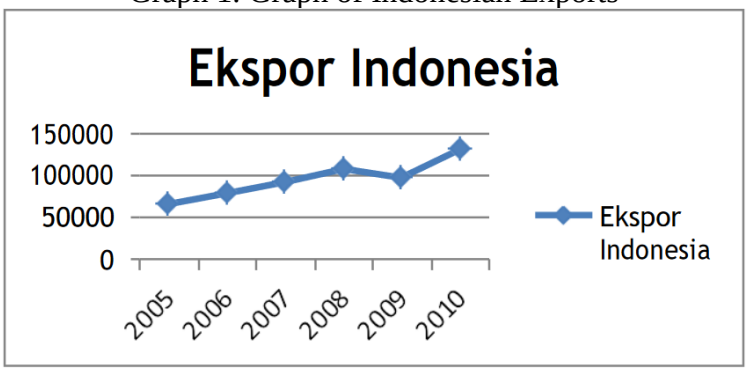
economic and business activities of a country are no longer the affairs of that country alone, but are the affairs of several other countries (Shaleh & Wisnaeni, 2019).

In other words, the consequence is that if a country's economy suffers or an economic crisis occurs, it will have an impact on other countries which will lead to a global economic crisis (Ruchiyani, Suriadi, Nainita, & Cahaya, 2022). The financial crisis that hit the developed countries of the United States of America in 2008 brought a very serious impact in the era of globalization in the form of a global economic crisis (Teguh & Sisdianto, 2020).

BNP Paribas, one of the world's largest banks, announced a freeze on some securities related to high-uncertainty real estate loans in the United States. This news became the initial cause of this global economic crisis (Sunarji & Sufyani, 2017). As a result, Financial institutions go bankrupt because people are unable to pay the debts they borrow, so these financial institutions become illiquid (Alim, 2014).

Eventually it spread throughout the world, one of which is Indonesia. Most of the studies on the impact of the 2008 crisis were conducted on financial institutions. (Alfira, Fasa, & Suharto, 2021) examines the impact of the 2008 crisis on the Indonesian banking sector. Even though the crisis has been going on for a long time, it is still relevant to study the impact of the 2008 crisis on Indonesian manufacturing companies, because research on the impact of the crisis on these manufacturing companies is still small and the phenomena are different (Shifa, Amalia, Majid, & Marliyah, 2022). Compared with the past to financial institutions. The impact of the global economic crisis that emerged in 2008 was felt by the international community, including Indonesia. The economic crisis led to higher prices, which devalued the rupiah against the US dollar (Ardesfira et al., 2022). For manufacturing companies, the weakening of the rupiah creates the perception that products exported to other countries are cheaper. As a result, exports increased. Indonesia's export growth is shown in Figure 1.

Graph 1. Graph of Indonesian Exports



The data source comes from BPS

Figure 1 shows that exports increased in 2007-2008, even though these years were at the peak of the global economic crisis (Miswanto & Aslan, 2019). Thus, the author tentatively hypothesizes that the global economic crisis has an impact on the real sector in Indonesia. However, the negative impact is not as severe as what happened in the financial sector. An increase in exports to manufacturing companies may not necessarily improve the situation of the companies involved in these exports. Combined with this explanation, the authors wish to understand more clearly the impact of the global crisis in 2008 on the financial performance of manufacturing companies on the IDX. Usually

these companies carry out import and export activities to various countries. The author observes this performance by analyzing the company's profitability ratios before and after the 2008 global crisis.

This study aims to find out that: 1) post-crisis ROA is better than before the 2008 global economic crisis, and 2) post-crisis ROE is better than before the 2008 global economic crisis. 3) post-crisis NPM is better than before the 2008 global economic crisis.

Research methods

The research data uses secondary data in the form of profit ratios for manufacturing companies published by Mirae Asset in the 16th quarter of 2006-2007 and the 16th quarter of 2009-2010. The research object was all manufacturing companies listed on the IDX, this time 70 companies were selected as samples. The variables used to test the hypothesis are the global economic crisis and financial performance based on ROA, ROE and NPM assessments. In addition to descriptive analysis, testing the research hypothesis also uses a two-sample paired-sample t-test analysis technique (Santoso, Powers, Grady, & Parsons, 2000). Although the analysis is descriptive in nature, there are differences in performance, and it is not certain that the analysis of the different tests of the two paired samples shows differences in performance before and after the crisis. This study uses a two-sample pairwise difference test because the type and amount of company data before and after the crisis are the same. The two-sample paired test requires the processed data to be normally distributed. Therefore, before testing the hypothesis, the authors first conducted a normality test and then performed a descriptive analysis. One-tailed t-test was used to test for differences between two paired samples. The t-test is carried out on the one hand because it is clear that the impact of the crisis on financial performance is that the company's financial performance after the crisis has improved compared to before the crisis (Algifari, 2013). before testing the hypothesis, the authors first conducted a normality test and then performed a descriptive analysis. One-tailed t-test was used to test for differences between two paired samples. The t-test is carried out on the one hand because it is clear that the impact of the crisis on financial performance is that the company's financial performance after the crisis has improved compared to before the crisis (Algifari, 2013). before testing the hypothesis, the authors first conducted a normality test and then performed a descriptive analysis. One-tailed t-test was used to test for differences between two paired samples. The t-test is carried out on the one hand because it is clear that the impact of the crisis on financial performance is that the company's financial performance after the crisis has improved compared to before the crisis (Zakaria & Algifari, 2013).

Results and Discussion

descriptive analysis

In descriptive statistics, the minimum, maximum, mean and standard deviation values of all variables used in this study were analyzed (Zakaria & Algifari, 2013).

Table 3

Descriptive Statistic of Average ROA Before Versus After Global Economic Crisis

	N	At a minimum	Maximum	Average	Standard Deviation
ROA After	70	-7,712	33,937	6,824	7,861
ROA Before	70	-1,900	34,212	5,551	5,806

Source: SPSS processing results

Table 3 shows that the mean ROA after the global economic crisis was 6.824 with a standard deviation of 7.861, while the mean ROA before the crisis was 5.551 with a standard deviation of 5.806. This shows that the average ROA before and after is smaller than the standard deviation. Therefore, it can be said that the deviation of the ROA value from the average value is quite large. By comparing the average ROA, the post-crisis ROA is higher than before the crisis or has increased, namely the average ROA in the previous period was 5.5518 to 6.8245.

Table 4.
Descriptive Statistics of Average ROE Before Versus After the 2008 Global Economic Crisis

	N	At minimum	aMaximum	Flat-flat	Standard Deviation
ROE After	70	-30,837	62,175	12,863	15,607
ROE Before	70	-3,587	84,112	12,776	14,459

Source: SPSS processing results

The descriptive statistical analysis in Table 4 shows that the average ROE value after the global economic crisis was 12.863, and the standard deviation was 15.607. The average ROE before the crisis was 12,776, and the standard deviation was 14,459. This shows that the average ROE before and after the crisis is smaller than the standard deviation. Therefore, it can be said that the deviation of the ROE value from the average value is large. By comparing the average ROE, the ROE after the crisis is higher or has increased compared to before the crisis.

Table 5.
NPM Average Descriptive Statistics Before Versus After Global Economic Crisis

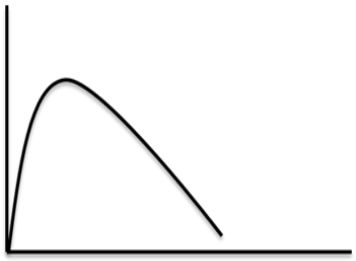
	N	At minimum	aMaximum	Average	Standard Deviation
NPM After	70	-0.020	0.593	0.069	0.103
NPM Before	70	-0.152	0.273	0.053	0.072

Source: SPSS processing results

Table 5 shows a descriptive statistical analysis which shows that the average value of NPM after the global economic crisis was 0.0690 with a standard deviation of 0.1031. Post-crisis NPM has an average of 0.0537 and a standard deviation of 0.0727. This shows that the average of the NPM results before and after is smaller than the standard deviation. Therefore, it can be said that the deviation of the NPM value from the average value is quite large. By comparing the average NPM, NPM after the crisis was higher than before the crisis or increased.

Normality Analysis

From the results of the normality test in this study, all data were not normally distributed, so the authors transformed the data so that they were normally distributed. All data in this study are presented in the form of a histogram with moderate positive skewness. Therefore, the transformation used is SQRT(x) or square root (Zakaria & Algifari, 2013).



Moderate positive skewness

Figure 2. Histogram Data Graph

Table 6 contains the results of the normality test on data that has gone through the transformation process.

Table 6.

Data Normality Test Results After Transformation

Research variable	Ket	asymp. Sig. (2-tailed)	Distribution
ROA	Before	0.858	Normal
ROE	Before	0.190	Normal
NPM	Before	0.074	Normal
ROA	After	0.510	Normal
ROE	After	0.065	Normal
NPM	After	0.862	Normal

Source: SPSS processing results

Table 6 shows that all research variables before and after the global economic crisis, namely ROA, ROE and NPM, after the transformation of the data are normally distributed, namely Asym. Signal > 0.05. hypothesis testing In this research approach.

Hypothesis test

hypothesis testing using a different test for two paired samples. Processed data is data that is changed. The first hypothesis (H1) is that ROA increased after the global economic crisis in 2008. Table 7 below contains the results of testing H1

Table 7.

Results of the Paired Sample t-test ROA After-Before the Global Economic Crisis

	Paired Differences						
	Flat-Flat	std. Deviation	std. Error Means	95% Confidence Interval of the	t	df	Sig.(2-tailed)

				difference				
				Lower	Upper			
Pairs 1	SQRT_ROASe-SQRT_ROABefore	0.347	0.912	0.114	0.118	0.577	3,020	62	0.00

Source: SPSS processing results

Table 7 shows that using a significance level of 5% (α = 5%), the results of the ROA test show a t-count of 3.020. When α = 5% and df = 62, the t-table number is 1.645. Unilateral calculations, namely the right side, it can be seen that the calculated t value is greater than the t table value. Decide whether to reject Ho or accept Ha. As a result, ROA experienced a massive increase after the 2008 global economic crisis.

The second hypothesis (H2) is that ROE increased after the global economic crisis in 2008. The results of the H2 test are summarized in Table 8. The table shows that the tcount value for ROE is 1.637. By using one sisxi calculation (right side), it can be seen that the t-count value of 1.637 is smaller than the t-table value of 1.645. Decide whether to accept Ho or reject Ha. Therefore, ROE did not increase significantly after the 2008 global economic crisis.

Table 8
Results of Paired Sample t-test ROE Before-After the Global Economic Crisis

Paired Differences							
Average	std. Deviation	std.Error Means	95% Confidenceinterval of the difference		t	df	Sig. (2-tailed)
			Lower	Upper			
Pair 1 SQRT_ROE After-SQRT_ROE Before	0.3171.515	0.194	-0.070	0.705	1,637	60	0.11

Source: SPSS processing results

The third hypothesis (H3) NPM increased after the global economic crisis in 2008. The results of the H3 test are listed in Table 9, showing that the t-count for the NPM test result is 0.130. Unilateral calculations, namely the right side, obtained the result that the calculated t value of 0.130 is smaller than the solid table value of 1.645. Decide whether to accept Ho or reject Ha. As a result, NPM did not increase significantly after the 2008 global economic crisis.

Table 9
Results of the Paired Sample t-test NPM After-Before the Global Economic Crisis

Paired Differences							
Averagestd. Deviation		td. Error Means	95% Confidencet Interval of the difference			df	Sig. (2-tailed)
			Lower	Upper			
Pairs 1 SQRT_NPM After-SQRT_NPM Before	10.002	0.158	0.019	-0.037	0.042	0.130	62	0.89

Source: SPSS processing results

Discussion

Study data is transformed because all data are not normally distributed. After all the data is normally distributed, the authors test the hypothesis. The discussion of hypothesis testing is explained below.

1. The first hypothesis supports a greater ROA than before the global economic crisis in 2008. The ROA value from the descriptive test results has increased from the previous 5.5518 to 6.8245, it can also beit is said that ROA after the crisis is greater than before the global economic crisis. The results of the hypothesis test using two different test paired averages show that the t-count value of 3.027 is greater than the t-table of 1.645. According to the authors, the significant increase in ROA could not be separated from the significant increase in profits, which was triggered by increased sales and increased exports. The increase in exports in the post-crisis period has been presented and explained on the background of the problem and theoretical basis. The increase in exports was due to the impact of the global economic crisis on the Indonesian economy, one of which was the weakening of the rupiah. The weakening of the rupiah has increased demand for exports, so sales and profits of manufacturing companies have also increased. Therefore,
2. The second hypothesis which states that ROE has increased after the crisis is not supported. Based on the descriptive analysis, the average value of ROE after the crisis has increased from 12.7764 to 12.8632. The results of the hypothesis test show that the t-count is 1.637 less than the t-table 1.645 and indicates that H2 is not supported. According to the authors, the insignificant increase in ROE was probably due to the increase in own capital which was far greater than the increase in profits. The increase in own capital was caused by the company's internal funding from retained earnings which was much larger than before the crisis. The use of internal funds increased after the crisis because bank interest rates after the crisis were higher than before the crisis (Sari et al., 2012). This is evidenced by the fact that the demand for bank credit decreased during the post-crisis period. Apart from that, this is in accordance with the results of tests carried out by Mulyana (2011), namely the financial performance after the 2008 global economic crisis was worse than before the crisis at Bank Mega. Therefore, it is very reasonable that the role of financing from banks has decreased and financing from non-banks has seen an increase. Sources of financing in the post-crisis era came from non-banks, especially from internal funds, namely own capital. The increase in own capital came from the acquisition of retained earnings. namely the financial performance after the 2008 global economic crisis was worse than before the crisis at Bank Mega. Therefore, it is very reasonable that the role of financing from banks has decreased and financing from non-banks has seen an increase. Sources of financing in the post-crisis era came from non-banks, especially from internal funds, namely own capital. The increase in own capital came from the acquisition of retained earnings. namely the financial performance after the 2008 global economic crisis was worse than before the crisis at Bank Mega. Therefore, it is very reasonable that the role of financing from banks has decreased and financing from non-banks has seen an increase. Sources of financing in the post-crisis era came from non-banks, especially from internal funds, namely own capital. The increase in own capital came from the acquisition of retained earnings.
3. hypothesisthird, that NPM increased after the crisis, is not supported. From the results of the descriptive analysis, the average NPM has increased from 0.0537 to 0.0690. Based on

the different test of two paired samples, the t value of 0.130 is lower than the t table of 1.645 which indicates an insignificant increase. Failure to support the third hypothesis does not mean that post-crisis NPMs are arguably lower than before the crisis. NPM is measured by dividing profit after tax by sales. The inability to justify the possibility of H3 is due to the weak after-tax profit as a measure of a company's operating performance. According to Ross et al. (2015), the profit after tax reported in the financial statements is strongly influenced by the accounting method used in that period.

Conclusion

This study discusses whether the financial performance of manufacturing companies after the crisis is higher than before the global economic crisis in 2008, and the object of research is manufacturing companies on the IDX. Financial performance in this study is calculated by ROA, ROE and NPM only. By comparing the average ROA, ROE and NPM before and after the crisis, the results of the descriptive analysis show that ROA, ROE and NPM after the crisis were higher than before the crisis. Based on the descriptive statistical analysis, it can be seen that the financial performance of the manufacturing companies studied after the crisis was better than before the crisis.

Based on the different test of two paired samples, the results of the tests conducted on ROA, ROE and NPM are as follows. First, post-crisis ROA is higher than before the global economic crisis in 2008, and the increase is quite significant. Second, the return on equity after the crisis is said to be not much higher than before the global economic crisis. Third, NPM is not much different from ROE, that is, even though post-crisis NPM is higher than pre-crisis, the increase is still considered insignificant. Thus, the results of different tests show the company's financial performance in terms of ROA, its performance increased significantly after the crisis compared to before the crisis.

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