

The Effect of Economic Crisis in United States Towards the Infrastructure Sector Companies Listed in the Indonesian Stock Exchange: A Financial Statement Analysis

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The economic crisis on America has affecting the world's economy and the companies operated in various part of the world. Indonesia as part of the world economy also received the end-result of the crisis. However, how far the economic effecting Indonesia and the company's operated in the country. Infrastructure industry is one of the industry sector listed in Indonesian Stock Exchange that represents the growth of infrastructure development of the country. The research is trying to look on the effect of economic crisis on America towards the Infrastructure Companies listed in the Indonesian Stock Exchange based on Financial Statement Analysis. The results indicated that there is no significant difference in terms of financial ratios of PT. WijayaKarya and PT. Jaya Konstruksi pre and post economic crisis in United States of America. However, analysis on PT. AdhiKarya resulted in significant difference of financial ratios in terms of liquidity ($\rho_{CR} = 0.02$) and profitability ratios ($\rho_{ROA} = 0.02$; $\rho_{ROE} = 0.01$) pre and post economic crisis in United States of America.

Keywords: Economic Crisis, Financial Ratio, Financial Statement Analysis, Infrastructure Sector, Indonesian Stock Exchange

INTRODUCTION

Indonesia is a developing country in the Asia continent that had its ups-and-downs in terms of economy. The economy that said to have flustered in the New Order regime has its downside as it suffered economic crisis in 1997 that impacted the Asia region and other countries around the world. In order to resolve the impact of the crisis on 1997, International Monetary Fund (IMF) was asks by the government to help them to cure the Indonesia economy and so the IMF was helping Indonesia with loan funds. However, the help given doesn't cure Indonesia even years afterwards.

The country has its regime change neverthelesson 2008 the world has suffered another crisis that impacted many countries. Another economic crisis turned the world around. The financial crisis in mid-2007 on the subprime mortgage lending in the United States has sobering chain-effect all over the world. In early October 2008, the crisis spread and lead to a wider financial crisis include capital markets and banking. Although, the U.S. government has provided bailout funds amounting to 700 billion dollar, the bailout is apparently not considered sufficient by the business world, so the prices of shares on the New Stock Exchange continued to fall. On October 6, 2008, the Dow Jones stock index fell to under 10,000 and a domino effect to the entire world. Stock price index in the financial world follow the same rhythm that occurs in the U.S. Many countries in Europe face financial difficulties and further financial distress, Spain, Italy, German, and more strikingly Greece that can be considered bankrupt since they are low in debt because of the crisis. These circumstances let people to be discourage at the time and question if there's any company in any country's is saved from these economy catastrophe.

The financial performance of the company can be seen through its financial statements. The health of the company also can be transcribes in the statements .Stock exchange is a way to see the way the economy of the country goes. Any country that is on development needs a good development in infrastructure sector. Indonesian stock exchange has several companies that represent the infrastructure sectors(Indonesian Stock Exchange, 2013).And some of the companies are represented in the study, they are PT. Adhi Karya, PT. Jaya Konstruksi, and PT. Wijaya Karya. Each are the condition of the company. Through the ratios, analysis can be made on its solvency, liquidity, activity, and established companies that has recorded its performance through its financial ratios. Financial ratios can be used to see

profitability, furthermore its market value.

Table 1 Financial Ratios PT.Wijayakarya(WIKA)

Year	EPS	DTE	DTA	ROE	ROA	CR
2011	60.59	294.64	73.33	17.11	4.26	113.88
2010	50.15	242.53	69.51	15.81	4.53	136.03
2009	33.37	265.17	71.31	12.34	3.32	144.45
2008	26.75	310.84	74.57	11.27	3.70	144.45
2007	45.09	215.06	67.19	10.00	3.12	165.21
2006	1351.00	546.39	82.78	23.34	3.54	121.39

Source: Indonesian Stock Exchange (2013)

Table 2 Financial Ratios PT.Jaya Konstruksi(JKON)

Year	EPS	DTE	DTA	ROE	ROA	CR
2011	45.97	1.60	0.61	0.06	0.16	1.38
2010	39.30	1.61	0.61	0.06	0.16	1.35
2009	42.91	1.30	0.56	0.08	0.19	1.51
2008	34.77	1.35	0.57	0.07	0.18	1.55
2007	90.45	1.29	0.56	0.08	0.19	1.53
2006	1436.55	5.53	0.84	0.09	0.60	1.30

Source: Indonesian Stock Exchange (2013)

Table 3 Financial Ratios PT. AdhiKarya(ADHI)

Year	EPS	DTE	ROE	ROA	CR
2011	103.64	5.17	25.8	5.3	110.3
2010	107.83	1.07	33.2	6.5	119.3
2009	94.2	1.36	27.1	5.9	106.6
2008	46.04	1.19	19.3	2.4	117.4
2007	61.96	180.8	32.3	2.6	120.9
2006	53.06	211.5	27.9	3.3	119.5

Source: Indonesian Stock Exchange (2013)

The following table 1 indicates financial ratios of the PT. Adhi Karya (ADHI), companies of the infrastructure sub-sector from 2006-2011.

The following table 2 indicates financial ratios of the PT. Jaya Konstruksi, companies of the infrastructure sub-sector from 2006-2011.

The following table 3 indicates financial ratios of the PT. WijayaKarya (WIKa), companies of the infrastructure sub-sector from 2006-2011.

Based on the description above, economic crisis on America does have an effect on the world economy and the company operated in various part of the world. Indonesia as part of the world economy also received the end-result of

the crisis. However, how far the economic effecting Indonesia and the company's operated in the country. Infrastructure industry is therefore up for the test in relation that the company listed in Indonesian Stock Exchange represents the growth of infrastructure development of the country. Therefore, the research try to look on the effect of economic crisis on America towards the Infrastructure Companies listed in the Indonesian Stock Exchange based on Financial Statement Analysis.

STATEMENT OF THE PROBLEM

Based on the description above, answers are needed to solicit the following research questions:

- 1) Is there any difference between financial ratios of PT. WijayaKarya (WIKA) pre (2006-2008) and post (2009-2011) the economic crisis in the United States of America?
- 2) Is there any difference between financial ratios of PT. Jaya Konstruksi (JKON) pre (2006-2008) and post (2009-2011) the economic crisis in the United States of America?
- 3) Is there any difference between financial ratios of PT. AdhiKarya (ADHI) pre (2006-2008) and post (2009-2011) the economic crisis in the United States of America?

HYPOTHESIS

In answering the above research question, the following hypotheses are made:

- HA 1:** There is a significant difference between financial ratios of PT. WijayaKarya (WIKA) pre (2006-2008) and post (2009-2011) the economic crisis in the United States of America.
- HA 2:** Is there any difference between financial ratios of PT. Jaya Konstruksi (JKON) pre (2006-2008) and post (2009-2011) the economic crisis in the United States of America.
- HA 3:** There is a significant difference between financial ratios of PT. AdhiKarya (ADHI) pre (2006-2008) and post (2009-2011) the economic crisis in the United States of America.

REVIEW OF RELATED LITERATURE

ECONOMIC CRISIS

ambunan (2011:69) describe that changes in the economy can turn into an economic crisis. The financial crisis is often the case in many parts of the world that led experts to try to determine the cause, the general pattern are expected to develop a method to detect the financial crisis. Radelet and Sachs (1998) give 5 causes of the financial crisis, they are: inconsistent economic policies, the panic in the money market, the outbreak of the financial bubble, the absence of standard rules and moral hazard. Nevertheless, the financial crisis may occur not only from one single cause of these factors, but it could be a combination of various factors which work in synergy. In terms of theory, analysis of the financial crisis can be divided into four parts: the first generation theory of the financial crisis, the second generation and third generation and beyond systems theory generation.

The financial crisis in the Asian region on 1997 has its climax in 1998. This situation was started when investor turn their money from certain country. It was started in Thailand, and it got the exchange rate between Baht and dollar to be Depreciated in large sum of amount. Not long, it affected Indonesia (Tambunan, 2011:83).

CAPITAL MARKET

Tandelilin (2010:26) in his book on Portfolio Theory sees capital markets as a market that sells securities that generally have the age of more than one year, like stock and obligation. Another authors, PandjiandPiji (2003:6) describe capital markets as a trading venture that is dealing in securities such as stocks, stock certificates and bonds. Capital markets provide services that bridge the relationship between the owners of this thing called capital also known as an investor, with loan funds in this case is called by the name of the issuer which is the company that went public. The investor

requested the capital market instruments for the purpose of investment and eventually portfolio to maximize their income.

Capital market also can serve as intermediaries. This function shows the importance of capital market in boosting the nation economy since capital market act as intermediaries of those people who needs capital funds and those who have excess of funds (Tandelilin, 2010:26).

FINANCIAL RATIOS

Financial statement can be used to see the condition of a company. In the financial statement analysis, financial ratios is used to describe various aspect of a company's condition. Investor can also use financial ratio analysis to predict the stock price fluctuation. There are many different financial ratios that can be used to analyze a company's performance. Nevertheless, though each ratio has their own interpretation, the focus of this study is on the following financial ratios, namely: current ratio, debt to asset ratio, debt to equity ratio, return on asset, return on equity and net profit margin. Weston and Brigham (1995) describe that financial performance of a company to have significant meaning in deciding whether to invest and look on the overall condition of the company and its management.

Current Ratio is a financial ratio that can be used to see or analyze the liquidity position of the company. Garrison and Noreen (2003:778) in their book describe that, "A company's current assets divided by its current liabilities is known as the current ratio." Current ratio shows the ability of the company to pay its due on its short time obligation. Current assets normally include cash, marketable securities, accounts receivable, and inventories. Current liabilities consist of accounts payable, short-term notes payable, current maturities of long-term debt, accrued taxes and other accrued expenses. The analysis on current ratio is in order to see the how liquid the company is to meet its short term obligation and also known as part of the liquidity ratio.

Net profit margin is a ratio used to demonstrate the company's ability to generate net profits. According to Ang (1997), net profit margin is the ratio between the net income and sales. This ratio is very important for the operations manager for sales reflect pricing strategies applied by the company and its ability to control operating expenses. According to Weston and Copeland (1995), the greater the Net Profit Margin means the more efficient the company is in removing the costs in connection with its operations. It measures how much out of every dollar of sales a company actually keeps in earnings. Harahap (2007) sees that profitability shows the ability of a company to gain profit through its resources. Profitability ratio that can used to describe it are return on equity and return on assets.

According to Sartono (2001), ROE is return on equity that result or the amount declared as a parameter and obtained the investment in the ordinary shares of the company for a certain period of time. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. It measures a firm's efficiency at generating profits from every unit of shareholders' equity. ROE shows how well a company uses investment funds to generate earnings growth. On the other hand, as for return on asset, according to Sundjaja and Barlian (2003), return on assets determine profit sharing in the form of dividend which can be used to reinvest to the company or other means. Return on asset is an indicator of how profitable a company is relative to its total assets. Return on asset gives an idea as to how efficient management is at using its assets to generate earnings. Return on asset is calculated by dividing a company's annual earnings by its total assets, and is displayed as a percentage. Sometimes this is referred to as return on investment.

Solvency ratio or Leverage ratio is an analysis used to see how much the company is financed by debt or it other perspective is how the company's managed its debt. Debt to equity is a measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets. According to Garrison et al (2009:738), "Long-term creditors are also concerned with a company's ability to keep a reasonable balance between its debt and equity." This balance is measured by the debt-to-equity ratio. Debt to equity ratio shows the solvency position of the company. Another ratios in the leverage ratio is debt to asset ratio. Van Horne and Wachowicz (2005:2009) in their book describe that debt to total assets ratio (DAR) is used to measure the amount of total assets financed by debt. This means that the higher the ratio the greater the amount of capital loans used for investment in assets in order to generate profits for the company. The ratio is calculated by adding short-term and long-term debt and then dividing by the company's total assets, and is displayed as percentage.

Earning-per-share is one ratio that can be used as a way for a company or an investor looking at the growth of the company. Ross et al (1995:64) in their book describe Earning Per Share can be measured by market price per share of the stock. Ross et al added that in their calculation, the Earning Per Share measurement "can only be calculated directly for publicly traded companies" (1995:64).

There are several studies that linked factors that could affect capital market and stock prices in terms of financial ratios. Ashshofia and Sulistiyani (2009) studied the effect of economic crisis in America on Indonesia capital market looking at the Indonesian companies financial statement. The study resulted in that there is no significant differences before the economic crisis in America during the year 2004-2006 and the US Economic crisis in 2007-2009 is the

liquidity ratio, profitability ratios and market ratios. Another study by Pangaribuan (2009) shows the influence of financial ratios comprise of solvency position, liquidity position, and profitability position on the stock price of automotive industrial sector of the then Jakarta Stock Exchange (JSX). The results shows that only return on asset which is on profitability position has a significant and positive affect on stock price which has 55.9% contribution to the changes on stock price.

METHOD OF RESEARCH

The method of the study is descriptive. The variable used on the study is financial ratios of the company listed in Infrastructure sector in the Indonesian Stock Exchange. The sample for the study is PT. WijayaKarya (WIKA), PT. Jaya Konstruksi (JKON), and PT. AdhiKarya (ADHI) of the Infrastructure companies listed in the Indonesian Stock Exchange. The data for the study is acquired from the Indonesian Stock Exchange of the financial statement data from 2006-2011 of the said companies. The statistical treatment for the data is using *pair sample t-test* with significant value of 5%. Statistical software is utilized for the study called SPSS.

RESULT OF THE STUDY

PT. WIJAYA KARYA

PT. WijayaKarya (WIKA) is a company listed in Indonesia Stock Exchange. The company is listed as business of providing infrastructure services. PT. WijayaKarya shows their financial condition in through their financial ratios as in table 3. The following table 4, however, is on the difference of the financial ratios pre and post the economic crisis in the United States of America.

Based on the table 4 below, the financial ratios analysis pre and post the economic crisis is as follows. In terms of profitability, financial ratios pre and post crisis seems to show that there are no significant difference in return on equity ($p = 0.97$) and return on asset ($p = 0.34$). Thus, hypothesis is rejected. On the difference based on liquidity ratio, there is no significant difference ($p = 0.56$) of liquidity ratio pre and post economic crisis in America, therefore, H_0 is accepted. On the difference based on solvency or leverage ratios, there are no significant difference in terms of debt to equity ($p = 0.45$) and debt to asset ($p = 0.49$), thus, H_0 is accepted. And in terms of earning per share, there is no significant

Table 4 Pre-Post Financial Ratios Difference

Ratios	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	Sig. (2-tailed)
ROE	9.71	5.61	-24.35	23.91	-0.04	2	0.97
ROA	0.82	0.47	-2.61	1.44	-1.24	2	0.34
CR	30.57	17.65	-63.71	88.17	0.69	2	0.56
EPS	772.10	445.77	-1491.75	2344.24	0.96	2	0.44
DTE	167.05	96.45	-324.99	504.96	0.93	2	0.45
DTA	7.16	4.13	-14.32	21.25	0.84	2	0.49

Table 5 Pre-Post Economic Crisis Financial Ratios Difference PT. Jaya Konstruksi

Ratios	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	Sig. (2-tailed)
EPS	802.45	463.30	-1521.83	2464.98	1.02	2	0.42
DTE	2.42	1.40	-4.88	7.14	0.81	2	0.51
DTA	0.16	0.09	-0.34	0.44	0.55	2	0.64
ROA	0.01	0.01	-0.02	0.05	2.41	2	0.14
ROE	0.25	0.15	-0.48	0.78	1.04	2	0.41
CR	0.14	0.08	-0.24	0.44	1.28	2	0.33

difference of earning per share pre and post economic crisis in United States of America ($\rho = 0.44$), and thus H_0 is accepted. The result in table 4 shows that the economic crisis doesn't have an effect on PT. WijayaKarya in terms of financial ratios of liquidity, profitability, solvency and earnings per share.

PT. JAYA KONSTRUKSI (JKON)

PT. Jaya Konstruksi (JKON) is a company listed in Indonesia Stock Exchange. The company is listed as business of providing infrastructure services. PT. Jaya Konstruksi shows their financial condition in through their financial ratios as in table 2. The following table 5, however, is on the difference of the financial ratios pre and post the economic crisis in the United States of America. Based on the table above, the financial ratios analysis pre and post the economic crisis is as follows. In terms of liquidity, PT. JKON financial ratios pre and post crisis seems to show that there is no significant difference ($\rho = 0.33$). Thus, hypothesis is rejected in terms of liquidity ratios. On the difference based on profitability ratios, there are no significant difference in terms of return on asset ($\rho = 0.14$) and return on equity ($\rho = 0.41$) of financial ratios pre and post economic crisis in America, therefore, H_0 is accepted. On the difference based on solvency or leverage ratios, there are no significant difference in terms of debt to equity ($\rho = 0.51$) and debt to asset ($\rho = 0.64$), thus, H_0 is accepted. And in terms of earning per share, there is no significant difference of earning per share pre and post economic crisis in United States of America ($\rho = 0.42$), and thus H_0 is accepted. The results in table 5 is then shows that the economic crisis doesn't have an effect on PT. Jaya Konstruksi.

PT. ADHIKARYA (ADHI)

PT. AdhiKarya (ADHI) is a company listed in Indonesia Stock Exchange. The company is listed as business of providing infrastructure services. PT. AdhiKarya shows their financial condition in through their financial ratios as in table 21 The following table 6, however, is on the difference of the financial ratios pre and post the economic crisis in the United States of America.

Based on the table 6 above, the financial ratios analysis pre and post the economic crisis is as follows. In terms of Earning Per Share, PT. AdhiKarya earning per share ratio shows that pre and post crisis seems to show that there is no

Table 6 Pre-Post Financial Ratios Difference PT. AdhiKarya (ADHI)

Ratio	Std. Deviation	Std. Error Mean	Lower	Upper	t	Df	Sig. (2-tailed)
EPS	17.70	10.22	-39.31	48.65	0.46	2	0.69
DTE	113.59	65.58	-152.60	411.73	1.98	2	0.19
ROA	6.62	3.82	10.00	42.88	6.92	2	0.02
ROE	0.49	0.28	1.39	3.81	9.24	2	0.01
CR	1.74	1.01	113.58	122.24	117.21	2	0.00

significant difference ($\rho = 0.69$). Thus, hypothesis is rejected in terms of earning per share. On the difference based on solvency ratio, there are no significant difference in terms of debt to equity ($\rho = 0.19$) of financial ratios pre and post economic crisis in America, therefore, H_0 is accepted. On the difference based on profitability ratios, there are significant difference in terms of return on asset ($\rho = 0.02$) and return on equity ($\rho = 0.01$), thus, H_a is accepted. And in terms of liquidity ratio, there is significant difference of liquidity ratio pre and post economic crisis in United States of America ($\rho = 0.00$), and thus H_a is accepted. The results in table 6 is then shows that the economic crisis does have an effect on PT. AdhiKarya since there is a significant different of liquidity and profitability ratios pre and post economic crisis in the United States of America.

CONCLUSION

Based on the results of the study and the description above it, the research conclusion can be seen as follows: There is no significant difference of financial ratios of PT. Wijaya Karya pre and post economic crisis in United States of America. Thus, this shows that the economic crisis does not have an effect on PT. WijayaKarya. There is no significant difference of financial ratios of PT. Wijaya Karya pre and post economic crisis in United States of America. Thus, this

show that the economic crisis does not have an effect on PT. Jaya Konstruksi.

There is significant difference of financial ratios of PT. Adhi Karya. The results are significant at $\alpha = 0.05$. The results therefore show that the economic crisis does have an effect on PT. Adhi Karya since there is a significant difference of liquidity and profitability ratios pre and post economic crisis in the United States of America.

RECOMMENDATION

Based on the conclusion above, we can see that even though some analyst says that Indonesia survive the economic crisis, and as shown in the above results that two out of three companies in the Infrastructure sector does not affected by the economic crisis, nevertheless, analysis on PT. Adhi Karya financial statement shows result on significant difference in terms of profitability and liquidity pre and post economic crisis. Thus, the recommendation given thru this study is that for companies in the Indonesian Stock Exchange to be prepared and aware of the impact of foreign countries economy on Indonesia. In this sense, it is advisable that companies listed in the Indonesian Stock Exchange to maintain and improve their financial performance and analyze their performance periodically using financial ratios analysis.

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