Financial Performance Analysis Before and After Global Crisis (Case Study in Indonesian Oil and Gas Sector for the Period of 2006-2011)

Review of Integrative Business & Economics Research

Andika Priyadi Putra*
School of Management Studies
Harapan Bangsa Business School, Bandung
Email: andika.priyadiputra@gmail.com

Laura Lahindah
School of Management Studies
Harapan Bangsa Business School, Bandung
Email: laura@ithb.ac.id

Bambang Rismadi
School of Accounting
STIE Ekuitas, Bandung
Email: brismadi@gmail.com

ABSTRACT

The purpose of this study is to contrast the financial performance on oil and gas sector before and after global crisis. On this research the financial performance will examine with three ratio perspectives, profitability ratio, liquidity ratio, and market ratio. Every ratio in this research portrays value of return, risk, and return & risk. Profitability ratio is discussed by return on asset and return on equity. Liquidity ratio is discussed by current ratio and quick ratio. And market ratio is discussed by price-to-earning ratio.

Three companies are selected by purposive sampling technique. The data type is secondary data which collected by financial report per quarter. The period was divided to two periods, before global financial (2006-2008) and after global crisis (2009-2011). Hypothesis in test is proved by paired sample t-test and Wilcoxon signed-rank test.

The result found that return on asset, return on equity, current ratio, and quick ratio indicate significant difference performance during period of before global crisis and after global crisis. In the other hand, price-earning ratio is not indicate significant ratio through the before and after global crisis period.

Keywords: Financial performance, Global crisis, Liquidity, Market, Profitability

I. INTRODUCTION

External shocking, global crisis, United States crisis was created by subprime mortgage, gave poor effect for international market (Tambunan, 2011; Departemen Keuangan, 2008). Kuala Lumpur Composite Index had decreased 34% at the end of quarter in 2008. The same situation happened for Shanghai Stock Exchange Composite Index, this index had declined 64% at the same period (Hadi, 2009).

Observing Indonesian condition, Jakarta Composite index (JCI) had decreased 39% in the last quarter of 2008 (Hadi, 2009). Following the statement of Gustia (2008), the poor performance of JCI during global crisis has been caused by high correlation movement of JCI with movement of oil price. Djaja (2009) stated that oil and gas industry sector is one of the

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industries that effect by global crisis. PFC Energy (2009) stated that oil and gas received vulnerable condition by external shock.

Based on global crisis phenomenon and several facts of oil and gas industry, this research indicate that global crisis will effect the financial performance of Indonesian oil and gas sector. Referring from Bodie et al. (2009), stock price depict the investor assessment about firm's performance, so that emerging the curiosity about the global crisis effect for oil and gas sector industry.

Observing the stock price of several firms in oil and gas sector during period of 2006-2011 as the answer of the curiosity, the trend appeared that stock price during 2008-2011 had lower price trend than during 2006-2008. As a note, the period of 2008-2011 is category of after global crisis period and the period of 2006-2008 is before global crisis period.

II. LITERATURE STUDIES

II.1 GLOBAL CRISIS

Tambunan (2011) stated that industry which has global market is affected by global crisis. Global crisis had affected financial performance of financial industry (Yulianto, 2010; Lu and Fang, 2010; Agustini and Viverita, 2011). In addition, oil and gas sector estimated as the sector which received vulnerable condition by global crisis, indicated by the unstable condition of oil price (PFC Energy, 2009; Djaja, 2009; Tambunan 2011).

II.2 FINANCIAL MANAGEMENT

Financial management is an art and a study to organize company financial resource (Gitman and Zutter, 2012). Three activities of financial management are how to raise money; how to use money in addition to gain profit; and how to use profit effectively. Financial management is the tool to achieve firm's purpose which is maximizing shareholder profit. Maximizing shareholder profit can be measure with stock price in a market (Mcguigan, et al., 2011).

II.3 FINANCIAL STATEMENT ANALYSIS

Financial statement has much information to assess financial condition of a firm. Financial statement used for reporting company financial activity in specific period that describe the whole condition of the company (Peterson, 2009; Subramanyam and Wild, 2009). Financial statement has five parts that include profit and loss statement, balance sheet, cash flow statement, statement of owner equity, and note of financial statement (Gitman dan Zutter, 2012; Subramanyam dan Wild, 2009).

The purpose of financial statement analysis is to evaluate company prospect and risk, and to help analyst to make a decision (Subramanyam and Wild, 2009). By evaluating company prospect and risk, analyst can conclude company financial condition in the term of specific period. Generally, from five parts of financial statement, balance sheet and profit & loss statement are the most commonly used for appraising company financial performance (Peterson, 2009).

II.4 FINANCIAL PERFORMANCE MEASURE

Performance is the output from the function of job indicator (Wirawan, 2012). Based on management perspective, performance can be measured from three perspective organization that are operational, marketing, and finance (Heizer and Render, 2009).

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With an excellent performance, company can compete with their competitors. The most important measurement to raise up organization is financial performance. When organization increase the financial performance, the firm performance will increase correspondingly (Fauzi & Idris, 2010; Butt, et al., 2010). Using ratio as financial performance measurement tool is the general way to assess the value which is created by a firm.

Various types of ratio measurement can portray financial performance in several aspects. Gitman and Zutter (2012) stated that there are five ratio measurement categories to measure several aspects of financial performance. These ratios include liquidity ratio, activity ratio, profitability ratio, debt ratio, and market ratio.

1. Liquidity ratio is the ratio which assess the ability of a firm to pay their short liabilities. Investor is differ from a firm which saving their fund in highly liquidity account, because liquidity account can't create a return (Gitman and Zutter, 2012). Moreover, risk is increasing if a firm has slightly liquidity. In the relation of the risk, Christoper and Kizilaslan (2010) stated that liquidity factor is the important thing, which can affect loan pricing determination.

$$\text{Current ratio}=\frac{\text{current asset}}{\text{current liabilities}} \quad \text{......} (2.1)$$

$$\text{Quick ratio}=\frac{\text{current asset-inventories}}{\text{current liabilities}} \quad \text{......} (2.2)$$

2. Activity ratio used to portray how quick an account convert into cash.

$$\text{Inventory turnover}=\frac{\text{cost of good sold}}{\text{inventories}} \quad \text{......} (2.3)$$

$$\text{Average collection period}=\frac{\frac{\text{account payable}}{\text{annualy sales}}}{365} \quad \text{......} (2.4)$$

3. Debt ratio used to evaluate the proportion of debt in capital structure.

$$\text{Debt ratio}=\frac{\text{total liabilities}}{\text{total asset}} \quad \text{......} (2.5)$$

4. Profitability ratio used to evaluate firm's performance in the relation of generating profit. Based on LQ45 stock index in JCI, profitability has significant effect for stock price (Afiff and Anantadjaya, 2013).

$$\text{Gross profit margin}=\frac{\text{gross profit}}{\text{sales}} \quad \text{......} (2.6)$$

$$\text{Operating profit margin}=\frac{\text{operation profit}}{\text{sales}} \quad \text{......} (2.7)$$

$$\text{Return on asset}=\frac{\text{profit for common stockholder}}{\text{total asset}} \quad \text{......} (2.8)$$

$$\text{Return on equity}=\frac{\text{profit for common stockholder}}{\text{equtiy}} \quad \text{......} (2.9)$$

5. Market ratio used to evaluate the investor fund in order to risk and return value properly. Fun and Basana (2012) research based on LQ45 stock index in JCI, showed that stock portfolio with low P/E ratio is a general way for Indonesian investor to make profit in short term strategy.

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$$\text{P/E ratio} = \frac{\text{market stock price}}{\text{earning per share}} \quad (2.10)$$

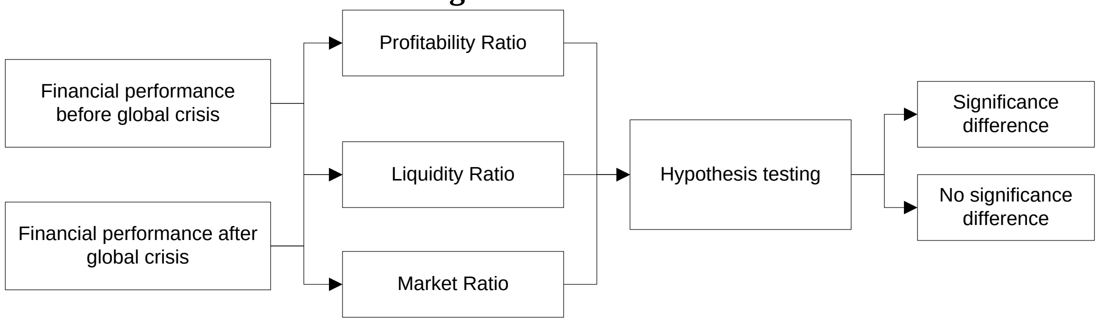
III. METHODOLOGY

This research is comparative analysis of before and after the global crisis. In this research the secondary data is used in this research, which is obtained from firm's financial statement during the period of 2006-2011. The period divides into before and after global crisis period. Before global crisis period analyzes from 2006 into 2008, and after global crisis period analyzes from 2009 to 2011.

III.1 RESEARCH MODEL

The research model in this study is as illustrated in the following diagram. This framework describe the step of this research to compare the financial performance of before global crisis and after crisis.

Figure 1: Research Model



III.2 HYPOTHESIS

There are four hypothesis in this research. The hypothesis breaks into five categories because of the use of ratio measurement.

H_1: Using return on asset, financial performance oil and gas sector industry listed in IDX in the period of before global crisis is significant difference with the period of after global crisis.

H_2: Using return on equity, financial performance oil and gas sector industry listed in IDX in the period of before global crisis is significant difference with the period of after global crisis.

H_3: Using current ratio, financial performance oil and gas sector industry listed in IDX in the period of before global crisis is significant difference with the period of after global crisis.

H_4: Using quick ratio, financial performance oil and gas sector industry listed in IDX in the period of before global crisis is significant difference with the period of after global crisis.

H_5: Using price to earning ration, financial performance oil and gas sector industry listed in IDX in the period of before global crisis is significant difference with the period of after global crisis.

III.3 RESEARCH OBJECT

The population in this research is industry sector oil and gas firms listed on Indonesia Stock Exchange. Totally, there are seven firms in this industry, but only three firms are selected as the sample by purposive sampling technique, with criterias:

1. Oil and gas sector industry firms listed in Indonesia Stock Exchange.

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2. Go public firms before year of 2006.
3. Firms which have completely quarter and annual financial statement during the period of 2006-2011.

Based on these criterias, this research decides PT. Medco Energi International, Tbk., PT. Energi Mega Persada, Tbk., and PT. Radiant Utama Interinsco, Tbk. as the sample of research object.

Table 1: Research Object Sample

Firm	Stock Code	Listing Date
PT. Energi Mega Persada, Tbk.	ENRG	07 Juni 2004
PT. Medco Energi International, Tbk.	MEDC	12 Oktober 1994
PT. Radiant Utama Interinsco, Tbk.	RUIS	12 Juli 2006

Source: data processing

III.4 VARIABLE OPERATION

This research uses three ratio perspectives, which include profitability ratio, liquidity ratio, and market ratio. Profitability ratio is explained by return on asset and return on equity. Liquidity ratio is explained by current ratio and quick ratio. Market ratio is explained by price to earning ratio.

Table 2: Variable Operational

NO	Variabel	Konsep	Sub-variable	Indikator	Skala
1	Rasio profitabilitas	Pengukuran kinerja keuangan untuk mengukur tingkat pengembalian modal dan aset. Sebagai cerimanan dari tingkat pengembalian perusahaan *(return)*	Tingkat pengembalian asset	Batas keuntungan bersih x perputaran aset	Rasio
			Tingkat pengembalian modal biasa	Tingkat pengembalian aset x pengungkit keuangan	Rasio
2	Rasio likuiditas	Mengukur kemampuan perusahaan dalam memenuhi kewajiban jangka pendek. Sebagai cerminan dari resiko *(risk)* perusahaan.	Rasio cepat	(Aset lancar – persediaan) / kewajiban lancer	Rasio
			Rasio lancar	Aset lancar/kewajiban lancer	Rasio

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NO	Variabel	Konsep	Sub-variable	Indikator	Skala
3	Rasio Pasar	Mengukur tingkat kepercayaan diri para pemegang saham. Sebagai cerminan akan resiko dan tingkat pengembalian *(risk and return*)	Rasio harga terhadap keuntungan	Harga pasar saham biasa/keuntungan per saham	Rasio

Source: Data processing

IV. DATA ANALYSIS

Paired sample t-test and Wilcoxon signed rank-test are using to test the hypothesis. When data are assuming normal distribution, paired sample t-test become the choice, but when data are not assuming normal distribution, wilcoxon signed rank-test become the choice (Lind, et al., 2012).

This research data preceded by normality analysis and ensured with the outlier test. Based on that, analyze all the data with paired sample t-test and Wilcoxon signed rank-test to examine the comparative study.

IV.1 RESULT AND DISCUSSION

Based on the result of the t-test and wilcoxon, this is the summary table of ratio measurement for oil and gas industry

Table 2: Ratio Measurement Summarizing of Oil and Gas Sector Industry

Description	Period	Means	Standard deviation	Paired sample t-test	Wilcoxon signed-rank test	Decision
ROA	**Before**	0.023	0.006		0.002	Accept the first hypothesis
	After	0.006	0.006			
ROE	**Before**	0.069	0.027		0.002	Accept the second hypothesis
	After	0.017	0.017			
CR	**Before**	1.986	0.202	0.009		Accept the third hypothesis
	After	1.611	0.435			
QR	**Before**	1.811	0.227	0.03		Accept the forth hypothesis
	After	1.516	0.397			
PER	**Before**	43.40	43.11		0.374	Reject the fifth hypothesis
	After	23.64	38.60			

Source: SPSS Student Version

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This result showed that four hypothesis are accepted and one hypothesis is rejected. Generally there is a different financial performance before and after global crisis. The financial performance measure with three financial ratio are profitability ratio, liquidity ratio and price to earning ratio. From all the ratio analysis, the price to earning ratio was rejected and all the measurement of the profitability ratio and liquidity ratio was accepted. This result shows that investors were not influence with the global crisis. Price to earning ratio examine the level of the investor trustworthy to the organization's return. Djaja (2009) examine, that the crisis was declining the commodity price, mainly food stuffs and energy. But on those situation, the pressure to the Indonesia inflation was small. Therefore, although the crisis certainly a down side risk the Indonesian economy, the purchasing power of masses will not so much jeopardy.

IV.2 PROFITABILITY

Comparing return on asset means both before and after period, declining value from 0.023 to 0.006 was an indication that global crisis affected the profitability of oil and gas sector industry. This industry couldn't defend their capability to created profit after external shocking occured. The same situation happened for return on equity measurement. Declining value from 0.069 to 0.017 was an indication that oil and gas sector industry couldn't create value for their investors, there was happen a destructing value after global crisis happened in the last quarter of 2008. The higher standard value create, the bigger spreading data create. Both standard deviation value of ROA and ROE the before global crisis are bigger than the period of after global crisis value.

The result of significant difference of ROA and ROE is tested by wilcoxon signed-rank test. Conducting the deep analysis about this, profitability is the success measurement of firm's capability to use its fund. A firm uses its fund to invest in several assets which can use for generating profit in future period. The presence of global crisis created an unstable situation for the firm, that they can't maximize their performance to use their fund. Using this information for users of financial information would impact the stock price performance in the market, because investors would bid their stock as long as the firm profitability.

IV.3 LIQUIDITY

Comparing means value of current ratio both before and after period, declining value from 1.98 to 1.61 was an indication that global crisis affected liquidity ratio of oil and gas sector industry. The decline of the liquidity value characterizes the increasing of industry risk. Why this situation happen is the answer of declining the industry capability to pay their short term liabilities. When the industry capability to pay their short term liability decrease, the risk will increase. The same situation happened for quick ratio. Quick ratio portrays industry capability to meet their short term liabilities. Declining value from 1.81 to 1.51 is the bad news for several users of financial information. At glance, this situation potential to create investor worrying.

The result of significant difference of current ratio and quick ratio is tested by paired sample t-test, that means liquidity of oil and gas sector industry was affected by global crisis. Conducting the impact of this situation, the increasing industry risk will impact the loan pricing. Financial institution will adjust the loan pricing based on industry risk characteristic. The higher the industry risk existed, the higher the loan pricing given.

IV.4 PRICE TO EARNING RATIO

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Price to earning ratio illustrates how the price of a stock is traded based on its earning per share. Comparing means value of price earning ratio both before and after period, declining value from 43.4 to 23.64, means the condition when investor has lower willingness to buy a stock. Although the means of the price to earning ratio was decline, the Wilcoxon signed-rank test indicated that the significant value of this testing is 0.374. These examine that is no significant difference financial performance during before and after global crisis. Therefore, the investors perspective on global crisis was not influence by investor profit on the short term.

V. CONCLUSION

This study shows oil and gas sector industry listed in Indonesian stock exchange condition during the period of before and after crisis global. By portraying condition in this sector in different period, this research concerns study about three ratio measurements that include profitability ratio, liquidity ratio, and market ratio.

Based on analysis for measuring profitability, return on asset and return on equity were significant difference during before and after global crisis. This result implied that oil and gas sector industry can't defend their capability to create profit. Based on analysis for measuring liquidity ratio, current ratio and quick ratio were significant difference during before and after global crisis. This result implied that oil and gas sector industry is increased their risk by weakening the ability of meet their short term liabilities.

In the other hand, price to earning ratio is no significant difference during before and after global crisis. That implied that on the short term the investor perspective was not influence with the global crisis.

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