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**GLOBAL OIL PRICE CRISIS EFFECT ON MALAYSIA OIL AND
GAS FIRMS**

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Abstract

This study determines the effect of financial leverage towards financial performance of Malaysia's public listed oil and gas firms before and after global oil price crisis, from the period of 2012 until 2018. This study was conducted on the data of 25 companies of oil and gas firms that are listed in Bursa Malaysia derived from Thomson Reuters. Multiple regression analysis has been used to analyze the financial leverage; asset to equity ratio, debt to equity ratio, and long term debt to total capital, and the financial performance; Return on Assets (ROA), Return on Equity (ROE), and Return on Investment Capital (ROIC). Based on the findings, only asset to equity ratio was positively and significantly impact towards financial performance. Furthermore, debt to equity ratio shows negatively significant impact towards financial performance. On the other hand, long-term debt to total capital claimed negatively significant impact towards ROA and ROIC. However, long-term debt to total capital was found to be negatively and insignificant related to the ROE. It can be concluded that, there are negative relationship between financial leverage and financial performance of public listed oil and gas firms in Malaysia. This study recommend that public listed oil and gas firms in Malaysia should improve on their leverage to perform better their financial performance. As a conclusion, investors and mana

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1. Introduction

Firms' financial performance had been a major concern of the stakeholders which includes the managements, shareholders, and employees as the firm's performance to ensure the continuity and the longevity of the firm. Therefore, the firm's financial performance is commonly measured by their profitability as any decision made need to consider the profitability of the firm. Since a long time, it had been a major concern towards the firms' management team as well as business researcher to study the factors that can affect the profitability of a firm (Alarussi & Alhaderi, 2018; Farooq & Masood, 2016). This is because any decision made must take into account to the risk of the firm's profitability. Hence, by identifying the factor that affect the profitability or financial performance of the firm, managers may emphasize a thorough decision in regards of the firm. Several finance researchers had asserted that financial leverage is the topmost factors that can affect the firm's profitability such as Alarussi and Alhaderi (2018), Farooq and Masood (2016).

Moreover, financial leverage had been treated as one of the method for firms in order to finance their operation. In economic boom period, higher financial leverage gives benefits to the firm but on the other hand, in economic recession, financial leverage have incompatible effect on firms profitability. This is because, economic recession period may bring cash flow problems to the firm and firm might not be able to meet its interest charges. In order to enhance returns of the firms, financial management need to make capital structure decisions which include a combination of financial tools of debt and equity (Raza, 2013). Next, financial managers need to make choices on how far extent to use debt or how far extent in acquiring equity in financing the firms' assets. Making the right choices by balancing these two is important to the managers in order to ensure the continuity of the firm. Thus, it is vital for the managers to know how far the extent the financial leverage affecting the profitability of the firms.

Furthermore, the relationship between financial leverage and financial performance had been studied by several researchers, but there are limited studies that focused on oil and gas firms in Malaysia. Below are several studies that had been done on the relationship between financial leverage and financial performance (Refer Table 1). This study is done to fill this gap as most of the studies done on this topic mostly cover on non-financial firms and financial industry and limited on oil and gas industry. Thus, this study aims to investigate the effect of financial leverage towards financial performance of Malaysia's oil and gas firms before and after global oil price crisis.

Table 01. Studies on the Relationship between Financial Leverage and Financial Performance

Authors	Industry	Country
Javed <i>et al.</i> (2015)	Textile Industry	Pakistan
Alarussi and Alhaderi (2018)	Non-Financial Firms	Malaysia
Banafa <i>et al.</i> (2015)		Kenya
Singapurwoko and El-Wahid (2011)		Indonesia
Akinlo and Asaolu (2012)		Nigeria
Abubakar (2015)	Financial Firm	Kenya
Malik (2011)		Pakistan
Kumar Singh and Bansal (2016)	Fast Moving Consumer Goods (FMCG) Companies	India
Mule and Mukras (2015)	Public Listed Firm	Kenya

Gill and Biger (2011)		United States
Farooq and Masood (2016)	Cement Industry	Pakistan
Škuflić et al. (2016)	Manufacturing Sector	Croatia
Cortez (2012)		Japan

2. Problem Statement

Oil and gas sector plays a vital role in Malaysia economic situation. It was remained as one of the most contributor which had contribute 20 to 30 percent of Malaysia's Gross Domestic Product (GDP) (Export Government, 2019). With the current crude oil price shock (Export Government, 2019) and the fluctuating economy situation in Malaysia due to currency depreciation, it is important for management of oil and gas firms in Malaysia to put proper concern on their financial performance in order to ensure that their firm is profitable.

Currently, the crude oil prices fluctuated heavily globally in the past three decades and become more volatile than they were over the period from World War II to the early 1970s. In 2014, the world had watched the steep drop in the price of crude oil (Refer Figure 01). The steep drop in the oil price is a concern towards oil and gas firms as according to a study done by Darko and Kruger (2017), the prices of crude oil had brought significant effect on the performance of oil and gas companies. Due to this, with the high dependence of Malaysia GDP on oil and gas sector, the performance of oil and gas firms is a great concern.



Figure 01. Brenrs' Crude Oil Price Chart (Macrotrends, 2019)

2.1. Firms Profitability

Alarussi and Alhaderi (2018) defined profitability as the earnings of a company that are generated from revenue after deducting all expenses incurred during a given period. Over the years, the determinant of firms' profitability had been a focus of numerous studies (Alarussi & Alhaderi, 2018; Isik & Tasgin, 2017; Malik, 2011; Sivathaasan et al., 2013; Škuflić et al., 2016). According to Malik (2011), profitability can be measured using Return on Assets (ROA), Return on Investment (ROI), and Return on Equity (ROE).

Malik (2011) identified that size of company, volume of capital, loss ratio, and leverage ratios have significant impact on the ROA. In addition, Sivathaasan et al. (2013) was found that capital structure and non-debt tax shield have statistically significant impact on profitability. However, working capital, growth rate and firm size have no significant effect on the profitability. Their study is focusing on the factors that determine the profitability of public listed manufacturing company in Sri Lanka using ROA and ROE as measurement of profitability.

Moreover, Devi and Devi (2014) found that financial leverage, capital structure and firm size have a significant relationship with corporate profitability. Their study is focusing on identifying the determinants of firm's profitability of public listed firms in Pakistan using ROA as a measurement of profitability. Besides, Alarussi and Alhaderi (2018), study on factors affecting profitability of public listed firms in Malaysia. The result shows a strong positive relationship between firm size, working capital, company efficiency and profitability. On the other hand, debt equity ratio and leverage ratio shown significant but negative relationship with profitability.

2.2. Financial Leverage and Profitability

Financial leverage is a measure on how much firm uses equity and debt to finance its assets (Abubakar, 2015). Financial leverage takes the form of loan or other borrowing, the proceeds of which are re-invested with the intent to earn a greater rate of return than cost of interest. While leverage may allow the investors to have greater potential return, nonetheless, the potential loss is also greater if the investment failed as the loan principal and accrued interest on the loan still need to be repaid (Chui et al., 2002). Thus, as debt increases, financial leverage also increases. Besides, the impact of financial leverage on profitability of firms had been studied by numerous researchers (Abubakar, 2015; Banafa et al., 2015; Nissim and Penman, 2003). For instance, financial leverage can be measured by asset to equity ratio, debt to equity ratio, and long term debt to total capital (Malik, 2011).

In the study done by Akinlo and Asaolu (2012), the impact of leverage on profitability for the period 1999 to 2007 of firms in Nigeria, they were found that leverage has significantly brought negative impact on the profitability of the firms. They argued that firms need to reduce their debt ratio to boost their profit level as the used of debt by firms in Nigeria decreases profitability. This study was supported by Javed et al. (2015) as their result also indicate that financial leverage has negatively and significantly impact towards profitability of textile firms in Pakistan. They proposed that organizations will in general acquire debt less on the ground that organizations keep up the adequate measure of assets internally. In addition, Banafa et al. (2015) also identified that financial leverage has negatively and significantly impact the profitability of public listed non-financial firms in Kenya. The data of study used from the period of 2009 to 2013. These results also claimed by Alarussi and Alhaderi (2018); Devi and Devi (2014); Farooq and Masood (2016); Kumar Singh and Bansal (2016); Malik (2011); and Mule and Mukras (2015).

However, Abor (2005) was reported a significantly positive relationship between total debt, total assets and profitability measured by ROE. He focused on data of public listed firms in Ghana during a five-year period. From the findings, he was suggested that firms are able to maximize their profits if they employ more debt. It was consistent with Chandrakumarmangalam and Govindasamy (2010), financial leverage is positively related to profitability of cement firms in India. They also proposed that when firms are able to

employ more debt, it will be resulted to maximize in shareholders' wealth. On the other hand, Abubakar (2015) found that financial leverage proxy by debt ratio has insignificant relationship with financial performance surrogated by ROE. In conclusion, most of the studies illustrated that financial leverage as a prominent factor of firms' profitability (Alarussi & Alhaderi, 2018; Farooq & Masood, 2016).

3. Research Questions

Is there any significant effect of financial leverage towards financial performance of Malaysia's oil and gas firms before and after global oil price crisis?

4. Purpose of the Study

Thus, this study aims to investigate the effect of financial leverage towards financial performance of Malaysia's oil and gas firms before and after global oil price crisis

5. Research Methods

In this study, financial leverage was presented by asset to equity ratio, debt to equity ratio, and long-term debt to total capital. On the other hand, financial performance was presented by Return on Assets (ROA), Return on Equity (ROE), and Return on Invested Capital (ROIC). Data were collected from Thomson Reuters of 25 oil and gas firms listed in Bursa Malaysia from year 2012 until 2018. Multiple regression analysis was conducted to measure the relationship between the variables. The findings of analysis have been generated using IBM SPSS Statistics 24. Figure 02 shows the theoretical framework for this study.

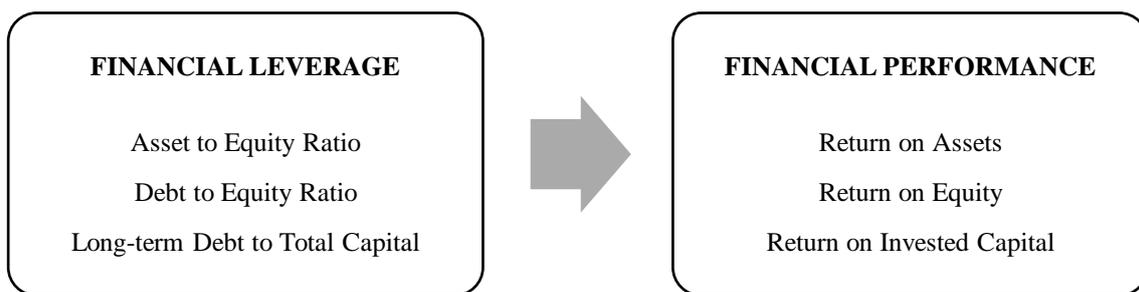


Figure 02. Theoretical Framework

Multiple regression model:

$$ROA = \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \varepsilon \quad (model\ 1)$$

$$ROE = \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \varepsilon \quad (model\ 2)$$

$$ROIC = \beta_1\chi_1 + \beta_2\chi_2 + \beta_3\chi_3 + \varepsilon \quad (model\ 3)$$

$\beta_{1,2,3}$ = Regression coefficient; χ_1 = Asset to equity ratio; χ_2 = Debt to equity ratio; χ_3 = Long-term debt to total capital; ε = Error term

6. Findings

6.1. Financial Leverage towards Return on Assets (ROA)

Table 02 presents the multiple regression analysis to examine the impact between Return on Assets (ROA) and three independent of leverage variables. Based on the Table 02, asset to equity ratio (p-value = 0.013, t = 2.520) was found to be positively and significantly related to the ROA. This result was supported by Devi & Devi (2014); Malik (2011); Ulzanah and Murtaqi (2015). Moreover, debt to equity ratio (p-value = 0.000, t = -3.963) and long-term debt to total capital (p-value = 0.007, t = -0.195) were found to be negatively and significantly related to the ROA. It was claimed by Abdur Rouf (2015); Singapurwoko and El-Wahid (2011). R^2 value for ROA is 0.182 indicating that 18.2 percent of the variation of factors affecting profitability of public listed oil and gas firms in Malaysia could be explained by the three independent variables.

Table 02. Regression Results for ROA

Variables	B	t-value	p-value
Asset to Equity Ratio	0.433	2.520	0.013
Debt to Equity Ratio	-0.685	-3.963	0.000
Long-term Debt to Total Capital	-0.195	-2.737	0.007
$R^2 = 0.182$			
Adjusted $R^2 = 0.168$			
Significant Value = 0.000			

6.1. Financial Leverage towards Return on Equity (ROE)

Table 03 presents the multiple regression analysis to examine the impact between Return on Equity (ROE) and three independent of leverage variables. Based on the table 2, asset to equity ratio (p-value = 0.008, t = 2.692) was found to be positively and significantly related to the ROE. Besides, debt to equity ratio (p-value = 0.000, t = -4.072) was found to be negatively and significantly related to the ROE. This result was supported by Abubakar (2015). However, Javed et al. (2012) were found that debt to equity ratio is positively related with ROE. Last but not least, from table 2 shows that long-term debt to total capital (p-value = 0.766, t = -0.299) was found to be negatively and insignificant related to the ROE. R^2 value for ROE is 0.128 indicating that 12.8 percent of the variation of factors affecting profitability of oil and gas firms in Malaysia could be explained by the three independent variables.

Table 03. Regression Results for ROE

Variables	B	t-value	p-value
Asset to Equity Ratio	0.477	2.692	0.008
Debt to Equity Ratio	-0.727	-4.072	0.000
Long-term Debt to Total Capital	-0.022	-0.299	0.766
$R^2 = 0.128$			
Adjusted $R^2 = 0.112$			
Significant Value = 0.000			

6.1. Financial Leverage towards Return on Invested Capital (ROIC)

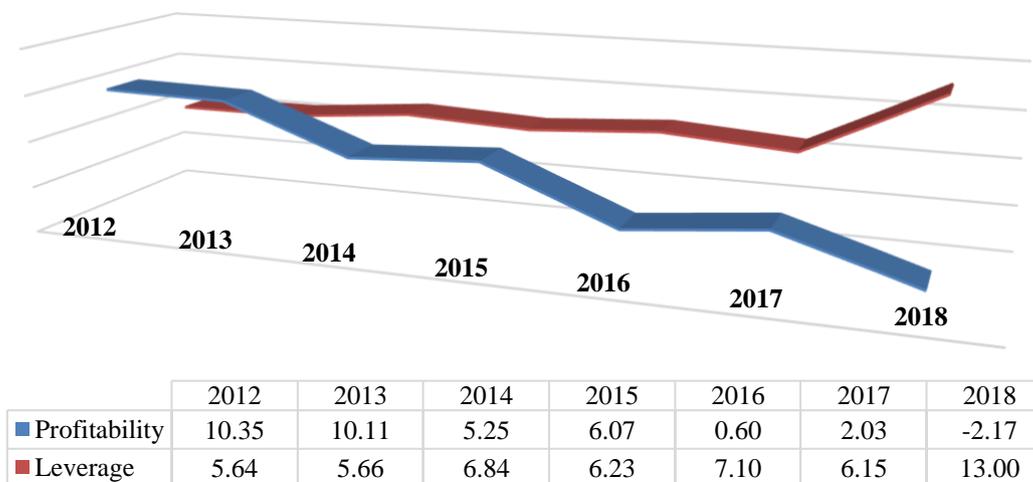
Table 04 presents the multiple regression analysis to examine the impact between Return on Invested Capital (ROIC) and three independent of leverage variables. Based on the table 3, asset to equity ratio (p-value = 0.019, t = 2.372) was found to be positively and significantly related to the ROIC. On the other hand, debt to equity ratio (p-value = 0.002, t = -3.207) and long-term debt to total capital (p-value = 0.000, t = -8.390) were found to be negatively and significantly related to the ROIC. R² value for ROIC is 0.373 indicating that 37.3 percent of the variation of factors affecting profitability of oil and gas firms in Malaysia could be explained by the three independent variables.

Table 04. Regression Results for ROIC

Variables	B	t-value	p-value
Asset to Equity Ratio	0.357	2.372	0.019
Debt to Equity Ratio	-0.485	-3.207	0.002
Long-term Debt to Total Capital	-0.523	-8.390	0.000
$R^2 = 0.373$			
Adjusted $R^2 = 0.362$			
Significant Value = 0.000			

6.1. Financial Leverage towards Financial Performance

Figure 03 shows that financial performance of public listed oil and gas firms in Malaysia was drastically dropped in year 2018 by -2.17 percent after the global oil price crisis happened. On top of that, financial leverage shows increasingly up to 13 percent in year 2018. It was concluded that during oil prices dropped sharply since June 2014, oil and gas firms in Malaysia shows negatively relationship since profitability was decrease and financial leverage was increase.



Sources: Thompson Reuters

Figure 03. Financial Leverage and Financial Performance of Oil and Gas Firms in Malaysia

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