Middlesex University Research Repository

An open access repository of

Middlesex University research

http://eprints.mdx.ac.uk

Copyright:

Examining the Resilience of UAE to Decline in Oil Prices – The Case of Insurance Sector

Abstract

The sharp fall in oil prices from \$112/barrel in 2014 to \$59/ barrel in 2019 impacted many economies in the world in a both positive and negative manner. United Arab Emirates (UAE) has been seeking diversification to reduce its reliance on oil revenues and expects higher growth from non-oil revenues in 2020. This study aims to examine the resilience of UAE to decline in oil prices with insurance sector as a representative sector of the economy This study involves calculations and comparisons of financial ratios pre- and post-fall in oil prices in the UAE. Parametric tests results indicate that while the change in investment and efficiency ratios is statistically significant, profitability, efficiency and gearing ratios have been quite stable in the period. Despite the overall slowdown in the insurance industry, the sector has been mostly resistant to the drop in oil prices. We resilience can be attributed to the ongoing efforts of UAE leadership to diversify away from oil-based economy.

Keywords: Insurance Sector, Oil prices, Parametric test, Profitability, Ratio analysis, United Arab Emirates

Introduction

The sharp decline in oil prices from $112/barrel in 2014 to $59/ barrel in 2019 impacted most economies in the world in a positive and negative way (Statista, 2019). The positive effects were felt in oil importing countries as a reduction in oil prices pushed the cost of production down whereas, in countries that export oil, negative effects were felt as their revenues declined due to a price fall.

The Gulf Cooperation Council's (GCC) countries are dependent on oil and gas and hold the biggest oil reserves in the world. According to Organization of the Petroleum Exporting Countries (OPEC) Annual Statistics Bulletin's 2019 estimates, 79.4% of the world's confirmed oil reserves are found in OPEC Member Countries, with 64.5% of OPEC oil reserves found in the Middle East (OPEC, 2019). The GCC's short term economic outlook aims to seek diversity across the region. Although the world economy has remained reliant on the GCC for oil since the 1970s, economic positions in a number of oil exporting countries are deteriorating because of the dramatic fall in oil prices from 2014 till date. As a result of this, governments have been striving to look for options to diversify away from oil, cut down spending and create new sources of revenue such as the introduction of Value Added Tax (VAT).

The reason for analyzing the insurance sector is that this sector acts as a crucial gauge for measuring the economic health of a country. A growing population, increase in expenditure on infrastructure and construction, higher life expectancy, rise in spending on cars and other expensive goods lead to a thriving insurance sector whereas, a slackening insurance sector is a sign of an economic slowdown. For instance, a failure of the property insurance market signifies individuals lose confidence in buying properties; a slowdown in business insurance market signifies loss in business investment. These might have a ripple effect on the economic health of a country and thus, examining the insurance sector will be useful in understanding the condition of an economy (EY Report, 2017).

Although, insurance sector has shown impressive growth in the last six years (2012-2018), insurance penetration remains lower than in emerging economies. According to a report by Alpen Capital, a leading investment banking advisory in the UAE, published in 2019, growth in the sector can be mainly attributed to insurance that has been made mandatory, that is, health and automobile insurance. Contribution from savings and life insurance have been very low, except for the UAE, Egypt and Iran. Commercial sectors, such as, construction and property has shown the poorest performance due to weak economic conditions and declining growth in the trade and commerce industry.

The four main reasons behind the motivation of this study are: First, although there is a general decline in oil prices, there has been no empirical evidence or a comprehensive research conducted in the UAE to study this impact. Considering the importance of oil in an economy, there was a need to study how resilient an economy is to changes in oil prices.

Second, Ernst & Young has emphasized on the need of more research on the insurance sector to understand the health of an economy (EY Report, 2017). Third, this study, to the best of our knowledge makes an original contribution to the existing body of research as it analyses the financial performance of thirty-one major UAE insurance firms which have experienced the period of falling oil prices. Lastly, due to the volatile nature of these firms' performance lately in the region, this study will help comprehend the fluctuations in the financial performance of insurance companies pre- and post-fall in oil prices.

There are 31 companies in the insurance sector listed in the Dubai Financial Market (DFM) and the Abu Dhabi Securities Exchange (ADX). This study analyses the performance of all the listed companies in the insurance sector pre- and post-fall in oil prices. Financial ratio analysis has been carried out and 11 ratios have been calculated to study the effects of a decline in oil prices and to draw a conclusion about performance of the sector. The financial performance of these companies has been categorized under five groups of ratios namely profitability, efficiency, liquidity, gearing and investment. Parametric test, namely Paired t-test was used to see whether the calculated ratios differ pre- and post-fall in oil prices.

Literature Review

This section reviews past studies that have looked at the impact of changes in oil price on various sectors of different economies and also past research papers that have analyzed the performance of firms in the insurance industry.

Impact of Oil Price Movements

Given the significant role that crude oil plays in the economy, fluctuations in oil prices have received much attention from research scholars. Effect of oil prices on financial performance of firms is an actively growing area of research. Research has been conducted to explore the relationship between crude oil prices with various other factors. Dayanandan and Donker (2011) examined the relationship between commodity prices of crude oil, capital structure, firm size and accounting measures of firm performance using a sample of oil and gas firms in North America from 1990 to 2008. Their study found that crude oil prices had a positive and significant effect on accounting returns (Return on Equity) of companies in the oil and gas industry in North America. Their study also revealed that the financial crisis of 2007-2008 impacted oil prices and the accounting performance of these firms negatively. On the contrary, the Asian financial crisis and 9/11 did not have any significant impact on the performance of companies in the oil and gas industry. Sadrosky (2008) used a multi factor model to examine the relationship between oil price movements, firm size and share prices. The study analysed a panel of firms over a 17-year period. The empirical results of the paper show that the relationship between fluctuations in oil price and capital gains on stocks does change depending on the size of the firm and

medium sized firms are more likely to be negatively impacted in terms of share prices caused by oil price movements. The author argues that firms of medium size do not have the production efficiency or financial leverage like that of a large firm and even the flexibility and responsiveness of small firms and therefore, the stock prices of medium sized firms are more likely to be unfavorably impacted by fluctuations in oil prices. Wattanatorn and Kanchanapoom (2012) used panel data regression to examine how movements in crude oil prices impacted profitability performance of companies from 11 different sectors in stock exchange of Thailand from 2001-2010. Their study conlcuded that the oil prices have a positive and significant impact on the accounting performance of firms in energy and food sectors.

In a related study, Wang and Zhang (2014) studied the effects of oil price volatility and extreme price movements, known as jump behaviour, on four industries in China from 2001 to 2011. The observations included the grains, metals, oil fats, and petrochemicals industries. Their results illustrate an asymmetric impact, with negative price shocks having a more substantial influence on the returns of all the four markets relative to positive shocks. Petrochemicals proved the most sensitive, with the grains market the least due to different correlations with the crude oil market and the varying cost-push effects of oil price changes to each industry. Furthermore, the petrochemicals and oil fats industries were found to react excessively and negatively to extreme oil price jumps. This was mostly due to a lack of, or inefficient use, of futures to mitigate oil price volatility.

Considerable research has been done to analyse the impact of oil prices on firm and equity returns. One such study was conducted by Narayan and Sharma (2011) that examined the relationship between oil price and firm returns of 560 companies listed on the New York Stock Exchange (NYSE). The results of their study show that the effect of oil prices on firm returns varied depending on the industry which firms belong to. Their results of their findings suggest that the firms in energy and transportation sectors witness an increase in returns when oil prices rise. On the other hand, the firms in other sectors witness a drop in returns when oil prices fall implying a heterogeneous effect on firm returns. Nandha and Faaf (2008) also looked at the same issue that is, relationship between oil price and equity prices by analysing 35 DataStream global industry indices from April 1983 to September 2005. Their research suggests that except mining and oil and gas industries, oil prices have a negative impact on equity returns for all other industries. The authors asserted that their findings were consistent with economic theory and evidence provided by previous empirical studies. Similarly, El Sharif et al (2005) investigated the relationship between the price of crude oil and equity values in the oil and gas sector using data for companies in the United Kingdom (UK). The findings suggest that relationship is always positive and greatly significant and mirrors the direct effect that volatility in the price of crude oil has on share prices of firms within the sector.

More recently, Tsai (2015) explored the link between oil price shocks, stock returns, and firm size while accounting for the effects of the Global Financial Crisis on 682 American firms by considering the periods before, during and following the crisis. Aggregate stock returns were found to respond positively to oil price shocks during and after the crisis. Considering firm size, big firms were the most significantly and negatively impacted pre-crisis, while medium-sized firms experienced positive responses from oil price increases post-crisis.

Studies have also been done on the relationship between crude oil prices and stock markets in GCC. A study conducted by Maghyereh and Al-Kandari (2007) investigated the relationship between oil prices and stock markets in GCC countries. Their findings suggest that oil prices affect the stock price indices in GCC countries in a nonlinear manner.

In terms of oil-importing and oil-exporting countries, a study by Bouri et al. (2016) examined the causality between the financials, services, and industrials equity sectors in Jordan (an oil-importing country) and world oil prices in both the periods pre- and post-Arab Uprising that started late-2010. The results are consistent with previous studies, illustrating a heterogeneous effect across equity sectors. Moreover, the financials and services sectors were found to be the most affected by oil return shocks, particularly in the period after the Arab Uprising. Nevertheless, Kayalar et al. (2017) provided evidence that the stock market indices of oil-importing countries tend to have a lower oil price dependency relative to oil exporters.

A recent study by Badeeb and Lean (2018) builds on the existing literature regarding the nonlinear relationship between oil prices and sectoral equity returns by focusing on Islamic stocks. The overall findings demonstrate a weak link between the Islamic composite index and oil price changes. Furthermore, the relationship proved to be positively linear in the short-run and tended towards a nonlinear pattern in the long-run. In the latter, the responses of the Islamic real sectors indices mirror the asymmetric effect in the study by Wang and Zhang (2014), suggesting that Islamic stocks gain from declining oil prices. However, a limitation in their research is that it did not consider the impact on the Islamic stocks in heavily oil-dependent countries.

A number of studies looked at how oil prices affect macroeconomic variables. A study by Kilian (2008) investigates the impact of exogenous oil supply shock on the United States (US) economy. The findings conclude a rise e in Consumer Price Index (CPI) inflation three quarters after the exogenous oil supply shock rather than a sustained rise in the general price level. The results also suggest that exogenous oil shocks led to negligible difference overall for the evolutions of US real GDP growth and CPI inflation since the 1970s, although they did matter for some historical periods. Ewing et al (2007) investigated the empirical relationship between oil prices and a number of key macroeconomic variables. Their study examined the cyclical co movements of crude oil prices with output, consumer prices,

unemployment and stock prices and their findings suggest that crude oil prices are pro cyclical and lag industrial productions. In addition to this, the results of the study show that oil prices lead consumer prices. Berument et al (2010) analysed the effects of oil price shocks on the output growth of 16 countries in Middle East and North African (MENA) region that are considered either net exporters or net importers on crude oil, but are too small to have any influence on oil prices. The findings of this study suggest that increases in oil price have a significant and positive impact on the growth of most of the oil-exporting economies.

Insurance Industry

Insurance sector is an important part of the financial system in any economy. Financial sustainability of insurance firms is key to foster economic growth. Studies on the insurance sector are limited most of them focus on the factors that influence the financial performance of insurance companies. In general, most of the past studies suggest that firm size is a key determining factor that influence profitability. For example, Chen-Ying (2014), Burca and Ghiorghe (2014) and Malik (2011) examined the effects of firm specific factors and concluded that there is a positive relationship between firm size and profitability in terms of Return on Assets of insurance firms. In contrast, Ogbeide and Akanji (2017) found that firm size was statistically insignificant in increasing firm financial performance. Instead, cash flows from operating activities were deemed to be a statistically significant. Along with firm size, the degree of leverage has also been identified by several researchers like Dogan (2013), Al Shami (2008), Omondi and Muturi (2013), Onaolapo and Sunday (2010), Athanasoglou et al., (2008) and Adams and Buckle (2003), as having a negative impact on the financial performance of insurance companies.

Apart from traditional insurance, Takaful insurance is particularly widespread in the MENA region for its compliance with Islamic principles. A study by Sherif and Hussnain (2017) investigated the economic and socio-demographic determinants of family Takaful demand using econometric methods on a sample of 15 countries in the MENA region over a 12-year period. The findings suggest a significantly positive relationship between Takaful demand and education, Islamic banking deposits, and the Muslim population. In contrast, the relationship between family Takaful and inflation and financial development proved to be inverse.

Investigations regarding the insurance industry and its systemic relevance have also become prevalent, especially after the 2008 Financial Crisis and bailout of the insurance giant, American International Group (AIG). Chang et al. (2018) and Bierth et al. (2017) found that insurers' interconnectedness with other financial institutions was a primary factor towards exposure to systemic risk. Bierth et al. (2017) also found insurers' leverage to be the driving factor behind contributions to systemic risk.

Financial Ratios and Resilience

Based on the above discussions, the following hypothesis will be tested in the current study:

Hypothesis: *There is no change in the population mean (for a particular ratio) pre- and post-fall in oil prices.*

If the ratios are similar pre and post fall in oil prices, this implies that the economy is resilient to change in oil prices. However, if the ratios decline in the post fall period, this would indicate that the economy has been impacted by fall in the oil price.

Data and Methodology

The study includes data from listed insurance companies in UAE. Abu Dhabi Exchange (ADX) lists 17 companies in the insurance sector, while Dubai Financial Markets (DFM) lists another 14. Financial data from 31 companies was corroborated from audited financial statements for the period 2013 - 2015 (pre-fall) and 2016 - 2018 (post-fall). The performance of companies during these periods was studied using Financial Ratio Analysis.

Ratio analysis has been one of the most widely used methods in measuring financial performance. Al-Malkawi & Pillai (2010); Beyer (2010) and Downs & Goodman (2003) have strongly supported the methodology suggesting that financial health of companies can be measured by quantitative analysis and ratios can be used to make yearly comparisons to determine industry trend. Following literature, 11 ratios have been calculated to better understand the Profitability, Efficiency, Liquidity, Gearing and Investment performance during the pre- and post-fall in oil prices.

Performance of the insurance sector gives an impression of the overall economy. A strong construction sector gives impetus to the non-life insurance segment while economically progressive population gives an impetus to the medical, automobile and other compulsory insurance segments. In order to understand if the performance of the insurance sector changed significantly, pre- and post-fall in oil prices, the data was divided into two cohorts, depicting the two periods. Formal statistical tests, including parametric tests were conducted; paired t-test was used to see if the figures in the two periods differ significantly. The sample size (93 pairs) allows us to use parametric test, which is more reliable and accurate as compared to its alternative non-parametric test, the Wilcoxon matched pairs test. Furthermore, in this case, since the values are normally distributed and mean values are statistically more accurate than median, deeming the use of t-test feasible.

Findings and Discussion

Financial Ratios in the categories Profitability, Efficiency, Liquidity, Gearing and Investment have been calculated to understand the performance of the insurance sector in the UAE pre- and post-fall in oil prices. The sample size of 93 shows 3 years' worth of data

respectively for the 31 insurance companies in each pre- and post-fall in oil prices. The 11 ratios will help understand which of these categories (if any) were most affected by the fall in oil prices. This information can be critical for the government in setting policies and regulations that will enable financial wellbeing and overall growth of the economy. Individual companies can also use the findings of this study to understand which part of their business needs more attention and perhaps corrective action.
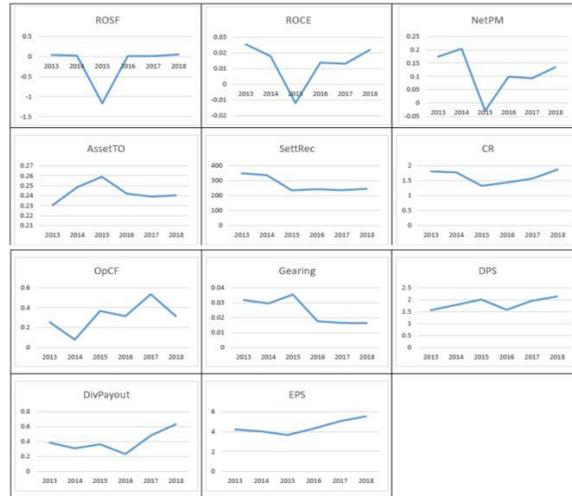
Figure 1: Financial Performance of Insurance Companies in UAE, 2013-2018

The graphical representation in Figure 1 shows that every ratio highlights unique activity in the year 2015. Certainly the year 2015 has been critical for all the insurance companies in UAE. Either the ratio has peaked or it took a hit, but the year 2015 is far from usual. The only unique feature that can be attributed to 2015 is that it represents the effect of fall in oil prices that started towards the end of 2014 and continued into 2015.

Paired Samples Statistics					
		Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Pair 1	ROSFPre	-0.36646	93	3.66196	0.37973
	ROSF	0.02660	93	0.17430	0.01807
Pair 2	ROCEPre	0.01043	93	0.06243	0.00647
	ROCE	0.01629	93	0.04401	0.00456
Pair 3	NPMPre	0.11611	93	0.76219	0.07904
	NPM	0.10858	93	0.27146	0.02815
Pair 4	ATOPre	0.24582	93	0.14606	0.01515
	ATO	0.24041	93	0.14453	0.01499
Pair 5	SettRecPre	306.80902	93	312.61014	32.41616
	SettRec	241.48537	93	132.41117	13.73040
Pair 6	CRPre	1.48519	10	0.56845	0.17976
	CR	1.74319	10	0.67661	0.21396
Pair 7	Opcfpre	0.23155	86	0.79906	0.08617
	Opcf	0.26734	86	0.63223	0.06818
Pair 8	GearingPre	0.03218	93	0.11516	0.01194
	Gearing	0.01672	93	0.06895	0.00715
Pair 9	DPSPre	1.77945	93	5.23936	0.54330
	DPS	1.88507	93	5.94941	0.61693
Pair 10	DivPayoutPre	0.35196	93	0.61726	0.06401
	DicPayout	0.44832	93	0.81244	0.08425
Pair 11	EPSPre	3.96022	93	12.64014	1.31072
	EPS	4.95248	93	15.60163	1.61781

Figure 2: Financial Ratios Preliminary Analysis (Paired Sample Statistics)

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	ROSFPre & ROSF	93	0.114	0.277
Pair 2	ROCEPre & ROCE	93	0.464	0.000
Pair 3	NPMPre & NPM	93	0.467	0.000
Pair 4	ATOPre & ATO	93	0.733	0.000
Pair 5	SettRecPre & SettRec	93	0.258	0.013
Pair 6	CRPre & CR	10	0.581	0.078
Pair 7	Opcfpre & Opcf	86	0.093	0.392
Pair 8	GearingPre & Gearing	93	0.282	0.006
Pair 9	DPSPre & DPS	93	0.973	0.000
Pair 10	DivPayoutPre & DicPayout	93	0.175	0.093
Pair 11	EPSPre & EPS	93	0.980	0.000

Figure 3: Financial Ratios Correlation Analysis (Paired Correlations)

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	ROSFPre – ROSF	-0.3931	3.6462	0.3781	-1.1440	0.3579	-1.0396	92	0.301
Pair 2	ROCEPre – ROCE	-0.0059	0.0573	0.0059	-0.0177	0.0059	-0.9856	92	0.327
Pair 3	NPMPre – NPM	0.0075	0.6792	0.0704	-0.1323	0.1474	0.1070	92	0.915
Pair 4	ATOPre – ATO	0.0054	0.1062	0.0110	-0.0165	0.0273	0.4915	92	0.624
Pair 5	**SettRecPre – SettRec**	65.3236	306.4624	31.7787	2.2085	128.4388	**2.0556**	92	**0.043****
Pair 6	CRPre – CR	-0.2580	0.5781	0.1828	-0.6715	0.1555	-1.4114	9	0.192
Pair 7	Opcfpre – Opcf	-0.0358	0.9715	0.1048	-0.2441	0.1725	-0.3416	85	0.733
Pair 8	GearingPre – Gearing	0.0155	0.1163	0.0121	-0.0085	0.0394	1.2812	92	0.203
Pair 9	DPSPre – DPS	-0.1056	1.4823	0.1537	-0.4109	0.1997	-0.6872	92	0.494
Pair 10	DivPayoutPre – DicPayout	-0.0964	0.9303	0.0965	-0.2880	0.0952	-0.9988	92	0.320
Pair 11	**EPSPre – EPS**	-0.9923	4.0612	0.4211	-1.8286	-0.1559	**-2.3562**	92	**0.021****

Paired Samples Test

Statistically Significant at *10%, **5%, ***1 percent levels

Figure 4: Financial Ratios Advanced Analysis (Paired Sample t-test)

Profitability Ratios

Profitability ratios are used to assess the ability of a business to generate earnings. An increase in profitability ratios would indicate financial wellbeing of the company/ industry. The three ratios calculated explain the returns to shareholder funds, return on capital employed and net profit margin. These ratios will shed light on the sales generated, costs incurred and owners' equity.

Profitability ratios as displayed in Figure 2, indicate minimal change in the post-fall period. Interestingly, some of the ratios show an improvement indicating preparedness of the economy and independence on oil prices. The consistent decrease in standard deviation indicates lower volatility in the post-fall period.

Figure 3 confirms low correlation in all profitability ratios. This is in-line with our initial expectation; the ratios are calculated using profits and revenues which are period figures, i.e. they start with a zero balance and represent performance in a single time period alone.

ROSF, also known as Return on Equity is calculated by dividing the net income by Shareholders' Equity. It depicts the amount of profits generated by use of shareholder investments. The figure also showcases the amount of funds available to shareholders after all costs of running the business (including debt costs) have been met. This is an important ratio as it indicates how effectively and efficiently the company resources are being utilized to generate profits.

ROSF fell from -0.36646 in pre-fall to 0.02660 in the post-fall period. It can be noted that the returns were already low in the pre-fall period (-3.6%), a negative figure is dangerous and signifies loss. It has not picked up much in the post-fall period, but is still higher than the pre-fall rate. As a general rule of thumb, ROSF above 20% is considered a good investment option, while below 10% is not considered safe (Dorsey 2003). Given our figures and the importance of this ratio, the outlook for the insurance industry does not seem positive.

ROCE is calculated by dividing the operating profits by the two aspects of capital raised, namely, noncurrent liabilities and owners' equity; thereby showing the amount of profit generated for each dirham invested. This is the most important ratio, as it is used to comment on the profitability and effectiveness with which the company uses its employed capital.

Figure 2 shows that ROCE increased marginally from 0.01043 in pre-fall to 0.01629 in the post-fall period. It must be stated that the profitability itself in the first place was small (1.04%) and then increased to 1.63%. While a marginal increase, it still is a step in the positive direction. As a general rule of thumb, the ROCE should be higher than the

companies cost of borrowing, else loss is eminent. A decline in ROCE generally is seen as a warning sign, although in this case, it has increased marginally. If the capital figure had also changed substantially, a point could be drawn towards the managerial efficiency, however, this is not the case.

NPM is calculated by dividing net profit by sales. It discloses the amount of profit each dirham of revenue generates. This ratio is used to gauge the level of efficiency with which a company is managed and is also a good tool to forecast future profitability. It has been suggested by authors such as Stickney et al. (2009) that firms that have substantial investments in fixed assets can increase their returns on assets by increasing profitability.

NPM has fallen from 0.1161 in pre-fall to 0.1086 in the post-fall period. The decrease can be attributed to the sharp fall in profits in the insurance sector. Figure 4 confirms that none of the profitability ratios have changed significantly in the post-fall period. It is clear that fall in oil prices had an adverse effect on the profitability of companies in the insurance sector in the UAE. Furthermore, Tiffany and Peterson (2011) explain that lower margins are acceptable only if they lead to greater sales. This was not the case in our study. All the profitability parameters have shown weak performance as values as oil prices fell between 2014-2015. This is consistent with the findings of the studies conducted by Lele (2016), Bashar (2014), Sadrosky (2008), El-Sharif et al (2005) and Malik et al (2009). However, in our findings none of the profitability ratios show a significant change in the post-fall period, indicating that despite low profitability the UAE economy has been prepared and diversified away from its' dependence on oil. It can be said that the fall in oil prices has not had a significant change in the profitability of the market.

Efficiency Ratios

Efficiency ratios are used to gauge how efficiently the assets and receivables are being managed by the firm. An increase or decrease in efficiency ratios must be treated with caution as it may not necessarily have the desired impact on company performance. The two ratios calculated explain the asset turnover and the receivable days for the insurance sector.

Efficiency ratios (as per Figure 2), indicate a slight decrease in asset turnover with a stable standard deviation. The receivable settlement period also decreased in the post-fall in oil prices period. The standard deviation is quite high before the fall in oil prices indicating extreme volatility, however, the decrease in standard deviation post-fall in oil prices indicates that credit was not extended as comfortably in this period, depicting lack of trust in the markets.

Figure 3 shows a high correlation for the asset turnover, as expected, since the non-current assets continue to be the same in both the periods. However, receivable settlement period shows a low correlation since the ratio uses period figures namely, receivables and credit sales.

Asset TO, better known as Asset Turnover is calculated by dividing sales by non-current assets. It shows how efficiently the non-current assets are being used to generate business. A high ratio is not necessarily desirable since it may only represent high sales, and not high profits.

The decrease in the ratio however, is only marginal. Therefore, this ratio doesn't seem to be affected by the fall in oil prices. Furthermore, the t-Statistic confirms that the slight change is not statistically significant.

SettRec, representing settlement period for receivables is calculated by dividing receivables by credit sales and multiplying by 365 to convert to days. The ratio shows how long it takes for a debtor to make the payment following a credit sale.

The average settlement period dropped from 306 days to 241 days. This indicates that the market confidence took a hit due to fall in oil prices. The fall is statistically significant at 5% level and easily rejects the null hypothesis. It is clear that the fall in oil prices had an effect on the settlement days, the effect however was positive, as it led to early collection of dues from debtors. Despite a positive change, the outlook seems negative. Comparison with earlier studies is not possible due to lack of similar studies done on this category of ratios.

Liquidity Ratios

Liquidity ratios are used to confirm that the business is liquid and a going concern. Stable liquidity ensures that the business has and will continue to have enough liquid assets to meet their current obligations. This category of ratios is crucial for banks and other creditors as it helps them to know how quickly their debts can be repaid using short term assets. Two ratios were calculated, namely, Current Ratio and Operating Cash flows. These ratios will help understand if the business needs to make arrangements for short term finance or if enough cash is being generated with the main business operations.

The liquidity ratios show that both current ratio and operating cash flow ratio, although small, have increased in the post-fall period.

A high correlation is seen for current ratio. This is against initial expectation as it shows that the current assets and liabilities in the post-fall period depend on the ratios in the pre-

16

fall periods. The operating cash flows ratio however shows weak correlation in the two periods, as expected.

CR, the Current Ratio is a ratio between the current assets and current liabilities. The ratio shows if the business is making enough current assets to cover their current liabilities. As a rule of thumb, the ratio should be 2, i.e. the current assets should be double the current liabilities, just in case they are not all converted to cash as the liabilities become due, (Bragg, 2010).

The ratio has been 1.5 or above in both the periods of study. The ratio is fair and represents stability. A regular decline in the ratio can imply the need to raise debt for meeting current obligations and a greater reliance on operating cash flow (Robinson et al., 2008)

OpCF represents the Operating Cash Flows and is calculated by dividing the cash flows from operations by the current liabilities. A higher figure would show that the cash generated by operations is large and would be a positive sign for the industry.

Figure 2 shows that the ratio has increased from 0.23 to 0.26, however the increase is not statistically significant. This confirms that both the liquidity ratios were not affected by the fall in oil prices. The increase however was expected, given the credit days were reduced, the focus in the post-fall period has been on cash sales rather than credit sales.

Gearing Ratios

Gearing ratios are used to keep a balance between the funds raised by issuing shares and that by taking a loan. The gearing ratios help understand the balance between the two modes of raising finance. While loan financing maybe a cheaper option, it exposes the business to several risks. A single ratio has been calculated in this category.

Gearing ratio has decreased with very low standard deviation in both periods. Additionally, Figure 3 confirms very low levels of correlation in the gearing in the two periods. Both these facts point towards stability in the business.

Gearing, is seen as the proportion of non-current liabilities from the total pool of funds raised. This is achieved by dividing the Non-Current Liabilities by the sum of Non-Current Liabilities and the Shareholders' Equity. It assists in understanding the proportion of funds that are borrowed. These funds come at a cost i.e. interest and the business must make sufficient profits in order to meet these costs. It may not be straightforward to say that a number is high since the number fluctuates depending on the nature of the industry. Due to low infrastructural cost and insurance being a service industry, the gearing ratio is not

expected to be large. It is interesting to note that while the non-current liabilities have increased (pointing towards an increase in loans in the industry); the gearing has gone down. One possible explanation for this movement is that the shareholder funds have increased post-fall in oil prices. It has been confirmed previously that the Shareholders' Equity has marginally increased in this period, given additional retained profits towards Shareholders' Equity.

The t-statistic in Figure 4 confirms that the fall in gearing is not statistically significant. The fall in oil prices have not had a significant change in the gearing. Webster (2003) confirm that highly geared companies are susceptible to business failures.

Investment Ratios

Investment Ratios are used to assess returns to shareholders. Preference towards a high or low ratio would generally depend on the nature of investors. A long term investor may not be looking for high dividends while capital gains maybe their primary motive. The three ratios calculated in this category explain the dividends per share, dividend payout and the earnings per share.

All investment ratios have performed better in the post-fall in oil prices period. High fluctuations and volatility are seen in the ratios as attributed by very high standard deviations in both pre- and post-fall. However, it is noteworthy that the standard deviation is even higher in the post-fall period. Singhvi and Bodhanwala (2006) affirmed that EPS is the ideal depiction of earnings and is a good tool to comprehend growth in a sector.

High correlation for Dividend per Share (DPS) and Earnings per share (EPS) are seen, as per our initial expectation. The ratios use dividend and earnings which are period figures, yet companies follow a dividend policy and hence the figures in any year would be in tandem with those of the previous year. For most companies, the number of shares has remained the same.

DPS, also known as Dividend per Share is calculated by dividing the dividends declared by the number of shares in issue. A higher value would mean higher amount of dividend when the number of shares remains unchanged. This maybe an important ratio for an investor to calculate their returns.

The ratio increased from 1.779 to 1.885 AED per share, which means higher dividends. This is surprising given the general trend of low profits. The high standard deviation shows that there is variability within the industry while some companies may have given higher dividends, other companies may not have followed suit.

DivPayout, also known as Dividend Payout Ratio is calculated by dividing dividends declared by the earnings for the year. The figure represents the proportion of earnings given out as dividend. As before, preference for higher or lower dividend payout depends on investor attitude. Figures 2 and 3 show that the dividend payout has increased in the post-fall period while the pre- and post-figures have very low correlation. This is in line with expectation as the earnings and dividends have both been higher (even though marginally) in the post-fall period. This, however both DPS and Dividend Payout are not statistically significant. A stable dividend policy indicates consistency in management decisions, while a 100 percent payout policy indicates lack of provision for growth strategies and an unsustainable trend (Bragg, 2010).

EPS, also known as Earnings per Share is calculated by dividing the earnings available to ordinary shareholders by the number of shares in issue. This is one of the most important investment ratios as it represents the profit attributable to each share. Larger the figure, better the financial performance of the company. The EPS has increased in the post-fall period and the change is statistically significant. This was expected, due to higher earnings in the post-fall period. The correlation is also high. The high standard deviation indicates great variability in the earnings across businesses in the industry. It can be said that the fall in oil prices had a significant effect on the investment ratios, but in a positive way.

Conclusion and Recommendations

UAE has been a major provider of oil resources and has had a heavily oil-dependent economy in the recent past. Much debate and high uncertainty surround economic decisions ever since the oil prices started falling in mid-2014. UAE among other gulf countries has taken several steps to diversify, so as to protect itself as the oil prices continue to remain low. Although, several new policies and revenue streams have been developed, it may take a few years for any of them to yield results. The years 2016, 2017 and 2018 truly depict the scenario post-fall in oil prices. It is clear with our analysis that the financial performance was weak, however, it is interesting to note that it was better than the pre-fall period. While ratios continued to be low, they were slighted better in the post-fall period. Most profitability ratios improved post-fall period, but none of these were statistically significant. ROCE is one of the most important profitability ratios and an increase signals increase in profits. Further insight into the ratio confirms fall in profits but another interesting element is revealed. It was seen that average liabilities steeply increased by 53%. Such sharp increase in liabilities poses a severe warning sign and indicates economic distress. Lower profits and higher loans, both financial disasters point towards the slowdown in the economy post-fall in oil prices. The increase in loans was required and therefore expected due to the fall in earnings. The efficiency (receivable settlement) on the other hand was the other financial ratio that changed significantly. The number of days for which credit was extended reduced by more than two months. Although this is a positive development for the economy as such, in this context, it points towards lack of confidence in the market.

Over the short run, the decline in oil prices is the most important factor that affects the GCC region with significant effects on the insurance industry. A fall in oil prices has led to a decline in government spending which in turn has led to in-flight projects being delayed or cancelled and new projects postponed. As a result, government tenders for insurance have become more price driven.

Due to poor economic activity post-fall in oil prices, consumers have also become more price sensitive and consider cost as an important buying consideration. This has led to a decline in the sales of optional insurance products such as home and travel insurance. Automobile insurance has also been affected as consumers now prefer to buy third party liability instead of comprehensive coverage.

Liquidity and Gearing ratios also remained unaffected in the post-fall period. The insurance industry is seen to be more liquid as the operating cash flows were slightly higher in the post-fall period. This was an expected change given lower credit days. As earnings fell, more companies in the insurance industry took out long term loans to meet their financial commitments. Despite this, the gearing ratio changes are not significant. This points towards stability and the fact that the economy has diversified into the non-oil sectors as the fall in oil prices did not have a significant influence on gearing.

It was rather interesting to study the changes in the Investment ratios – higher earnings and therefore higher dividends were paid to shareholders. This ensured that shareholders were happy and helped maintain a stable share price. The significant increase in EPS amidst lower oil prices, lower earnings and higher loans, the insurance industry overall made sure that the investor sentiment was never hurt. It shows the preparedness of the insurance industry at mitigating the negative effects of fall in oil prices.

The study confirms slowdown in the insurance industry with regards to profitability and efficiency, however, the liquidity, gearing and investment ratios stood strong in this period. It is worthwhile to note that the government and regulatory bodies have already taken action and adopted measures to put an end to the downfall. New policies ensure diversification from oil revenue and provides support for the economy to thrive in the absence of oil. Introduction of VAT (Value Added Tax) in 2018 was one of the measures adopted to increase government revenue. The insurance industry has also put in place new regulations that make adoption of certain insurance products mandatory. This has a two-sided effect - the amount of risk is reduced while the insurance sector prospers. Overall UAE has been resistant to the fall in oil prices and given the visionary leadership of its policy makers, the diversification strategy has taken effect rather quickly.

Implications for policymakers

Our findings have implications for the policymakers. The biggest reason why UAE was not severely by the fall in oil prices is due to the fact that they had diversified. Policy makers should ensure that the economy has several streams of revenue generation as even a traditional stream such as naturally occurring oil may suddenly become less attractive. Furthermore, diversification into avenues such as tourism and hospitality seemed booming in 2018, but with the onset of COVID-19, even these industries have suffered seriously. While the difference in ratios were not statistically significant, the stress could be felt in the economy with falling earnings and increasing loans. To ensure that the situation does not make a reappearance, further diversification is needed. The introduction of VAT seems very timely to add another stream of revenue, but these streams must be sought out and expanded strategically.

While the study makes an attempt to understand the impact of fall in oil prices on the insurance industry, it is not without limitations. The study includes 31 companies listed on the stock exchanges, however, foreign and private unlisted companies that provide business locally are not included due to lack of data availability. This would not change our findings much, because these insurers represent a small percentage of the total industry. However, these foreign insurers are expected to further increase their presence in the Gulf as they benefit from higher technical know-how, distribution capabilities, customer orientation and financial strengths. This could be one of the future avenues of study as

such data becomes available. The study is also subject to inherent weaknesses of ratio analysis.

Bibliography

Adams, M. and Buckle, M. (2003). The determinants of corporate financial performance in the Bermuda insurance market. Applied Financial Economics, 13(2), 133-143.

Al-Malkawi, H.N., Rafferty, M. and Pillai, R. (2010). Dividend policy: a review of theories and empirical evidence. International Bulletin of Business Administration, 9, 171-200.

Alpen Capital (2019). GCC Insurance Industry to witness growth revival, forecasts Alpen Capital. Accessed on 24th November, 2019. Available at:
http://www.alpencapital.com/news/2019/2019-November-24.html

Al-Shami, HAA. (2008). Determinants of insurance companies' profitability in UAE, PhD diss., University Utara Malaysia, Malaysia.

Athanasoglou, PP., Sophocles, NB. and Matthaios, DD. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability, Journal of International Financial Markets, Institutions and Money, 18(2), 121-136.

Badeeb, R.A. and Lean, H.H. (2018). Asymmetric impact of oil price on Islamic sectoral stocks. Energy Economics, 71, 128-139.

Basha, M. (2014). Impact of Increasing the Crude Oil Prices on the Financial Performance of Pharmaceutical Companies Operating in Jordan for the Period (2002-2011) A Case Study of Jordanian Al-Hikma Pharmaceutical Company. *European Journal of Business and Management, 6(3),* 150-156.

Berument, M. H., Ceylan, N. B., and Dogan, N. (2010). The impact of oil price shocks on the economic growth of selected MENA countries. The Energy Journal, 31(1), 149-176.

Beyer, S. (2010). International Corporate Finance – Impact of Financial Ratios on Long Term Credit Ratings: Using the Automotive Examples of BMW Group, Daimler Group and FordMotor Company, GRIN Verlag, Munich.

Bierth, C., Irresberger, F., and Weiß, G. N. (2015). Systemic risk of insurers around the globe. Journal of Banking & Finance, 55(C), 232-245.

Bragg, S.M. (2010), Business Ratios and Formulas: A Comprehensive Guide, Wiley, Hoboken, NJ.

Bouri, E., Awartani, B., & Maghyereh, A. (2016). Crude oil prices and sectoral stock returns in Jordan around the Arab uprisings of 2010. Energy Economics, 56(C), 205-214.

Burca, A. and Ghiorghe, B. (2014), The determinants of financial performance in the Romanian insurance market, International Journal of Academic Research in Accounting, Finance and Management Sciences, 4(1), 299-308.

Chang, C.W., Li, X., Lin, E.M., and Yu, M.T. (2018). Systemic risk, interconnectedness, and non-core activities in Taiwan insurance industry. International Review of Economics and Finance, 55, 273-284.

Chen-Ying, L. (2014). The effects of firm specific factors and macroeconomics on profitability of property-liability insurance industry in Taiwan, Asian Economic and Financial Review, 4(5), 681-691.

Dayanandan, A., and Donker, H. (2011). Oil prices and accounting profits of oil and gas companies. International Review of Financial Analysis, 20(5), 252-257.

Doğan, M (2013), Does firm size affect the firm profitability? Evidence from Turkey, Research Journal of Finance and Accounting, 4(4), 53-59.

Dorsey, P. (2003). The Five Rules for Successful Stock Investing: Morningstar's Guide to Building Wealth and Winning in the Market. Hoboken, NJ: Wiley.

Downes, J. and Goodman, J.E. (2003). Barron's Finance & Investment Handbook, Barrons Educational Series, Hauppauge, NY.

El-Sharif, I., Brown, D., Burton, B., Nixon, B., and Russell, A. (2005). Evidence on the nature and extent of the relationship between oil prices and equity values in the UK. Energy Economics, 27(6), 819-830.

Ernst and Young (2017). Insurance opportunities in the Middle East. Accessed on 18th April, 2018. Available at http://www.ey.com/Publication/vwLUAssets/ey-insurance-opportunities-in-the-middle-east/$FILE/ey-insurance-opportunities-in-the-middle-east.pdf.

Ewing, B. T., and Thompson, M. A. (2007). Dynamic cyclical co movements of oil prices with industrial production, consumer prices, unemployment, and stock prices. Energy Policy, 35(11), 5535-5540.

Gulf News (2019), UAE leads the GCC with hghest insurance penetration. Accessed on 25th November, 2019. Available at: https://gulfnews.com/business/banking/uae-leads-the-gcc-with-highest-insurance-penetration-1.68048647

Kayalar, D. E., Küçüközmen, C. C., and Selcuk-Kestel, A. S. (2017). The impact of crude oil prices on financial market indicators: copula approach. Energy Economics, 61(C), 162-173.

Kilian, L. (2008). Exogenous oil supply shocks: how big are they and how much do they matter for the US economy?. The Review of Economics and Statistics, 90(2), 216-240.

Lele, U. (2016). Impact of oil prices on revenue growth and profitability of Saudi listed companies in non-financial sectors. International Journal of Management, Information, Technology and Management and Engineering, 6(4), 13-20.

Malik, F., and Ewing, B. T. (2009). Volatility transmission between oil prices and equity sector returns. International Review of Financial Analysis, 18(3), 95-100.

Malik, H. (2011). Determinants of insurance companies' profitability: An analysis of insurance sector of Pakistan, Academic Research International, 1(3), 315-320.

Maghyereh, A., and Al-Kandari, A. (2007). Oil prices and stock markets in GCC countries: new evidence from nonlinear co integration analysis. Managerial Finance, 33(7), 449-460.

Nandha, M., and Faff, R. (2008). Does oil move equity prices? A global view. Energy Economics, 30(3), 986-997.

Narayan, P. and Sharma, S. (2011). New evidence on oil price and firm returns. Journal of Banking and Finance, 35(12), 3523-3262.

Ogbeide, S., and Akanji, B. (2017). A study on the relationship between cash-flow and financial performance of insurance companies: Evidence from a developing economy. Revista de Management Comparat International, 18(2), 148-157.

Omondi, M.M. and Willy, M. (2013). Factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Research Journal of Finance and Accounting, 4(15), 99-104.

Onaolapo, A.A. & Sunday, O.K. (2010). Capital structure and firm performance: Evidence from Nigeria, European Journal of Economics, Finance and Administrative Sciences, 25, 70-82.

Organization of the Petroleum Exporting Countries (2019). OPEC share of world crude oil reserves. Accessed on 18th June, 2020. Available at: https://www.opec.org/opec_web/en/data_graphs/330.htm

Robinson, T.R., Greuning, H.V., Henry, E. and Broihahn, B.A. (2008), International Financial Statement Analysis, Wiley, Hoboken, NJ.

Sadorsky, P. (2008). Assessing the impact of oil prices on firms of different sizes: It's tough being in the middle. Energy Policy, 36(10), 3854-3861.

Sherif, M., and Hussnain, S. (2017). Family Takaful in developing countries: the case of Middle East and North Africa (MENA). International Journal of Islamic and Middle Eastern Finance and Management, 10(3), 371-399.

Singhvi, N.M. and Bodhanwala, R.J. (2006), *Management   Accounting*, PHI Learning, New Delhi.

Statista (2019), Average annual Brent crude oil price from 1976 to 2020. Accessed on 30th September, 2019. Available at: https://www.statista.com/statistics/262860/uk-brent-crude-oil-price-changes-since-1976/

Stickney, C.P., Weil, R.L., Schipper, K. and Francis, J. (2009), Financial Accounting: An Introduction to Concepts, Methods, and Uses, Cengage Learning, Madison, OH.

Tiffany, P. and Peterson, S.D. (2011), Business Plans for Dummies, Wiley, Indianapolis, IN.

Tsai, C. L. (2015). How do US stock returns respond differently to oil price shocks pre-crisis, within the financial crisis, and post-crisis? Energy Economics, 50(C), 47-62.

Wang, X., & Zhang, C. (2014). The impacts of global oil price shocks on China's fundamental industries. Energy Policy, 68(C), 394-402.

Wattanatorn, W. and Kanchanapoom, T. (2012). Oil Prices and Profitability Performance: Sector Analysis. Social and Behavioral Sciences, 40, &63-767.

Webster, W.H. (2003), Accounting for Managers, McGraw-Hill, New York, NY.