ExxonMobil & Crude Oil

A Comparative Study of the Stock Market Performance of ExxonMobil Corporation and the West Texas Intermediate Crude Oil Spot Price in 2014

Final Project Report for:
EME 460
Fall 2014
Dr. Antonio Nieto
The Pennsylvania State University
December 12, 2014

By Dylan Humenik
December 12, 2014

Dr. Antonio Nieto
122 Hosler Building
The Pennsylvania State University

Dear Dr. Nieto:

I am pleased to submit my final report for EME 460 Fall 2014, due December 12, 2014, entitled *ExxonMobil & Crude Oil: A Comparative Study of the Stock Market Performance of ExxonMobil Corporation and the West Texas intermediate Crude Oil Spot Price in 2014*. The report examines the stock market price of the company ExxonMobil (NYSE:XOM) and compares its performance to that of the daily spot price of Cushing, OK West Texas Intermediate Free on Board crude oil for the time period of 2014 year to date (December 11, 2014).

2014 has been an especially interesting year so far, especially with the recent downfall in the price of crude oil. In this report is a discussion on how the stock price of ExxonMobil, one of the world’s oil and gas supermajors, has fared with the recent trends in crude oil prices throughout the year. To contribute to this discussion, the report examines ten key events related to ExxonMobil and five key events related to crude oil that took place this year.

The performances of the ExxonMobil stock and the crude oil price are examined and compared using graphs and the results are analyzed to draw conclusions about any correlation between the two. The methodology is discussed as well.

Thank you for instructing a successful semester of EME 460! Any questions about this report can be directed to me at dvh5219@psu.edu.

Sincerely,

Dylan Humenik
Abstract

The year 2014 has been a peculiar year in the oil markets. Prices were soaring to 5-year highs in the summer of 2014 before crashing due to a number of factors, including a price war initiated by OPEC against the U.S. shale oil industry. At the time of this writing, the performance of American oil companies in the face of falling oil prices is of utmost concern. Many American oil executives assert their confidence that their company can endure low oil prices, including ExxonMobil CEO Rex Tillerson who stated that a price of $40 per barrel of oil is survivable. However, others are starting to worry that these claims are too confident. The booming U.S. shale industry is at stake if prices continue to drop, and OPEC is currently perusing the specific price which will dramatically hurt the American oil industry. This report examines the factors behind the falling oil prices in 2014, and their effect that they have on the stock market price of American oil supermajor ExxonMobil (NYSE:XOM). This is accomplished by comparing the ExxonMobil stock price with the daily spot price for WTI crude oil for 2014 year-to-date (December 11, 2014) and examining key events that took place relating to ExxonMobil and the price of crude oil. The analysis showed that a limited, but significant correlation exists between the two prices. The ExxonMobil stock price follows the crude oil price for most of 2014, but is somewhat resilient to the rapid price decline that crude oil has experienced over the last few months.
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Introduction

Crude Oil

Crude oil, sometimes known as petroleum, is the yellow-to-black-liquid fossil fuel that occurs naturally in the Earth's underground geologic formations. Crude oil is extracted from the ground using various methods and distilled and processed into many end products such as gasoline, diesel fuel, jet fuel, heating oil, kerosene, liquefied petroleum gas, asphalts, tars, plastics, and many other products. All of these end products are viable because of the wide variety of hydrocarbons found in crude oil, ranging from light, small-carbon number molecules to heavy, high-carbon number molecules. These hydrocarbons were formed from the remains of plankton and algae that sunk to the bottoms of oceans and lakes, became covered up by sediment, and then changed their structure over long time scales under the immense pressures and heat of the underground oxygen-free environment. These crude oil deposits can occur either between two layers of impermeable rock in a permeable rock layer, or in an oil sand; although these two scenarios are not the only way oil exists underground.

The rise of oil began largely with the rise of the internal combustion engine in the late 1800s. As a result, oil has become a global commodity since the beginning of the 20th century. Economists and historians widely support the understanding that oil, coal, and natural gas have allowed for the rapid development of industrialized nations in the 20th century. Although the supply of crude oil in the world is not readily renewable, new advances in drilling techniques and unconventional drilling, improvements in efficiency in nearly all sectors including building, transportation, and power generation, and development of other forms of energy including alternatives and renewables have allowed the world's economies to avert financial stagnation as the more easily accessible crude oil reserves are depleted. Recently, advances in unconventional drilling, including directional drilling and hydraulic fracturing (“fracking” – when a water/chemical/sand mixture is injected into a well in order to stimulate oil or gas production) have allowed for previously unprofitable oilfields to be drilled.

The largest oil production areas in the world are the Middle East, Russia, the United States, Canada, and Central/South America. Consumption of oil is highest in the United States and China. The oil industry is expansive and contains many divisions, including the extraction, transportation, refining, storage, and distribution divisions. Some oil companies strive for horizontal integration while others strive for vertical integration. The largest percentage of a barrel of crude oil ends up as gasoline, followed by diesel fuel. Nearly all of the worldwide transportation industry is dependent on oil.

The pricing of crude oil is generally determined from the daily spot price of West Texas Intermediate crude oil, as this is the New York Mercantile Exchange’s underlying commodity. The price of a barrel of crude oil itself depends on the quality of the oil, along with many other factors that affect the global and regional supply and demand for crude oil. Some of these factors include the world’s global economic condition, the strength of the U.S. dollar, collusion among oil producers (OPEC), geopolitical conflict in oil producing countries, and the strength of consumers' demand of oil.
**ExxonMobil**

ExxonMobil is currently the world’s sixth largest company by revenue. The oil and gas company started in 1999 after the merger of Exxon and Mobil. Both of these companies are descendants of the new companies that formed after the 1911 breakup of John D. Rockefeller’s oil monopoly, Standard Oil. The company is headquartered in Irving, Texas. ExxonMobil is considered a “supermajor”, along with BP, Chevron, Royal Dutch Shell, Total SA, and ConocoPhillips.

Its success is due in part to its investors - the company currently has the third highest market capitalization of any public company. The brands “Exxon”, “Mobil”, and “Esso” are familiar brand names that ExxonMobil sells their products under. The company is principally organized into its upstream division, downstream division, and chemical division. The upstream division represents about 70% of ExxonMobil’s revenues. Although classified as an oil and gas company, the company’s primary commodity is crude oil.

However, this success in the oil industry has not come with criticism and opposition. 25 years ago, the Exxon Valdez spilled between 260,000 and 750,000 barrels of crude oil into Prince William Sound, Alaska. This event was perhaps the largest negative influence on the public image of the company. Others criticize the company for its various other oil spills, dealings with leaders of oil-rich nations, discrimination towards LGBT employees, and funding for the spread of denial and disinformation about global warming.

To this day, ExxonMobil continues to be a prominent American company serving the worldwide oil market. ExxonMobil entered into the recent U.S. shale oil boom market, when it bought unconventional drilling company XTO Energy. The CEO of ExxonMobil is Rex Tillerson.
Procedure

To affectively analyze the comparison between the stock price of ExxonMobil shares (NYSE:XOM) on the New York Stock Exchange, and the daily spot price of Cushing, OK West Texas Intermediate Free on Board (FOB) crude oil for the year-to-date 2014, a variety of tasks were completed, including:

- Obtaining the historical stock price of ExxonMobil shares for 2014
- Determining ten key newsworthy events relating to ExxonMobil in 2014
- Obtaining the historical price of crude oil for 2014
- Determining five key newsworthy events relating to crude oil in 2014
- Examining for a correlation between the ExxonMobil share price and crude oil price

Obtaining the Historical Stock Price of ExxonMobil Shares for 2014
The historical stock prices for ExxonMobil (NYSE:XOM) for year 2014 up to December 10, 2014 were taken from Yahoo! Finance. The data was imported into Excel and graphed.

Determining Ten Key Newsworthy Events Relating to ExxonMobil in 2014
Various news outlets were searched with the keyword “ExxonMobil” to examine events that occurred throughout the year relating to the company. Among the news sites used for key events for this company were the New York Times, The Daily News, CNBC, Bloomberg, Reuters, and The Wire. Events were analyzed for their importance and articles describing events of lesser importance were discarded. Events were then placed on the graph of ExxonMobil’s stock price to determine the effect that they had on the company’s stock. Some events had a large impact, while others had little impact. In total, ten events were used.

Obtaining the Historical Price of Crude Oil for 2014
The price chosen to represent the price of crude oil in this report was the daily spot price for Cushing, OK West Texas Intermediate Free on Board crude oil. The historical crude oil prices for year 2014 up to December 8, 2014 were taken from the United States Energy Information Administration. The data was imported into Excel and graphed.

Determining Ten Key Newsworthy Events Relating to ExxonMobil in 2014
Various news outlets were searched with the keywords “oil”, “crude oil”, “oil price”, and “crude oil price” to examine events that occurred throughout the year relating to the commodity. Among the news sites used for key events for this report were the New York Times, CNN, Forbes, and Reuters. Events were analyzed for their importance and articles describing events of lesser importance were discarded. Events were then placed on the graph of crude oil’s price to determine the effect that they had on the commodity’s price. Some events had a large impact, while others had little impact. In total, five events were used.

Examining for a Correlation Between the ExxonMobil Share Price and Crude Oil Price
To determine whether or not a correlation exists between the ExxonMobil share price and the daily crude oil spot price, two things were done. First, the data for both prices were converted into percent change from the beginning of the year, and overlaid on top of each other so that
price trends could be compared. Second, the ten events chosen for ExxonMobil and the five events chosen for crude oil were placed on the percent change combined graph, and their significance analyzed in terms of price trends. Conclusions were made about how certain events affected the price of its relative commodity or stock share, and whether or not this change in price in turn affected the price of the other.

These individual conclusions, along with the coinciding or differing price trends were all analyzed to come up with a well-supported conclusion of whether or not a correlation exists between the stock market price of ExxonMobil and the price of crude oil. This correlation was also assessed to determine the strength of the correlation.
Results

ExxonMobil

ExxonMobil (NYSE:XOM) Share Price for 2014
Year-to-Date

Figure 1 Year-to-date share price for ExxonMobil stock.

Table 1: Key ExxonMobil Events in 2014 Year-to-Date

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>News</th>
</tr>
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<td>1/3/2014</td>
<td>ExxonMobil will face criminal charges after spilling 50,000 gallons of fracking wastewater in Marcellus Shale.</td>
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<tr>
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<td>ExxonMobil CEO opposes fracking when drillers come near his home.</td>
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<td>ExxonMobil agrees to publish information on how global warming policies/legislation may affect the company and its investors.</td>
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<td>ExxonMobil reports that their production of oil and gas hits 5 year low.</td>
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<td>ExxonMobil starts drilling in Russia’s Arctic.</td>
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<td>ExxonMobil halts oil drilling in Russian Arctic waters.</td>
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<td>10/16/2014</td>
<td>ExxonMobil stays in EU despite energy laws approaching.</td>
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<td>ExxonMobil reports 3% profit increase in refining and chemicals sector.</td>
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<td>Microsoft surpasses ExxonMobil as 2nd most valuable company.</td>
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<td>10</td>
<td>12/3/2014</td>
<td>ExxonMobil CEO okay with $40 oil.</td>
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**Figure 2** Year-to-date spot price for WTI crude oil.

**Table 2: Key Crude Oil Events in 2014 Year-to-Date**

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<td>OPEC in disagreement over cutting production as prices fall.</td>
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<td>OPEC decides after meeting to hold (continue) high production.</td>
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</table>
Combined Year-to-Date Percent Change

Figure 3 Year-to-date share price for ExxonMobil stock and spot price for WTI crude oil percent changes.

Table 3: Key ExxonMobil and Crude Oil Events in 2014 Year-to-Date

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Discussion

ExxonMobil

1. ExxonMobil will face criminal charges after spilling 50,000 gallons of fracking wastewater in Marcellus Shale\textsuperscript{14}: In 2010, Exxon subsidiary XTO Energy dumped fracking wastewater numbering in the tens of thousands of gallons at a hydraulic fracturing drilling site in Pennsylvania. Four years later, right as 2014 began, a Pennsylvania judge ruled that enough evidence exists to try Exxon in court for the dumping. Although the company will have few worries for paying the fine if charged, the hit to the company’s publicity from this event is more damaging than a financial penalty. ExxonMobil already has its fair share of bad publicity from previous events, as discussed previously. This news story was bad press for the corporation, and will continue to be as trials begin. The stock price for ExxonMobil declined after this story broke for the month of January; however, the decline was preceding a multi-month rally that lie ahead at the time.

2. ExxonMobil CEO opposes fracking when drillers come near his home\textsuperscript{15}: This next event is another, somewhat ironic event that garnered bad publicity for ExxonMobil. Rex Tillerson, CEO of one of the supermajors in the oil and gas industry – and a leading drilling and fracking company – filed a lawsuit and went to his Texas town council to oppose a water tower that would be built for supplying fracking water. The petition Tillerson submitted to his town council also included a discussion on the negative side effects of the fracking operation. Critics of ExxonMobil were quick to point out the hypocritical nature of Tillerson’s lawsuit and petition. Ultimately, this news story was just another piece of bad publicity among many for the company. However, the stock price did not react very much to this event. Instead, it was still on its upward trend that would continue for a large part of 2014.

3. ExxonMobil agrees to publish information on how global warming policies/legislation may affect the company and its investors\textsuperscript{16}: For the past few years, oil, gas, and energy companies have been urged to provide information to their shareholders about how future carbon emission policies and laws would affect their business. For this event, ExxonMobil announced that it agreed to publish this information by the end of the month. The reason that investors are pressuring companies like ExxonMobil to disclose this information is due to the evolving energy policies that are being developed, announced, and implemented around the world in response to the climate change/global warming crisis. President Obama has been an active president in terms of climate-friendly announcements and proposals, some of which he announced prior this event – including an 80% reduction in carbon emissions goal for 2050 set by Obama. One would imagine that such an announcement would scare off investors, but this event seemed to have the opposite effect on the stock price of ExxonMobil. This trend continued at the end of March too, when the information was published. This is presumably due to the fact that investors in oil and gas companies like ExxonMobil are probably not very concerned with climate change.
4. ExxonMobil reports that their production of oil and gas hits 5 year low\(^{17}\): At this point in time, ExxonMobil was pursuing the exploration of crude oil deposits in the Russian Arctic. According to Bloomberg.com, ExxonMobil’s oil and gas output decreased 5.7% from the high, to the lowest production level since Q3 of 2009. The company reported 3.84 million barrels per day, much lower than the expected 3.96 million barrels per day. ExxonMobil’s quest for Arctic crude has the goal of reversing this falling production trend. However, at the time of this event, the U.S. and European Union stated that they would place sanctions on the company if the area is pursued. As a result of this event, the ExxonMobil stock dropped 4.2% that day to close at 98.94%, one of the biggest one-day decreases in the past decade for the company. After this point, the chart shows that the downward trend in stock price was underway for the company, but this is due to many factors, as discussed more below.

5. ExxonMobil starts drilling in Russia’s Arctic\(^{18}\): Shortly after the U.S. and European Union threatened to impose sanctions on ExxonMobil for Arctic drilling in Russia, the company went ahead and began drilling in Russia’s Kara Sea at the time of this event. The sanctions placed included sanctions on the Russian company Rosneft, which was to provide technology for ExxonMobil’s drilling operations. In addition, the sanctions placed on Russia by the U.S. due to the crisis in Ukraine would also contribute to hurting projects like this, because they would hurt the government owned Rosneft in financing, and ultimately disrupt ExxonMobil’s operations. In a move to oppose the U.S. in an already escalating crisis over Ukraine, Russian Prime Minister Vladimir Putin publically supported ExxonMobil’s drilling operations in his country. Supporters of the company saw Exxon’s Arctic drilling as a good sign, and a good indicator of future returns on the company’s investment. Criticizers of the company saw this event as another instance of bad publicity – a company that already rejects that the Arctic is melting due to man-made climate change now begins drilling there. After the event, stock prices experienced a period of levelling-out before falling.

6. ExxonMobil halts oil drilling in Russian Arctic waters\(^{19}\): A little over a month after oil drilling began in Russia’s Kara Sea, ExxonMobil began halting their operations. The reason is due to the sanctions that the U.S. and European Union placed on companies like Rosneft which supply the advanced drilling technology for such operations in the region. The sanctions are due in part to the Ukraine Crisis. Other reasons for the sanctions are cited as safety reasons and environmental reasons. Due to the project being in the exploratory phase at the time of this event, the cease in operations will not cause any significant drop in revenues; however, the possibilities for future revenue and return on investments from the project will be significantly delayed or cancelled as a result of the event. As mentioned before, ExxonMobil was seeking to explore and begin drilling in the Russian Arctic to reverse its declining production trend that has already hurt the company’s stock. This freeze in operations will significantly hurt the prospects of achieving this reversal, and investors in the company responded accordingly. Soon after this event, the stock price began declining at an even greater rate than before.

7. ExxonMobil stays in European Union despite energy laws approaching\(^{20}\): Even though at the time of this event the European Union was planning on introducing new energy and climate policy at the Brussels Summit, ExxonMobil announced that it will
continue to operate in the European Union. The company believes that oil and gas reserves, including those in the European Union, are important in meeting the demand of oil. Specifically, the company announced that it will not cut funding from a $1 billion refinery in the European Union. The Antwerp refinery is one of the long-term investments for the company and one way that ExxonMobil plans to continue expanding in the European Union despite increasingly common “green” laws. ExxonMobil’s investors seemed to agree with the company, providing relief to the rapidly declining stock price. The stock price rose, but only temporarily.

8. **ExxonMobil reports 3% profit increase in refining and chemicals sector**\(^{21}\): The profits of the refining and chemicals businesses of ExxonMobil Corporation rose by 3%, and the company was happy to report this news. ExxonMobil’s refining business is up 72% from last year, and the company’s chemicals unit is up 17% from last year. However, this good news is among bad news, including decreasing production figures. Also a part of the bad news is revenue – down from last year as well, due to the lower production and the (now) lower price in crude oil. At this point in the year, the company and its stock began seeing the effects of lower oil prices. As stated before, the lower company revenues are a result of not only decreased production, but also decreased profit – due to reduced oil price. Investor confidence continually fell and also did long term stock price trend. Due to this event, the stock price continued to rise at a slow rate as before, but would soon resume its downward trend after a short period of time. It is because of events like these that the stock price stopped declining as fast as the price of oil.

9. **Microsoft surpasses ExxonMobil as 2\(^{nd}\) most valuable company**\(^{22}\): ExxonMobil’s falling stock price crossed paths with Microsoft’s rising stock price at the time of this event. Microsoft’s rising stock can be attributed to the current bull market in the U.S. tech industry, the new Microsoft CEO, and Microsoft’s new strategic moves to compete with other tech companies. The new CEO, Satya Nadella, has led the company away from excess expenses and towards mobile technology and cloud computing. The result of these moves has placed the company at second place with $410 billion in total market value, with Apple in first place. ExxonMobil’s value was $404 billion at the time of this event. The significant development that this event created was that it further exposed the company’s downward trending stock price, resulting in negative publicity. The downward trend in stock prices continued after this event.

10. **ExxonMobil CEO okay with $40 oil**\(^{23}\): ExxonMobil CEO Rex Tillerson told CNBC that the company can survive even with $40 per barrel oil, citing a number of factors. A big reason given was the long-term nature of the company’s investments. The company has tested their investment models across a wide range of prices. However, the CEO also reported that at low prices, oil companies, including ExxonMobil, will have to refocus on being more financially responsible. He expects the not-so-good companies at the margins to not survive these low prices, but expects his company to do fine. After this event, the stock price of ExxonMobil seems to be on the downward trend, but more volatile than in the past.
Crude Oil:

1. **Speculators weigh factors that may drive prices down in coming months**: Throughout the summer, investors began speculating on factors that may drive down the price of crude oil in the coming months. *Forbes.com* came out with several reasons that would cause oil to drop in the upcoming months. One reason is the fact that the global economy is losing momentum and trending downhill after the global economy of stimuli after the recession. This results in the halt of stimulus programs and as a result, a financial aid cutoff for many sectors. The strained global economy that would result would cancel out the crude oil price boon that resulted because of these stimuli. Another reason the *Forbes.com* cites is the increasing supply due to the rise in unconventional drilling techniques such as directional drilling and fracking. Production is also increasing in many other countries around the world. Also, the site states that global oil demand is slowing, and a big part of that is the economic slowdown in the oil-thirsty China. Several other factors were mentioned, but overall, it was around this time that investors began to take note of the possibility of an oil price bust in the coming months, and they turned out to be correct.

2. **ISIL captures major Syrian oil field**: The Islamic State of Iraq and the Levant (ISIL, commonly labelled ISIS) recently succeeded in taking over control of land in Syria that contains a major oil field. This oil field, the al-Omar oil field, is the country’s largest and most important oil facility. The facility is an important economic resource for the country. This news comes as the world is beginning to recognize the seriousness of the current situation with ISIL in the Middle East. Geo-political tensions in oil rich areas tend to decrease investments in foreign oil, and thus decrease supply. A decreased supply has the tendency to increase the price. Because of this event, the price of oil did increase a small amount a few weeks afterward, but the factors mentioned above seemed to be a greater influence as prices began to fall over the months afterward.

3. **OPEC production hits highest since 2012**: This event is significant because it signifies the recognition of a trend in OPEC oil production that will ultimately influence the price of oil in the months afterwards. An increased supply will drive prices down, and that is exactly what OPEC (Organization of the Petroleum Exporting Countries) intends to do. The increased outputs come from Saudi Arabia, other Gulf producers, and a recovering Libya. After the event the price did go down some more, declining at a more noticeable rate than before. This trend would ultimately continue up to today, as prices are still falling. As the price started to fall after this event, many oil producing countries started feeling the pressure of lower prices on their budget – including some OPEC countries like Iran, and other non-OPEC countries like Russia.

4. **OPEC in disagreement over cutting production as prices fall**: At the time of this event, OPEC’s strategy to flood the market with cheap oil was succeeding in driving the price down. OPEC’s “goal” is supposedly to drive the price down so far as to threaten the booming U.S. oil production industry, including shale drilling operations. However, at what cost does this come to OPEC? Not all OPEC countries can balance their budget with low oil prices like Saudi Arabia can. These financially struggling countries include
Libya, Iran, and non-OPEC member Russia – who would nonetheless support an initiative to hurt the U.S. shale industry. Therefore, at the time of this event, many OPEC countries disagreed with the strategy of reduce prices. Many experts thought that at the next meeting, which was scheduled for November 27th, OPEC would cut back on production in order to freeze the drop or even raise the price. However, until then, the world would continue to see falling oil prices as OPEC flooded the oversupplied market.

5. **OPEC decides after meeting to hold (continue) high production**

   At the highly anticipated OPEC meeting on November 27, the oil cartel decided not to cut production, but to instead continue production and drive prices down even further. Many experts call OPEC’s behavior an all-out price war with the United States. As a result of this announcement, prices dropped rapidly to below $70 per barrel, with no end in sight. This strategy could backfire and hurt OPEC countries, who depend heavily on revenue from oil exports. The United States will most likely fare better than these countries, as a price of $40 - $50 per barrel is what some American oil executives are saying is survivable, including ExxonMobil’s CEO. The low prices may hurt shale production in the long term, however, as new drilling operations may slow down in the coming year if prices remain low. The American economy is also likely to benefit from this though, as consumers will have more money on hand due to lower energy prices. The falling prices from this event are continuing right up to the time of this writing.
Conclusions

Based on comparing the performance of the ExxonMobil stock with the price of WTI crude oil over the year-to-date, and examining key events that influenced the price of either the ExxonMobil stock or the oil price, the conclusion can be made that the price of crude oil has a limited, but still significant correlation with the price of ExxonMobil shares. This conclusion can be made citing the abundance of evidence presented above; however, below are four key points of consideration that strongly contribute to this conclusion:

- Rising prices in the spring
- Plateau in the summer
- Falling prices from August to October
- Continued falling oil prices after October, but a stable yet volatile ExxonMobil stock

Rising Prices in the Spring
Both the price of crude oil and the stock price of ExxonMobil shares rose throughout the spring and early summer of 2014, as shown on Figure 3. However, the price of crude oil rose even in the winter months of 2014, while the price of ExxonMobil dropped. One event that contributed to this drop was the news that ExxonMobil would face charges from spilling fracking wastewater in Pennsylvania. News stories that contribute to bad publicity of a company are almost always detrimental to that company’s stock price. However, it is likely that many other events not covered in this report also influenced the price as well. Throughout most of the spring however, the price of ExxonMobil followed a similar upward trend observed in the price of crude oil. By July, the stock price had nearly caught up to the price of crude oil, in terms of year-to-date percent change. These two similar trends in both the price of crude oil and of ExxonMobil shares serve as evidence of a correlation between the two.

Plateau in the Summer
Much like correlation seen in the spring, the trend continued in the summer when both the price of crude oil and the price of ExxonMobil shares on the stock market experienced a plateau, and levelled out before dropping. Figure 3 illustrates how the both plateaus started around May and continued until around August, when the price of both began to drop. It was around this time that speculators began to notice several factors emerging that could contribute to a drop in oil prices, including oversupply by emerging U.S. and Canadian shale production, and lowered global demand due to a stagnating global economy. Crude oil traders losing confidence due to these trends is the reason that oil prices began to level out, and the fact that the ExxonMobil stock price followed a similar trend is further evidence that the two prices are correlated.

Falling Prices from August to October
Perhaps the greatest piece of evidence that supports a correlation between the stock price of ExxonMobil and the price of crude oil occurred on July 31. On that day, both the price of ExxonMobil shares and the price of oil fell dramatically. The key event examined for that date was the announcement by ExxonMobil that their oil and gas production had hit a five year low. Another important factor at the time was the oversupply of the markets with oil, an important factor that drives oil prices down. After this event, neither the price of crude oil nor the stock price of ExxonMobil ever recovered as of the time of this writing. From July 31 to about the
middle of October, the percent change graph overlay of the two prices shows a compelling correlation. The two prices followed each other very closely during this time, as seen on Figure 3. The day of July 31, along with the months afterward, are undeniably the most substantial pieces of evidence that the price of crude oil and the stock price of ExxonMobil are correlated.

Continued Falling Oil Prices After October, but a Stable Yet Volatile ExxonMobil Stock
This last reason serves as the rationale behind the conclusion that the two prices are correlated but only to a limited extent. The three arguments above provide compelling reason to believe that the price of crude oil and the price of ExxonMobil shares are significantly correlated; however, as the year winds down to a close, the performance of these two prices begin to differ, and this divergence in price evidently supports the conclusion that the correlation is limited at best. As shown on Figure 3, right around the middle of October, several key events occurred relating to both ExxonMobil and the price of oil that weakened the correlation between the two prices and sent them in different directions.

On the crude oil side, it was around this time that OPEC countries were oversupplying the world market with cheap oil. This drove the price of oil down. This move by OPEC is what many believe to be a price war against the U.S. shale industry. However, many OPEC countries were in disagreement over this strategy, as lower prices would hurt their budgets. The most recent event for crude oil was the decision by OPEC at their November 27 meeting to keep production high even at the expense of some of their member countries, and prices continue to drop today as a result.

ExxonMobil’s stock price reversed its downward trend and moved upwards at this point in October. This can be attributed to several events that, as a whole, show ExxonMobil’s resilience to rapidly falling oil prices. The first event discussed was the decision by ExxonMobil to remain in the European Union with its Antwerp refinery despite the likelihood of stricter energy and emissions laws. This decision to not pull its investment was favored by shareholders, because this is when the stock price of ExxonMobil began to rise. Another event that occurred as the stock price rose was the report that ExxonMobil’s refining and chemicals sector experienced a 3% profit increase. This increase was only sustained until the end of October however, when the stock price levelled out. Around Thanksgiving Day, the price of ExxonMobil shares begin to decline again, perhaps in response to the news of Microsoft’s surpassing of the company to second place in market capitalization, or perhaps in response to the rapid drop in oil prices following the news that OPEC would hold production. The end of the year for ExxonMobil’s stock price was more volatile than the rest of the year, but ExxonMobil’s CEO, Rex Tillerson, remains confident that the company can survive oil prices as low as $40 per barrel. The events of the last few months of 2014 show that ExxonMobil’s stock can remain somewhat stable in the face of falling oil prices, but the very last month shows a net decrease in the stock price, which may suggest that ExxonMobil’s resilience to falling oil prices may be running out.

Summary
This report concludes that the price of crude oil has a limited, yet significant correlation with the stock market price of ExxonMobil shares in 2014 due to a number of reasons. The prices of both followed similar upward trends in the spring. Likewise, the prices of both also plateaued in the summer. In the beginning of the fall, both prices followed extremely similar price trends as
their prices began to fall. All three of these reasons provide evidence for a strong correlation between the price of crude oil and the price of ExxonMobil shares on the stock market. Only the last reason differs in its evidence, because it supports the assertion that ExxonMobil can remain immune to the rapidly falling oil prices. All four of these reasons were taken into consideration when determining that the correlation was limited.

All four of these reasons were supported by both the graphs of the stock price of ExxonMobil and the price of crude oil, and the key events that took place over 2014 to influence these prices. These events were analyzed to determine what effect they had on the price of their respective company or commodity. Then these effects were then analyzed to come up with the four reasons listed above, which were used to make the conclusion.

The coming months in 2015 should be very interesting as OPEC, along with other oversuppliers like the U.S. shale boom, drive down prices in an already weakly-demanding market. The price war that OPEC has started cannot last forever without bankrupting many of their countries. However, will OPEC concede before the U.S. oil industry is crippled due to low prices? As 2015 and later years play out, one or the other will happen.
References


