

INVESTING IN THE NYSE INTEGRATED OIL & GAS COMPANIES

Name: Einav Hazut

Supervisor: Sveinn Eldon

Degree Programme: BBA-11

Date: 01/05/2014

DEGREE THESIS	
Arcada	
Degree Programme:	International Business
Identification number:	
Author:	Einav Hazut
Title:	Investing in the NYSE,integrated oil & gas companies.
Supervisor (Arcada):	Sveinn Eldon
Commissioned by:	
<p>The following thesis analyzes the profitability of investing in the integrated oil & gas companies in the New York Stock Exchange. The analysis includes data from the three leading competing companies in that industry and their performance compared with the industry average. The investment is restricted only to shares and does apply to other channels of investment such as bonds. The theory analyzes the profitability of the investment using financial ratios, return on investment and weighted average cost of capital combined with the economic value added. The calculation and theory are examined alongside a forecast of supply & demand for oil & natural gas.</p> <p>The results reveal that Exxon is more profitable and efficient than Chevron however, Exxon's liquidity level are extremely low. Furthermore, Chevron has better investor ratios and is able to please its investors better than Exxon.</p> <p>Therefore the author concludes that in her opinion investment in Chevron's stocks in the NYSE is a more profitable investment than its two examined competitors; BP & Exxon.</p>	
Keywords:	Financial ratio, WACC, EVA, integrated oil & gas industry, NYSE, investment, ROI, BP, Exxon, Chevron
Number of pages:	61
Language:	English
Date of acceptance:	

Table of Contents

<i>INVESTING IN THE NYSE INTEGRATED OIL & GAS COMPANIES</i>	1
1. INVESTING IN THE NYSE INTEGRATED OIL & GAS COMPANIES	6
1.1 <i>Motivation for choice of research topic</i>	6
1.2 <i>Research Aim</i>	7
1.3 <i>Research Questions</i>	7
1.4 <i>Theoretical framework</i>	8
1.5 <i>Demarcation</i>	9
2 LITERATURE REVIEW	10
2.1 <i>Investments</i>	10
2.1.1 <i>Preferred Stock</i>	11
2.1.2 <i>Common Stock</i>	11
2.2 <i>ROI</i>	11
2.3 <i>Financial Ratios</i>	12
2.3.1 <i>Benchmark</i>	13
2.3.2 <i>Performance Ratios</i>	14
2.3.3 <i>Efficiency Ratios</i>	15
2.3.4 <i>Leverage / Gearing Ratios</i>	16
2.3.5 <i>Liquidity Ratios</i>	18
2.3.6 <i>Investor Ratios</i>	19
2.4 <i>Problems with financial ratios</i>	21
2.5 <i>Weighted Cost of Capital & Economic Value Added</i>	22
2.5.1 <i>Weighted Cost of Capital</i>	22
2.5.2 <i>Economic Value Added</i>	23
2.6 <i>Forecast of oil & gas industry: supply & demand</i>	24
3 Integrated oil & gas industry	26
3.1 <i>Industry average</i>	26
3.2 <i>Companies Profile</i>	28
3.2.1 <i>Exxon</i>	28
3.2.2 <i>BP</i>	29
3.2.3 <i>Chevron</i>	30
3.3 <i>Financial ratios</i>	32

3.3.1	<i>Performance Ratio</i>	32
3.3.2	<i>Efficiency Ratios</i>	35
3.3.3	<i>Gearing Ratios</i>	38
3.3.4	<i>Liquidity Ratios</i>	40
3.3.5	<i>Investor Ratios</i>	44
3.4	<i>WACC & EVA</i>	49
3.5	<i>Return on investment</i>	51
4	<i>Conclusions</i>	52
5	<i>References</i>	55
6	<i>Bibliography</i>	55

Figures

Figure 1. Financial Ratios	13
Figure 2. Net Income Exxon.....	28
Figure 3. Net Income BP	29
Figure 4. Net Income Chevron.....	30
Figure 5. Return on Capital.....	32
Figure 6. Return on Equity.....	33
Figure 7. Return on Assets.....	34
Figure 8. Asset Turnover	35
Figure 9. Receivables Turnover	36
Figure 9. Operating Profit Margin	37
Figure 10. Long Term Debt	38
Figure 11. Long Term Equity	39
Figure 12. Total Debt.....	39
Figure 13. Net working capital to Total Assets	40
Figure 15. Current Ratio	41
Figure 16. Quick Ratio.....	42
Figure 17. Cash Ratio	43
Figure 18. Dividends per Share	44
Figure 19. Earnings Per Share	45
Figure 20. P/E Ratio.....	46
Figure 21. Earnings Yield.....	47
Figure 22. Dividends Yiled.....	48
Figure23. Cost of Capitl.....	49
Figure 24. EVA.....	50

Tables

Table 1. Performance Ratios.....	14
Table 2. Efficiency Ratios	15
Table 3. Leverage / Gearing Ratios	16
Table 4. Liquidity Ratios	18
Table 5. Investor Ratios	19
Table 6. Industry Average.....	27

INVESTING IN THE NYSE INTEGRATED OIL & GAS COMPANIES

In today's volatile stock market, profitable investments are hard to predict. Choosing the right market, industry and company requires scrutinizing inspection of many factors, which may not all be economical.

Using financial ratios and weighted average cost of capital may be useful however; the data gathered for the above formulas has to be correct.

Investing in one of top 3 integrated oil & gas companies: Exxon, Chevron and BP; requires a scrutinizing inspection including market needs, company's financial situation and industry conditions.

After examining all the above and applying this information on the required formulas, forecasting of such investment may be more accurate.

1.1 Motivation for choice of research topic

The 1973 oil crisis created economic crisis of many western European and American markets.

Transportation was almost completely shut down and many industries could not function without oil and its products. Citizens of the impacted countries could not heat their households in extreme weather.

The dependency on OPEC organization, which provides most of world's oil supply, cannot continue and other energy resources or providers are market requirements.

Although the dependency on oil still exists, natural gas is a significant source of energy used by electricity companies, public transportation and various fields of industries. It provides a cheaper and cleaner substitute of coal and fuel to produce electricity by reducing substantially carbon dioxide emissions.

In addition, natural gas is common in every US household for cooking and heat. Furthermore, compressed natural gas is a relatively clean substitute to gasoline and diesel used to refuel cars, and most common in Argentina, India, Brazil, Italy, Russia, USA and other countries. Natural gas is as efficient as gasoline and diesel based engines.

As mentioned above, natural gas is a cheaper and cleaner substitute for oil based resources used for electricity and car fuel therefore, it can provide the need of energy resources and reduce the dependency on oil and consequently on OPEC.

The clear need of a new source of energy is a current issue in the past few decades. The market offers renewable energy as a viable alternative however; its efficiency does not exceed oil based energy. Solar energy requires sunny areas, alcohol based energy requires huge amounts of corn, and water and wind based energies require specific geographic conditions as well.

Natural gas may not be as clean as renewable energy however, it does not pollute as oil and as efficient as oil.

1.2 Research Aim

Although the above conditions may suggest natural gas is a profitable investment, the author wants to examine market and industry conditions of both the current common energy source, oil, and the potential energy source of the future, natural gas. Therefore, the integrated oil & gas companies are the focus in the following research. The need and interest in natural gas is clear from the above text however; there are still few issues one must reveal to consider the profitability of investing in one of those companies.

1.3 Research Questions

According to the financial ratio analysis which company is more profitable?

The Literature review explains the financial ratio analysis and applies them based on the data gathered from the companies' financial reports and stock exchange information. The company that meets that meets the quantitative and qualitative demands of the financial ratio analysis will be selected as the most profitable company.

According to the WACC formula and the EVA calculation which company is more profitable?

Based on the financial data gathered from the financial statements, the author establishes the WACC. After finding the amount of return expected from each company, the author examines whether the companies answered stakeholders' expectations via the EVA calculation.

Based on the findings, which of the three companies is a more profitable investment?

A summary of all the financial ratios, WACC, EVA and ROI, will reveal which company meets investors' demands more and what it lacks. The sum of all will reveal the most profitable company of the three companies examined.

1.4 Theoretical framework

The London stock exchange claims that investing in shares is “one of the best long-term investments in the financial market place”. It even exceeds government bonds, corporate bonds, property and different other forms of investment. For the private investor who wishes to invest in integrated Oil & Gas Company, it is crucial to understand what is a stock exchange, how to invest in ordinary shares and why to invest in the New York Stock Exchange(NYSE).

The London Stock Exchange defines shares and explains how to invest in them. C.Thorenghon (2011) explains what stock exchange is and Bodie, Kane and Marcus (2009) elaborate on the New York Stock Exchange.

In the NYSE there are many industries, sectors and subsectors for the investor to choose from. The profitability and safe investment of the integrated Oil & Gas companies may not be calculated solely by economic and financial formula however; it must reflect the market needs also known as: supply & demand. According to the World's Energy Council the most common source of energy is oil and its products, and then followed by gas. Moreover, the “Exxon Outlook for Energy: A View to 2040” (2014) projects growth of world population and increasing demand for oil and natural gas at least until 2040.

The following step is to evaluate the industry and in which company it is most profitable to invest.

To evaluate an investment the author use financial ratio analysis, weighted average cost of capital and Economic Value Added (EVA) formula to asses business performance.

Financial ratio analysis, analyzes different trends in the company performance that suggest its strength, efficiency and profitability. Erich.A Helfert, D.B.A. (2001) claims there are many different ratios and measurements and using only one or few of them can not indicate accurately on the company's performance. Brealey, Myers & Allen agrees and add that financial ratios can indicate company's performance for a short and a long term period.

Head & Watson (2007) add that although using various ratios is useful, it has little significance. To understand the meaning of the ratios one must use a benchmark. There

are different kinds of benchmarks and they are chosen according to necessity. Harvey B. Lermack (2003) suggests that the ratios must contain information from the past 3-5 years financial statement.

Hence, the author chooses to analyze the past three years of financial statements from the industry and compare its results to the three companies on the research.

Another measurement to establish company's performance is to calculate weighted average cost of capital. The most crucial issue for an investor is to gain profit from its investment. The Weighted Average Cost of Capital is a complex formula that determines the minimum rate of return a company needs to pay to all its security holders. By the three companies return, the investor can make its decision also based on the expected return for the investment.

1.5 Demarcation

As mentioned in the theoretical framework, there are many ways to invest in the market. The thesis will not cover other potential investment channels such as bonds or treasury bills.

Furthermore there are many different stock exchanges, and sub-industries in which oil and natural gas are traded, and any conclusions this research reaches will not apply on other stock exchanges or sub-industries. Furthermore, there are many different ways to estimate business performance such as CAPM model, Altman-Z score, Du Pont and Internal Rate of Return. The author decides not to use them to create some homogeneity between the measurements selected, and to reach limitation of pages and number of words. The results of the thesis are limited only to the three integrated oil& gas companies in the NYSE and cannot indicate other natural gas and oil companies.

2 LITERATURE REVIEW

2.1 Investments

Bodie & Merton (2009) defines investment as the placement of money or resources in the present, in the purpose of receiving future yields. The following research focuses on such an investment in the stock exchange market.

The stock exchange market allows corporations to raise equity from the public by issuing shares. C. Thorngren (2011) explains that it is difficult for large companies such as Apple or Intel to raise enough funds only by debt. Erich A. Helfert (2001) elaborates that by purchasing a share the public entitles to a “share” in the company’s success.

The stock exchange is where shares are traded. The stock exchange market acts as a market i.e. where goods are bought and sold. There are specific and supervised regulations on how to negotiate the price.

The three companies examined in the following research are all traded in the New York Stock Exchange (NYSE). The New York Stock Exchange is the largest stock exchange in the United States, and is the second largest in the number of companies traded. Over 3200 companies are traded in the NYSE, and their capital combined worth approximately 20 billion dollars.

The stock begins its cycle in the initial public offering (IPO). A shareholder can generate profit from either dividend and / or by selling the share to another trader in a higher price. A dividend is the profit shared by its shareholders respectively to the amount of shares each shareholder possess. The profit is company’s earnings after it pays its current debts and taxes.

Stock price is set by the market i.e. its supply & demand. There are many factors that influence market’s demand. In the short term, different macroeconomic factors, politic issues or different trends may influence the stock price. In the long term, company’s performance and financial statements reflects the price range it fluctuates on.

Stock trade is held by mediators such as investment banks and brokers. The investor gives an order to the broker and as requested the broker purchases or sells the shares. In the past the

phone was the mean to perform such transactions but today it is more common to do so through a computer.

A stock or a share represents the relative part of its owner in a company. In the long run stock has the potential of receiving higher yields than other safe investment options such as bonds however; stocks tends to be more volatile. Volatility in terms of stock exchange refers to the fluctuations in the stock price. There is a possibility a stock value decreases under the price the investor initially bought it or its value increases substantially and may create great profit to its investor. A bond on the other hand is a low fixed return. There are different kinds of stocks, preferred stock & common stock.

2.1.1 Preferred Stock

Preferred stock supplies the need for a firm to raise equity without diluting its managers' privileges. The owners of such stock are entitled to share company's assets if dissolute and get preference in receiving dividends before the common shareholders. Erich A. Helfert (2001) agrees and adds that such stocks are midway point between debt and common stock.

2.1.2 Common Stock

Common stock provides its owner the privilege to share the company's profit and entitles to share company's assets if dissolute. A common stock is the lowest ranked stock and considered inferior to preferred stock.

2.2 ROI

It is not only important to know how to place an investment; the investor must measure its efficiency as well. Return on Investment (ROI) is the adequate formula to do so.

Brealey, Myers and Allen (2011) define ROI as "the ratio of after-tax operating income to the net (depreciated) book value of assets."

The following formula examines that ratio:

$$\text{ROI} = \frac{(\text{Gain from Investment} - \text{Cost of Investment})}{\text{Cost of Investment}}$$

C. Thorngren (2011) adds that ROI is one of most commonly used key performance indicators to evaluate investment performance.

In the following research this formula will explore the three companies investment performance by subtracting dividends + company's stock price at the end of the examined time frame (31.12.2013) and the stock price at the beginning of the time frame (31.12.2011) divided by the cost of investment (stock price 31.12.2011). Positive number suggests gain while negative indicates of a loss, and (0) represents indifference. I.e. there is no gain or loss.

2.3 Financial Ratios

Financial ratios are an effective tool to analyze current and past data in order to estimate company's financial situation and performance. The ratios measure and estimate the company's trends and help the researcher to draw conclusions on company's strength and monetary conduct. The financial ratios based on the company's financial statements as the balance sheet and income statement alongside stock market information such as stock price, risk rate, coupons and beta. Brealey, Myers & Allen (2011) claim that stakeholders such as shareholders, creditors and bank need to monitor the company they are invested in to ensure that their financial interests are met.

The ratios are divided to 5 different groups:

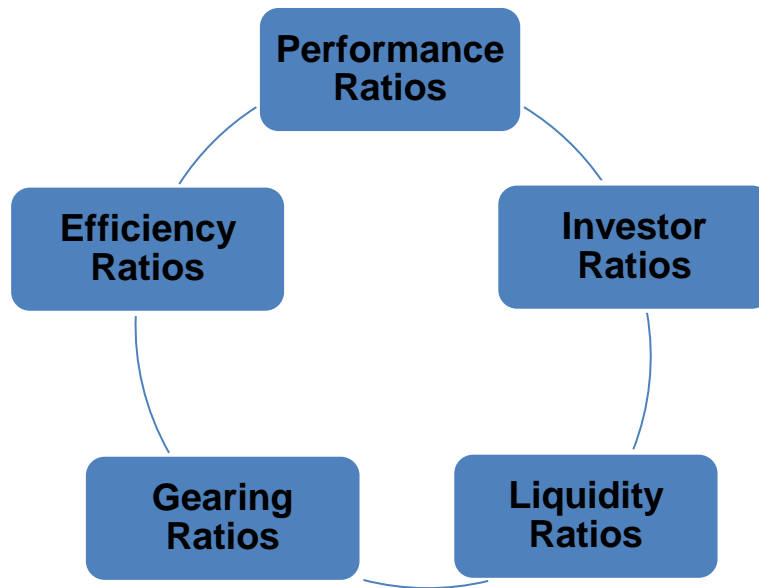


Figure 1. Financial Ratios

2.3.1 Benchmark

C. Thorngren (2001) defines *benchmarking* as “the practice of comparing a company with other leading companies. Head & Watson (2007) agree and add that financial ratios have little significance when tested only on one firm. For an accurate analysis, the firm must be compared against a suitable benchmark. C. Thorngren(2001) defines two kind of benchmarking.

- Benchmarking against a key competitor-Both of the companies must compete in the same industry and engage similar activities.
- Benchmarking Against the Industry Average-the average returns and performance of all the industry combined, compared with a company suggest it rank in the industry and its performance relatively to its market.

Although benchmarking with another competing company can suggest differences in performances and evaluate which of the two is more efficient, benchmarking against the industry average may be a better indicator

2.3.2 Performance Ratios

Table 1. Performance Ratios

Ratio	Formula
ROC- Return on Capital	$\frac{\text{after-tax interest} + \text{net income}}{\text{total capital}}$
ROE- Return on Equity	$\frac{\text{net income}}{\text{equity}}$
ROA- Return on Assets	$\frac{\text{after-tax interest} + \text{net income}}{\text{total assets}}$

The key indicator to the existence of a business is profit. The company may be less profitable in one year but it still does not mean it does not have the ability to gain earnings in the following years. Performance ratios measure the company's ability to earn in the present and in the future, aiming to show the confidence interval of the company and its ability to cope in the long run.

ROC- Return on Capital-Head & Watson (2007) defines ROC as the ratio that measures the profitability of a company to the finance that it received. The return on capital calculates the net income the company earned (after tax) during the fiscal year, divided by money raised solely by capital contributors, i.e. shareholders and bond holders.

The after tax interest is $1 - \text{tax rate}$. It's multiplied with the interest expense + the net income (after tax income). It is divided by the total capital. As mentioned above the ROC formula wants to examine the company use of its raised capital. Therefore total capital amounts to: Total liabilities + equity.

Return on equity- Return on equity is the ratio between company's returns and its equity. It is similar to the ROC formula only the ROE measures return to the equity solely, and does not include debt. The ROE formula is one of the most common ratios since it measures whether a company is able to use its equity to generate profit.

Its net income is revenues after tax and other expenses, divided by its shareholders' equity.

ROA- Return on Assets- Brealey, Myers & Allen (2011) defines that “ROA measures the income available to debt and equity investors per dollar of the firm’s total assets”. The ROA ratio explains how much revenue a company will earn from each capital invested on its assets. The return on assets formula presents profitability without considering the financial leverage of the company. ROA is not sufficient to determine profitability from investing in a company’s assets hence, leverage / gearing ratios are also taken under consideration when examining company’s performance.

The after tax interest is 1- tax rate multiplied by the interest expense + the net income (after tax income). It is divided by its total assets (current & fixed assets).

2.3.3 Efficiency Ratios

Table 2. Efficiency Ratios

Ratio	Formula
Asset Turnover	$\frac{\text{Sales}}{\text{Total assets at start of year}}$
Receivables Turnover	$\frac{\text{Sales}}{\text{Receivables at start of year}}$
Operating Profit Margin	$\frac{\text{After tax interest + income}}{\text{Sales}}$

Efficiency ratios measure company’s ability to use its resources wisely and effectively, i.e. how much a firm does uses its resources?

Asset Turnover Ratio- C.Thorngren (2001) defines “the asset turnover ratio measures the amount of net sales generated for each average dollar of total assets invested”. This formula measures how well a company uses its assets to generate sales revenue. This formula does not calculate the cost of sales. Therefore, even if a company demonstrates high performance but has high costs, it does not create good profits.

Sales represent the total revenue before tax and costs divided by total assets at start of the year. Therefore, total assets are taken from last year’s balance sheet.

Receivables Turnover Ratio-Company's receivables is revenue from sales that yet to be collected from the company's costumers. Receivables turnover ratio measures company's effectiveness in collecting its debt and in extending credits. If the company succeeds to collect its debt or providing credit to the right customers, the ratio is expected to be high. Brealey, Myers & Allen (2011) claim that high turnover does not necessarily suggests a company is able to collect its revenue on time. High results can be caused by big amount of credits given to customers. Sales before tax and other expenses are divided by the end of last year's receivables.

Operating Profit Margin- The operating profit margin measures company's profit. It does it by dividing its net income (profit after expenses) by its sales. This ratio indicates the proportion of sales that finds its way into profits.

If the marginal profit grows each sale will yield more revenue and by that the ROE will be higher.

Profit margin formula can be not accurate for all companies. Companies that fund most of their operations by debt pay their profits with interest to their creditors and since debt is considered to be a part of the cost of capital it will not be accurate to exclude it of the net income calculation. This definition can be misleading. When companies are partly financed by debt, a portion of their revenue is stated in the financial report as interest expense and is not part the net income. Therefore, the financial ratio suggests a more elaborated formula called operating profit margin.

2.3.4 Leverage / Gearing Ratios

Table 3. Leverage / Gearing Ratios

Ratio	Formula
Long-term debt	$\frac{\text{Long-term debt}}{\text{Long-term debt} + \text{equity}}$
Long-term debt equity	$\frac{\text{Long-term debt}}{\text{equity}}$
Total debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}}$

Leverage defines the amount of debt versus equity a company owns. Highly geared / leveraged company has greater amount of debt. For the equity investor, investing in a company with big amounts of debt can be risky since it suggests the company has many other creditors that are entitled first to the company's earnings. High amount of equity versus debt is not a good indicator. That usually suggests the company offers to many stocks to the market (IPO) and by that it dilutes the value of other shareholders.

Long-term debt Ratio-Long term debt ratio demonstrates the financial leverage of a company.

The current liabilities represent debt that is paid immediately while the long term debt shows the amount of debt that the company needs to pay. It is divided by its total capital i.e. equity rose by shareholder and debt that remains. It demonstrates the relative amount of debt from the company's total payment obligations.

Long –term debt-equity Ratio-As mentioned above, the leverage ratio of a company is crucial for an investor to make its investment decision. Therefore Long –term debt-equity Ratio determines the company leverage. High leveraged / geared company will have a ratio higher than 0.5. For manufacturing companies 0.7 or less leverage ratio is common.

Long term debt is the future debt a company owed to its creditors divided by shareholder equity.

Total Debt Ratio-The following financial ratio measures the percentage of debt to the company's assets. For this ratio, similar to other leverage ratios, the higher the percentage the more risky company's operations are. Total liabilities include current debt and long term debt divided by total assets which respectively include current and non-current assets.

2.3.5 Liquidity Ratios

Table 4. Liquidity Ratios

Ratio	Formula
Net-Working-Capital-to-Total-Assets Ratio	$\frac{\text{Net working capital}}{\text{Total assets}}$
Current Ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$
Quick (Acid-Test) Ratio	$\frac{\text{Cash} + \text{Marketable securities} + \text{Receivable}}{\text{Current liabilities}}$
Cash Ratio	$\frac{\text{Cash} + \text{Marketable securities}}{\text{Current liabilities}}$

Liquidity ratios indicate the company's ability to meet its obligations and to deal with unexpected financial pressures in the short term (up to one year). The need to repay its liabilities rises usually under crisis. The company finds itself in a situation where it has to repay its liabilities immediately. In that time, a company must have enough sources, i.e. cash / current assets. In light of the above, it is certain to say that the liquidity ratios can indicate the company's ability to repay its current liabilities.

Net-Working-Capital-to-Total-Assets Ratio measures the company's ability to pay its short term debt (current liabilities). Evaluating by this ratio is not necessarily by comparing one company to another or to its industry, it's by demonstrating if company's liquidity is improving with time.

Current Ratio-Current ratio simply measures the ratio between current assets and current liabilities. If the ratio is lower than 1 it means the company has more liabilities than assets. The higher the ratio the better company's liquidity is.

Quick (Acid-Test) Ratio-Quick (Acid-Test) Ratio is a rigorous measurement that demonstrates whether a company has enough short-term assets to cover its immediate liabilities without selling

inventory, unlike Net-Working-Capital-to-Total-Assets Ratio which allows inclusion of inventory assets.

Similar to the previous formula, the higher the ratio the better the company liquidity is.

Cash Ratio- Cash ratio is an even more rigorous yet accurate ratio to examine company's liquidity.

This ratio is similar to the Quick (Acid-Test) Ratio however it leaves out the receivables. Although it is money that the company registers as its own, it is still not paid

2.3.6 Investor Ratios

Table 5. Investor Ratios

Ratio	Formula
Dividend per share	$\frac{\text{Dividend paid to ordinary shareholders}}{\text{Number of issued ordinary shares}}$
Earnings per share	$\frac{\text{Earnings after tax \& preference dividends}}{\text{Number of issued ordinary shares}}$
P/E Ratio	$\frac{\text{Market price per share}}{\text{Earnings per share}}$
Dividend Yield	$\frac{\text{Dividend per share}}{\text{Market price per share}}$
Earnings Yield	$\frac{\text{Earnings per share}}{\text{Market price per share}}$

One of the key measures to identify company's success or failure is profit. Therefore it is very important to analyze the relationship between profitability and other parameters of the balance sheet and the income statement. These Ratios are called "Profitability Ratios" or "Investors Ratios". In this case, the word "profit" does not mean net profits. To measure "profits" we use

operating profit before tax in order to neutralize the changes in operating expenses and income tax / non-recurring expenses.

Dividend per share-Dividend per share is the amount paid in dollars to ordinary shareholders. The dividends are paid respectively to the shares shareholders own.

Earnings per share- Earnings per share are one of the most prominent financial ratios that measure public companies.

It measures the portion of a company's profit allocated to each outstanding share of common stock. High profit share suggests that the share price should be higher. It means that in the long run it will increase earnings per share and stock price increase and as a result - the company value will increase as well.

P/E- Price Earnings Ratio- The Price Earnings ratio (P/E), measures the ratio between company's market capitalization and its EPS.

P/E Ratio differs from industry to industry; hence an accurate examination of the P/E ratio obliges the investor to compare the company to the industry average.

High P/E ratio reflects investors' expectations for higher future profits than those presented on company's latest financial reports, and vice versa. Nevertheless, when the capital markets are booming companies' P/E ratios are rising up, and in most cases without any connection with the profitability of the companies.

For example, P/E ratio of 20 means that the share price in the capital market is 20 times higher than earnings per share, in other words - if the company's net profit will remain at the current level, it will take 20 years to the company's earnings will return to the investor the amount he pays today for one share.

Earnings yield-Earnings yield is a financial ratio that expresses the ratio between earnings per share and its market price in percent per year. This ratio is an inverted version to the P/E ratio (for example, if the P/E is 8 - The earnings yield is a 1/8 or 12.5 percent). This ratio reflects the total profit of the firm i.e. it takes into account undistributed profits (unlike dividend yield). This ratio does not distinguish between a firm's income and the income of the investor. However, this

indicator is used to measure stock returns and the extent of their popularity. Earnings yield ratio is obtained by dividing the earnings per share market price of the stock.

Dividends Yield- Dividend yield is measured by percentage and expresses the amount of dividends paid relatively to the market. The higher a company's dividend yield is, the more attractive its investment.

2.4 Problems with financial ratios

Head & Watson (2007) claim, the results of the financial ratios must be interpreted with great caution. There are number of reasons why financial ratio can be misleading.

The first issue is the source of the data that is gathered to calculate the ratios. The financial statements published by a company, address to the company's condition of a certain day. Financial statements can be inaccurate since they do not demonstrate the company's financial situation up until the next report. For example tax payable and dividends due can be paid by the next report however; they are audited to the company's current financial situation and shows the company is in greater debt than what it really is.

Second is the benchmark. One of the key conditions in the financial ratios is to compare a company with its competitors or to its industry. In reality no two companies are the same even if they operate in the same industry. Some may have similar operations however, they may not operate in the same market, they have other investments, operations or projects that other companies may not have.

Another key issue is the financial information. Today's financial reports are more complex and may be hard to interpret even for experts.

Therefore, it is crucial for the user of financial ratios to notice the data carefully and choose to invest after scrutinizing inspection of the financial statements. Furthermore, in the following research the author uses other measurements such as WACC, EVA, ROI and industry forecast to validate the financial ratios results.

2.5 Weighted Cost of Capital & Economic Value Added

2.5.1 Weighted Cost of Capital

The Weighted Cost of Capital (WACC) is the calculation of a company's cost to each category of capital. Capital includes all funding sources such as bank loans and common stocks. Each capital is proportionately weighted.

After examining the financial statements regarding the corporate financial performance, what is left to determine is whether a company has met investor's expectation for profit.

Before calculating any expected returns, the analyst must examine the company financial statements and determine required rate of return. The weighted average cost of capital is a way to calculate the required rate of return expected from the company. It incorporates debt, equity, and preferred shares into this required rate. These are the various ways that a firm can raise capital. It is important to incorporate this fact into the rate since firms do not raise all of their capital from one source. They often gather it from a combination of all of the above sources. Each method of raising capital has a different cost associated with it, and must be taken into account.

The WACC formula:

$$WACC_{\text{without Taxes}} = r_D \times \frac{D}{D+E} + r_E \times \frac{E}{D+E}$$

r_D - return rate to debtors

The most common measurement to assess return rate for debtors is by using credit rating companies such as S&P. The grades scale goes from D (on the verge of bankruptcy) to AAA which is the most prestigious rate a company can get. By using this index the investor can find the return rate for debtors.

r_E - return rate to investors

The return rate for investors is a bit more complex. It includes Risk-free, beta and average market return. The Risk-free interest rate is the theoretical return rate of an investment with no risk of financial loss. The beta is the risk added and it is individual to each company and divided

by market average. The market average and risk free rate are identical in calculating all companies competing in the exact same market and industry.

D - Debt

E - Equity

A company that does not use its debt to pay for its operations will have unlevered cost of equity i.e. an equal WACC to its equity costs.

Since the funding in this research examines investment profitability, the above equation will not be suitable.

The following WACC will be more accurate:

$$WACC_{After-Tax} = r_D \times (1 - t) \times \frac{D}{D + E} + r_E \times \frac{E}{D + E}$$

t - Marginal tax

When the company is levered, the interest it pays reduces tax so its current debt is $(1-t)$.

The WACC is lower than the return on investment since it considers the leverage.

2.5.2 Economic Value Added

The WACC shows the minimum return a company must gain to meet its stakeholders' expectations. Although the WACC is a very effective formula, it cannot determine whether the expected profit was gained.

According Brealey, Myers & Allen (2011) the investor can see whether the company has truly created value only after deducting all its costs.

First the cost of capital demonstrates the minimum return expected by the following formula:

WACC X (equity + long term debt) = cost of capital

The cost of capital is the minimum acceptable rate of return on capital investment.

A company creates value to its stakeholders only by exceeding cost of capital.

Profits exceed cost of capital are called the company's economic value added or EVA and is calculated by the following formula:

$$EVA = (\text{after-tax interest} + \text{net income}) - (\text{cost of capital} \times \text{capital})$$

2.6 Forecast of oil & gas industry: supply & demand

Our dependency on energy is not oblivious to us in our everyday life.

We use electricity supplied by fuels, to keep us warm at winter and we use trains, cars and airplanes to reach our destinations that also run by fuels, and with time we become more dependent on energy sources.

Hence, the following report's forecasts of growth in demand seem synchronized with world's current market trends.

Exxon (2014) stated on its energy report, that by 2040 we expect to see:

- Population growth of 2 billion people
- An increase of 130% in the whole economy
- A 35% higher demand for energy
- Growth in demand in non OECD countries such as India
- 60% of the energy demand will be provided by oil and natural gas
- Projection claims that natural gas will become second largest energy source and surpasses coal.
- Growth in demand for electricity
- Operations will be more efficient: CO₂ emissions decrease gradually.

Although oil & gas products are not purchased directly by the private consumer from integrated oil & gas companies, the population growth has a substantial impact on the supply & demand of the companies in that industry.

The world's economy is technology oriented and technology requires energy. Whether it's cooking, watching TV, traveling, using a smartphone or even conducting business operation from a sole proprietor to a corporation, the use of technology is inevitable.

The growth in demand for energy is not a recent trend. Energy consumption worldwide is 25 times higher than in 1800. Such increase in demand over the past 200 years demonstrates that forecasts of growth do not appear farfetched.

According to Exxon (2014), there are three key indicators that set energy growth:

- Increasing population
- Urbanization
- Rising living standards

Economy growth expected in the OECD countries is 2% annually averaged while developing countries such as China, are expected to have 4.4% annually growth. More accurately, GDP per capita will grow by about 80 percent from 2010 to 2040, and will multiply the growth between 1980-2010. Such growth in gross domestic product suggests an increase in quality of life which respectively increases demand of technology and evidently more energy. The two most populated countries are China and India and they are both considered developing countries. As mentioned above, developing countries are expected to have higher growth than developed countries and when all that taken under consideration, both countries combined are expected to account for half of growth in energy demand.

Although in the next decade replacing oil as the main energy source for transportation is unlikely, natural gas is projected to grow as energy source in other sectors. Natural gas will be utilized for electricity production, which is expected to increase by 90 percent from 2010 to 2040.

The commercial sector experiences trends towards increasing use in electricity rather than fuels such as oil and coal. Hence the growth projection for oil is expected to be slow towards 2040. The demand is expected to grow by approximately 50 percent from 2010-2040.

Residential and commercial energy demand combined, is expected to grow by 30 percent from 2010-2040.

The transportation sector is projected to increase slowly its demand to fuel in next decade, however later it will gradually decline over the remaining forecasted years (2040). Such decline will not be a cause of decrease in the need of vehicles. It is caused due to the shift in world's demand for hybrid cars. At the moment hybrid cars constitute 1 percent of world's vehicle transportation while in 2040 they are projected to increase up to 35 percent.

Commercial transportation is expected to increase its energy demand by 70 percent from 2010-2040. This increase will be due to the expected increase in the economy and the demand of greater economy activity of freight.

The industrial sector is expected to experience growth in demand of energy. The rising living standard shifts the demand for more commercial goods. Such demand increases manufacturing that respectively increases the demand for energy. Although industries move to cleaner and more cost efficient energy sources, this sector is still expected to experience 30 percent growth in demand to fossil-fuel.

3 Integrated oil & gas industry

3.1 Industry average

A benchmark is a crucial condition for an investor to perform an accurate financial ratio. The benchmark can be either to another competing company or to the whole industry. In the following research the author uses both benchmarks to maximize its comparison measures.

The following table is the industry's average from the 10 leading companies traded in the same industry. Among them are the three examined companies: Exxon, BP & Chevron. The average includes the three companies above and other seven companies: ENI S.P.A, Hess Corporation, Royal Dutch Shell, Marathon Petroleum corp., Statoil, Total S.A and PetroChina

Table 6. Industry Average

	2011	2012	2013
ROC	19.4%	17.4%	13.9%
ROE	23.5%	20.7%	16.7%
ROA	10.6%	9.9%	8.1%
Asset TO	1.31	1.26	1.23
Receivables TO	11.17	11.04	11.41
Profit Margin	8.7%	8.4%	8.3%
Operating profit margin	8.7%	8.4%	8.3%
Long term debt ratio	20.7%	19.4%	19.3%
long term equity ratio	27.2%	24.9%	24.7%
Total debt ratio	55.8%	53.7%	52.9%
Net working capital to	3.4%	6.0%	5.0%
Current ratio	2.19	1.25	1.24
Quick ratio	0.77	0.85	0.84
cash ratio	21.9%	30.5%	29.7%
DPS	2.09	2.31	2.45
EPS	7.75	7.69	6.62
P/E Ratio	8.16	9.64	10.88
Earnings yield	12.7%	10.8%	9.3%
Dividends yield	4.2%	4.3%	3.9%

3.2 Companies Profile

3.2.1 Exxon

Stock price (01.05.14): \$ 102.41

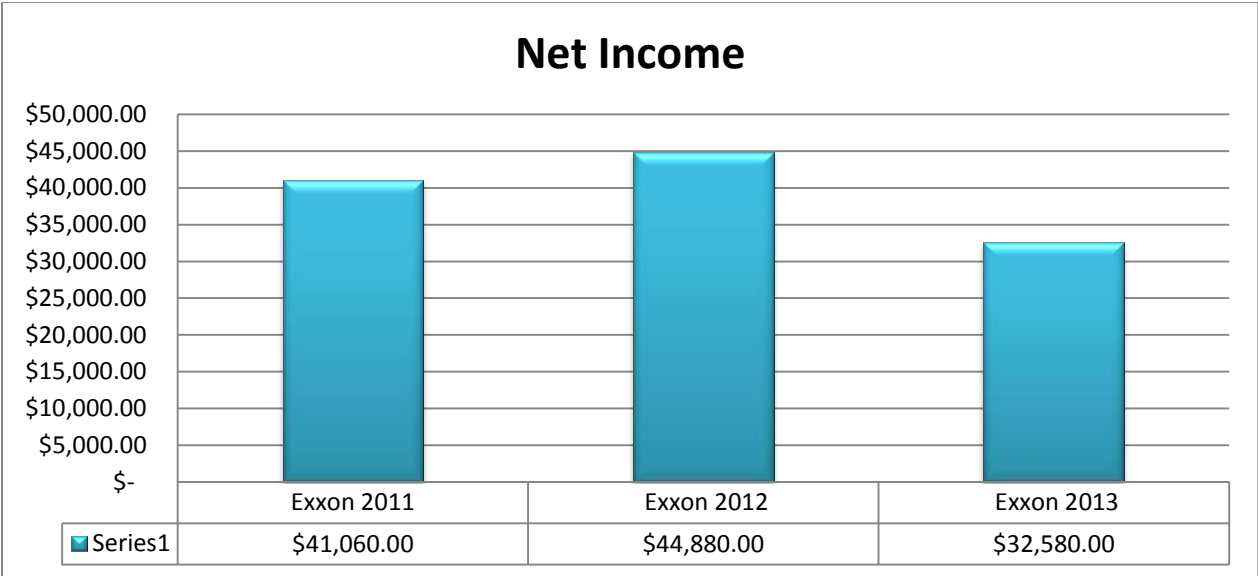


Figure 2. Net Income Exxon

ExxonMobil is an international American corporation. Its headquarters are in Irving, Texas, United States. Initially it was established under the name Standard Oil Company and founded by John D. Rockefeller. Since, it had many mergers and turned to one of the largest corporations in the world. The corporation ExxonMobil is the largest public oil company in the world and was created on November 30, 1999. In 2012 the company won the title of the world's largest company in America based on its revenues that amounted to 452.9 billion. In 2011 and 2013 it ranked second place (Fortune 500 2011-2013)

In the global market, Exxon ranked third in the list of world's largest companies (Fortune 500 2013). Apple was ranked first which automatically placed Exxon to be the most leading company by market capitalization within its industry. Amongst its competitors, the company produces world's largest amount of oil in the world, 5.3 million barrels of oil per day. Exxon owns approximately 3 percent of world production (financial times 2007) and today it has the largest amount of reserves of oil and natural gas in the world (per company), although there are

other countries (e.g. Saudi Arabia) which poses larger amount of oil & gas reserves. According to Exxon financial statement, it possesses 31 oil refineries located in 17 countries (2013).

3.2.2 BP

Stock price (01.05.14): \$ 50.62

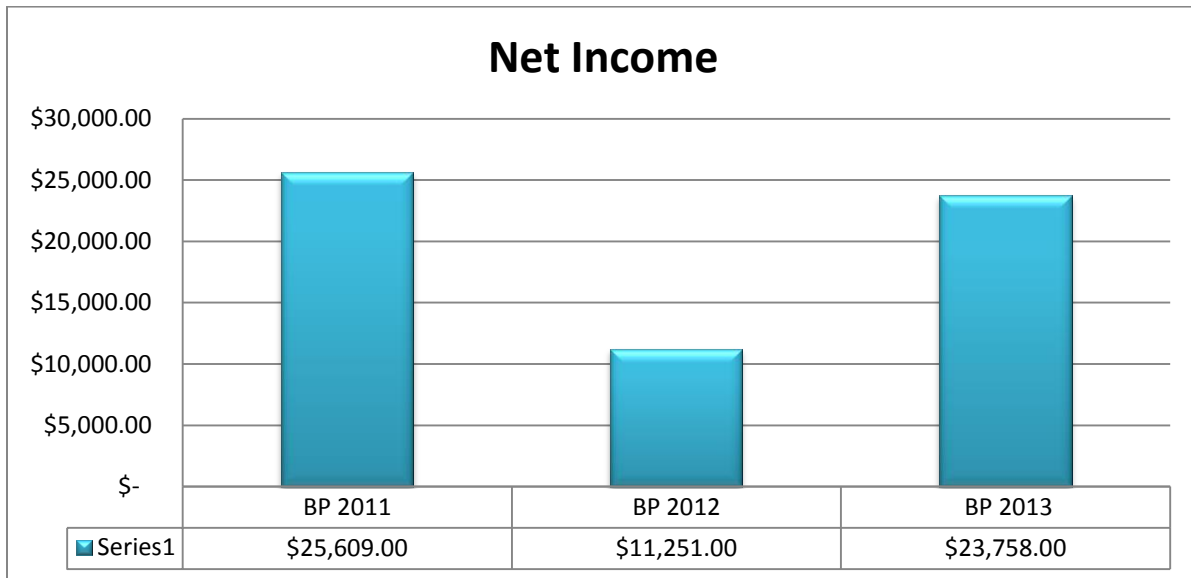


Figure 3. Net Income BP

BP is a British oil corporation. It is located in London England and initially formed in 1908 under the name “Anglo Persian Oil Company”. It is ranked 9th in the world’s top 10 super-major companies in the oil industry

Its stocks are traded in the London, Tokyo and the New York stock exchange. Its main operations include drillings and producing oil and natural gas. It is notoriously famous for the oil leak in the Mexico golf. On April 20th 2010, BP’s chartered oil platform, Deepwater horizon, exploded and crashed. The drilled well underneath it leaked natural gas and oil for over a month and caused one of the largest ecological disasters in history.

In 2013 the company won the title of the sixth world's largest company based on its revenues that amounted to 388.3 billion. In 2011 and 2012 it ranked fourth place (Fortune 500 2011-2013).

Amongst its competitors, the company ranked 6th on the world’s oil production that amounts to 4.1 million barrels of oil per day.

3.2.3 Chevron

Stock price (01.05.14): \$ 125.52

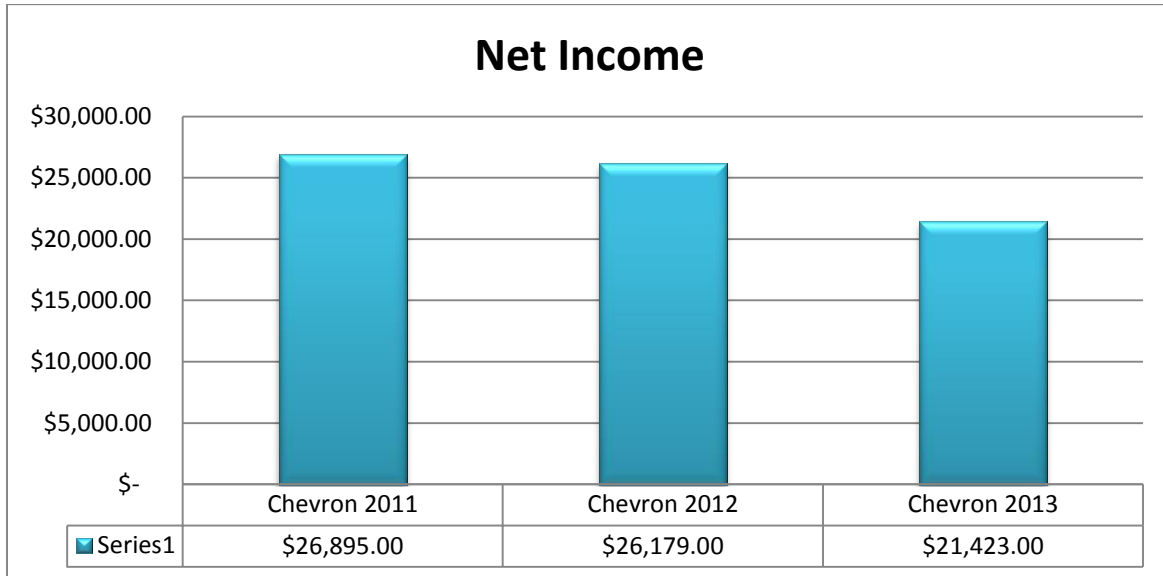


Figure 4. Net Income Chevron

Chevron is a leading company in the global market of integrated oil & gas companies. Its headquarters are located in San Ramon, California and has operations and activities in over 170 countries. It is ranked last in the world's top 10 super major companies in the oil industry (the economist 2013)

Chevron's major operations include production and transportation of crude oil and natural gas, marketing and distributing fuels and lubricants, they engage in the selling and manufacturing petrochemical products, producing geothermal energy developing renewable energy and elaborate their activities to R&D of advanced bio fuels.

The company started its operations in 1879 with the discovery of oil at Pico Canyon that is located in the North of Los Angeles. The company was established under the name Standard Oil

Co. until it formed to Chevron. 75 percent of its oil-equivalent production was outside of the US. It amounted to the average of 2.61 million barrels per day in 2012.

One of Chevron's recent activities was investing in 11 power-generating facilities in the United States and Asia.

In 2013 the company won the title of the world's third largest company in America based on its revenues that amounted to 196.3 billion. In 2011 it was ranked third largest company and 2012 it ranked second (Fortune 500 2011-2013)

In the global market, Chevron ranked 11th in the list of world's largest companies (Fortune 500 2013)

On 2013, Chevron Corporation ranked the 11th most leading company based on its market value that amounts to 231 billion dollars (PWC 2013). Amongst its competitors, the company produces world's 9th largest amount of oil in the world, 3.5 million barrels of oil per day.

Chevron also suffered from bad critiques due to ecological and environmental hazard it created. In 2012, a large fire erupted on Chevron's refinery located in Richmond California. Findings show this fire caused by obsolete equipment and lack of proper inspection in the facility

3.3 Financial ratios

3.3.1 Performance Ratio

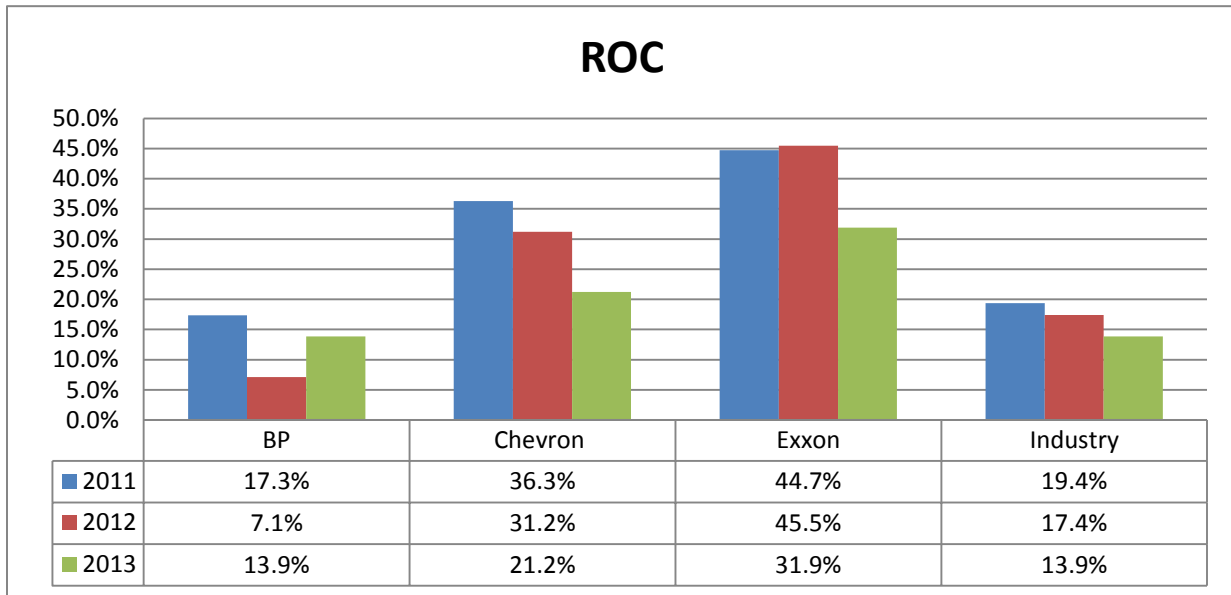


Figure 5. Return on Capital

The Return on Capital (ROC) formula measures company's profitability by examining the ratio of profit to its total capital (funds raised by shareholders and creditors). The net income is divided by the capital employed by the company's stakeholders. Therefore, higher ratio of one company over another suggests a better ability of the leading company to pay its stakeholders.

Exxon demonstrates the highest ROC ratio and exceeds the industry average and its competitors substantially. Chevron shows high ratios as well yet it does not compete with Exxon's performance. BP on the other hand shows poor performance. Nevertheless, while the industry, Chevron and Exxon shows a decrease in ROC over the years, BP improves its performance in 2013.

The graph reveals, Exxon gained the highest profit (in percentage) to its stakeholders.

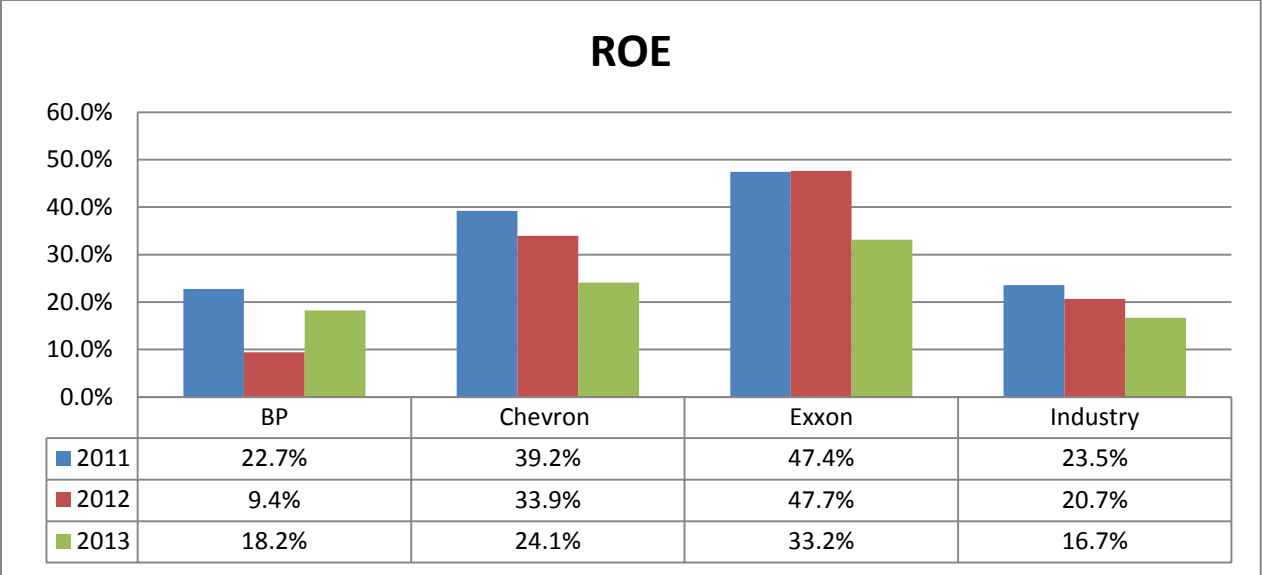


Figure 6. Return on Equity

The return on equity (ROE) ratio measures return to its shareholder. The ROE formula is similar to the ROC in its essence however in this case, it does not measure returns to the company's creditors.

Respectively, higher ratio of one company over another suggests a better ability of the leading company to pay its shareholders.

The results of this ratio are similar to the ROC ratio. Exxon is the leading company and is followed by Chevron. Both exceed industry's average. BP again does not meet industry's performance yet its performance improves in 2013 while its competitors performance decreases each year. It appears Exxon gained the highest returns to its shareholders

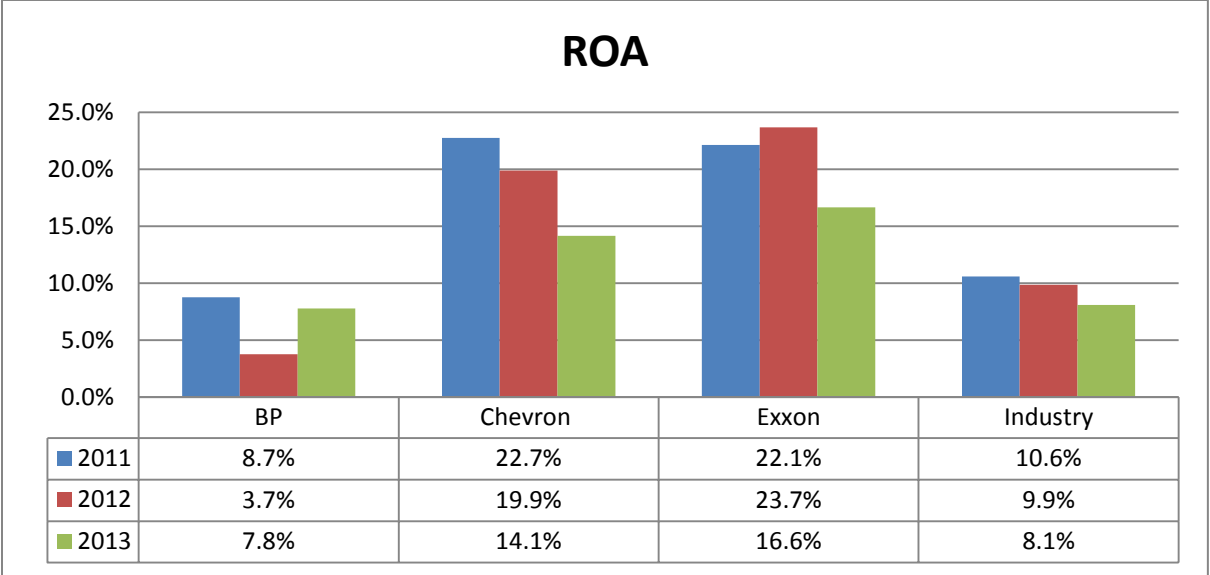


Figure 7. Return on Assets

The Return on Assets ratio (ROA) ratio demonstrates how much revenue a company will earn from each capital invested on its assets. The net income is divided by the company’s total assets hence; higher ratio of one company over another suggests a better ability of the leading company to generate profit of its assets.

The results of this ratio are similar to the ROC and ROE ratios. Exxon is the leading company and is followed by Chevron. Both exceed industry’s average. BP again does not meet industry’s performance yet its performance improves in 2013 while its competitors performance decreases each year. It appears Exxon gained higher earnings from its assets using its capital.

3.3.2 Efficiency Ratios

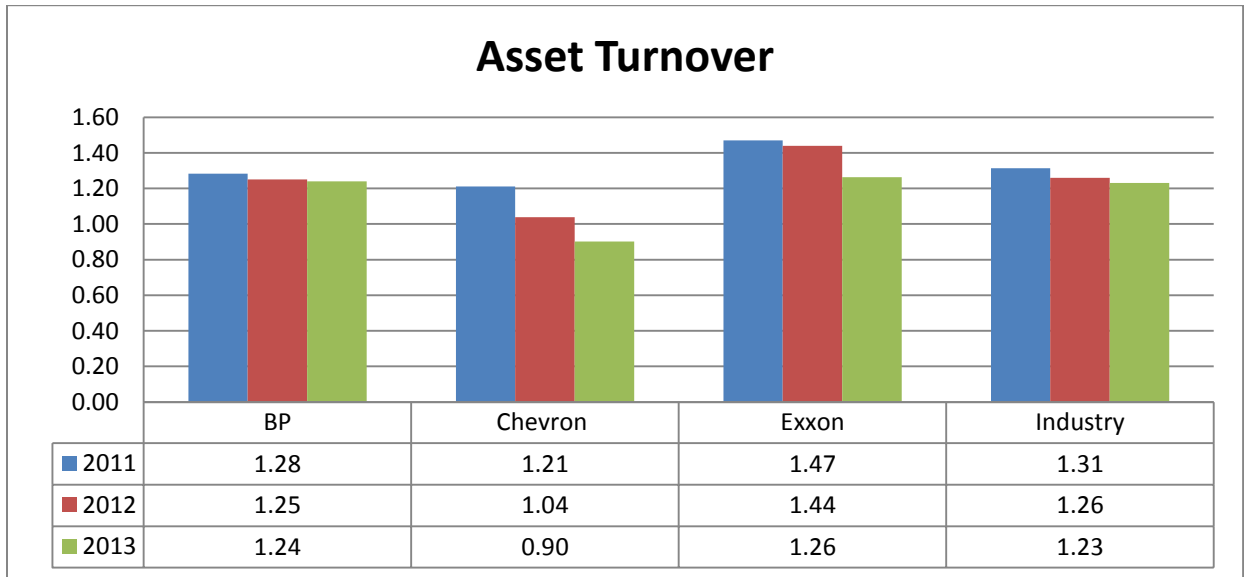


Figure 8. Asset Turnover

The Asset Turnover ratio measures how well a company uses its assets to generate revenues. In this ratio company's revenues (sales before deductions) is divided by its reported assets at the end of its previous fiscal year. The reason why the assets of the previous fiscal year are part of this ratio is to demonstrate how well a company used the assets in the beginning of the year.

The findings are a bit inconclusive since all the ratios are quite similar. Even though, Exxon is still leading and demonstrates high ratios, more than its competitors and the industry average. It appears the whole industry including the three companies; suffer a decrease in asset turnover. BP and Chevron do not meet industry performance in 2011 and 2012 although BP improves its turnover ratio in 2013. Chevron shows the worst performance and does not use its assets well enough to generate more profit. It is important to emphasize that although one company is more efficient than its competitors, it does not necessarily means it generates more profit.

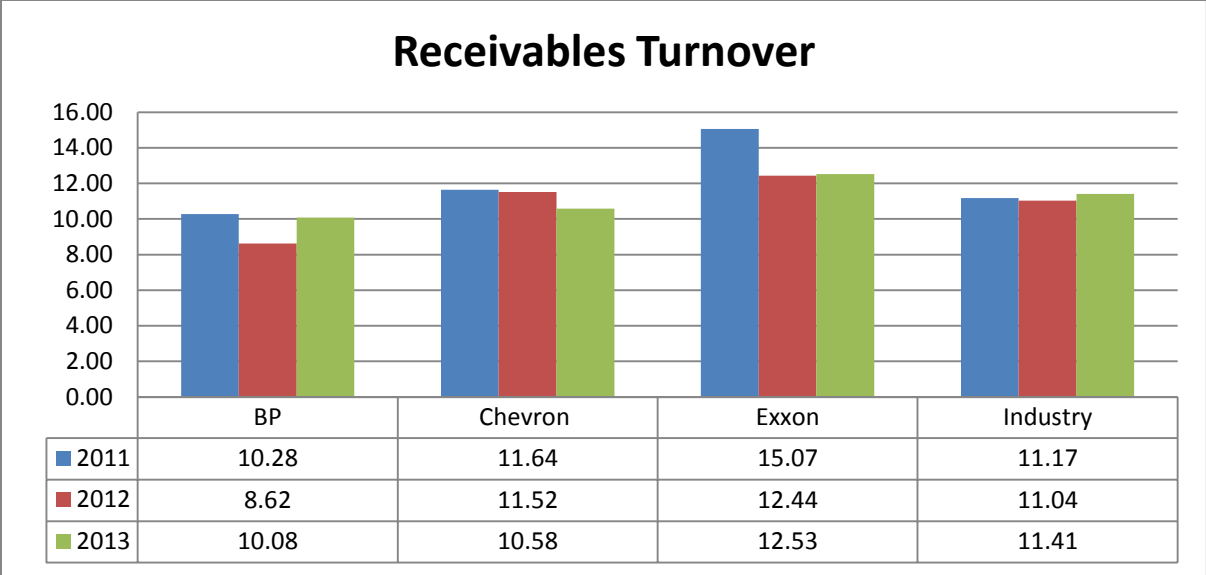


Figure 9. Receivables Turnover

Receivables turnover measures company’s effectiveness in collecting its debt and extending credits. High ratio reflects company’s effective ability to collect its debt and grant the right customers credits. This ratio can be misleading. High results can be caused by companies that grant too much credit.

Exxon is still leading and demonstrates high ratios between 2011-2013, more than its competitors and the industry average. Exxon, the industry and BP’s ratios decreased in 2012 but shifted back up again in 2013. Chevron’s ratio on the other hand decreased over time which suggests Chevron lost its efficiency to collect its debt. Chevron was above industry average in 2011 and 2012 however it did not meet industry’s efficiency in 2013.

Although BP succeeded to improve in 2013, it did not meet industry efficiency during the examined time frame.

According to the receivables ratio, Exxon demonstrates higher abilities to collect its debt and granting credits to the right customers.

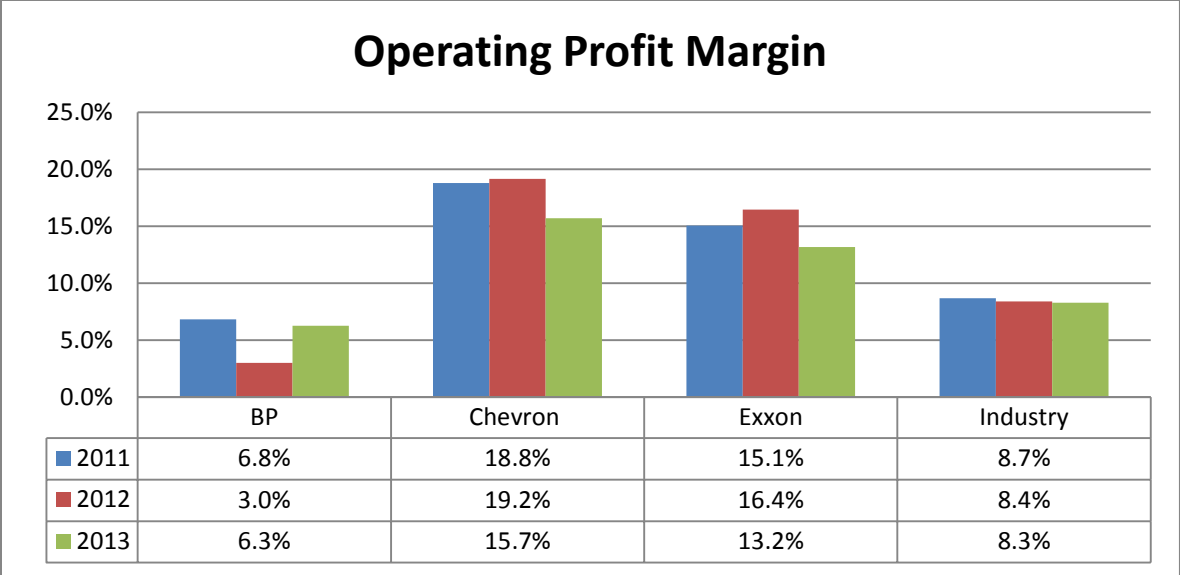


Figure 9. Operating Profit Margin

Profit margin formula can be not accurate for all companies. Companies that fund most of their operations by debt pay their profits with interest to their creditors and since debt is considered to be a part of the cost of capital it will not be accurate to exclude it of the net income calculation. This definition can be misleading. When companies are partly financed by debt, a portion of their revenue is stated in the financial report as interest expense and is not part the net income. Therefore, the financial ratio suggests a more elaborated formula called operating profit margin.

The operating profit margin represents the ratio between company’s profit (revenue after tax and interest deduction) to its revenue (sales).

Higher ratio represents company’s better ability to cut its costs.

The graph above clearly states Chevron is managing to preserve its revenues and exceeds industry performance.

Although on 2013 Chevron’s ratio decreased, it still maintained a higher ratio than its competitors.

Exxon demonstrate operating margin that exceeds industry average as well, but falls behind Chevron. It appears that industry suffered similar decrease on 2013 as well however; it is not a substantial one.

BP has the lowest ratio, even lower than industry average. This suggests its ability to cut its cost is lower than its competitors.

3.3.3 Gearing Ratios

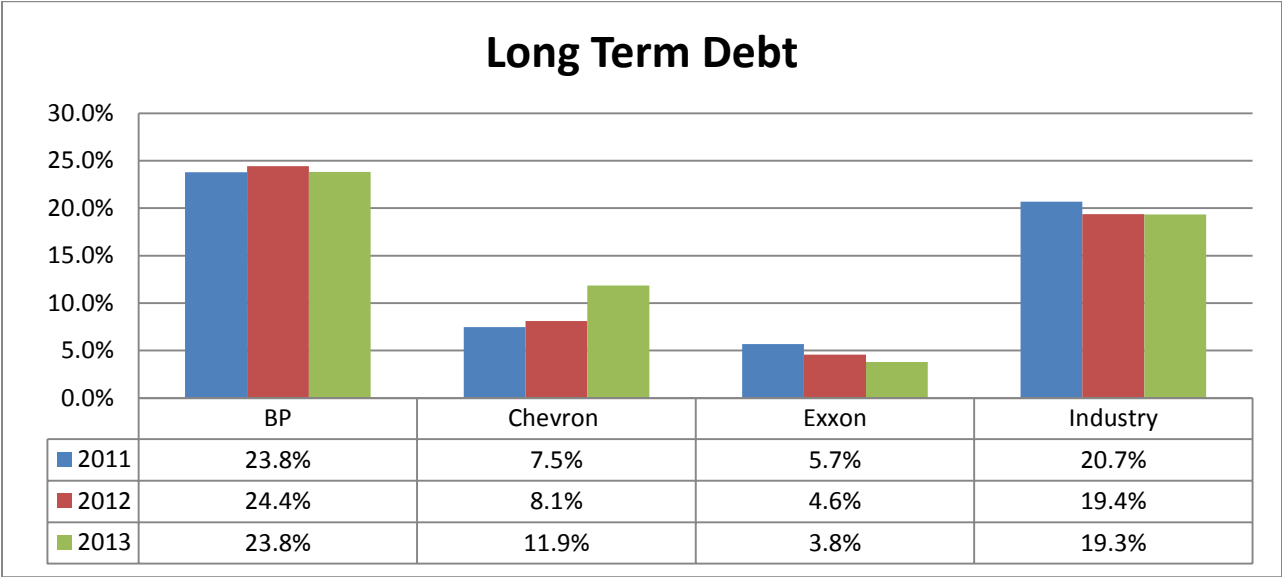


Figure 10. Long Term Debt

Long term debt ratio measures the debt ratio from the whole capital (debt and equity). High ratio suggests the company is high leveraged i.e. its operations are funded mostly by debt. For the investor the meaning of high leverage is that creditors receive more yields and precedent on company’s profits.

In this case, the industry is relatively high leveraged. Exxon has the lowest ratio which indicates that unlike BP and the industry, it succeeds to fund its operations from equity rather than debt. Chevron also does not reach the industry ratio and succeeds to fund its operations from equity rather than debt. BP again does not meet the industry’s performance and is highly leveraged.

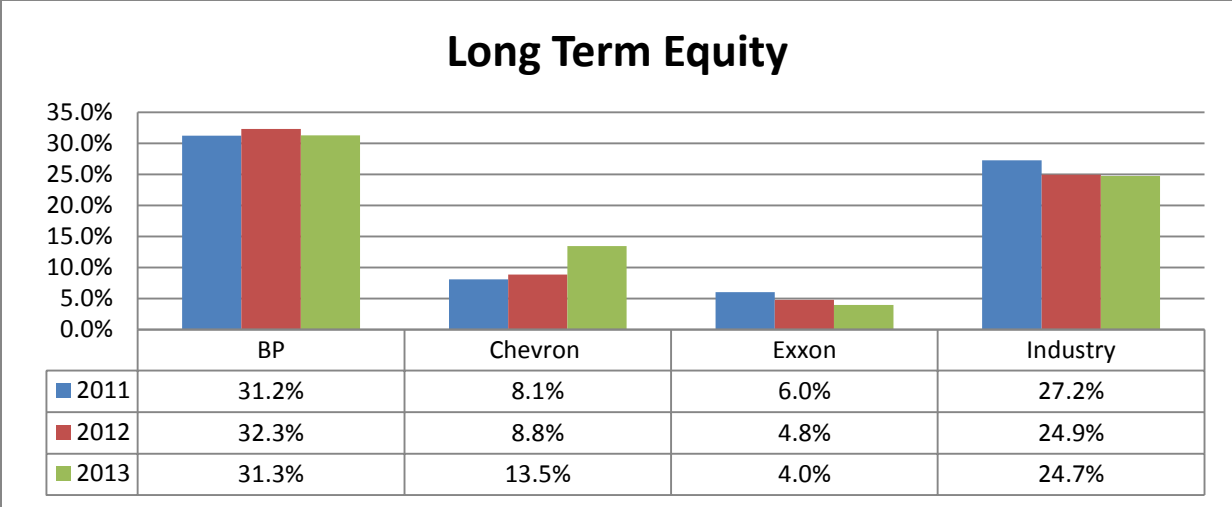


Figure 11. Long Term Equity

Long term debt equity demonstrates the ratio between debt and equity.

Although the ratios are not exactly the same, the results are identical to the long term debt ratio.

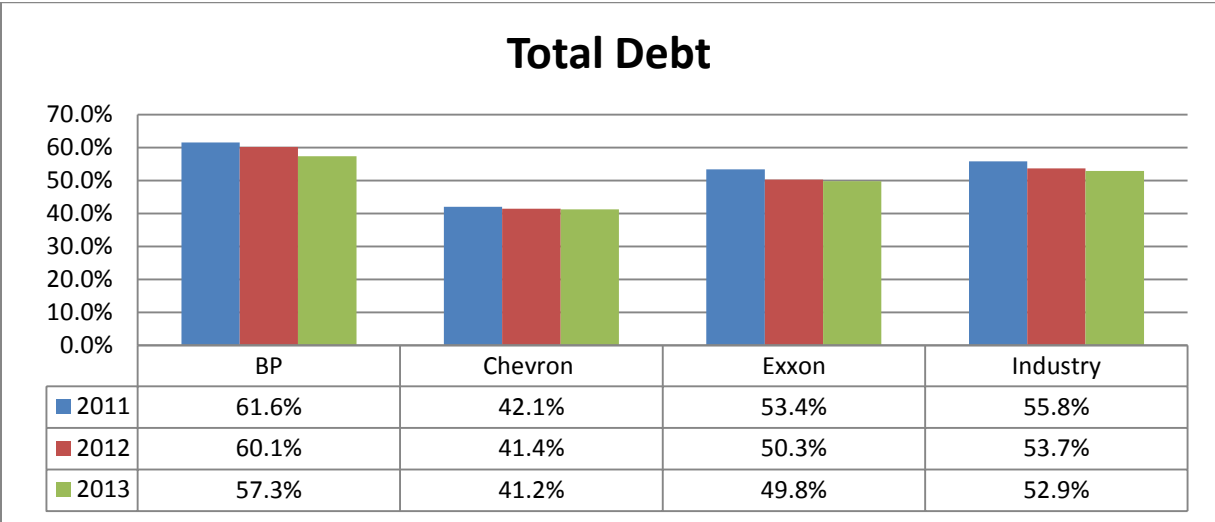


Figure 12. Total Debt

The total debt ratio examines the percentage of debt to the company’s assets.

Higher ratio has higher risk, i.e. the company has more debt to pay.

In this case Chevron is the least leveraged company and exceeds industry performance substantially in the whole time frame. Exxon also exceeds the industry performance but only slightly. BP again does not meet Industry performance is highly geared. All companies, including the industry, show improvement in their leverage ratios in 2011-2013.

3.3.4 Liquidity Ratios

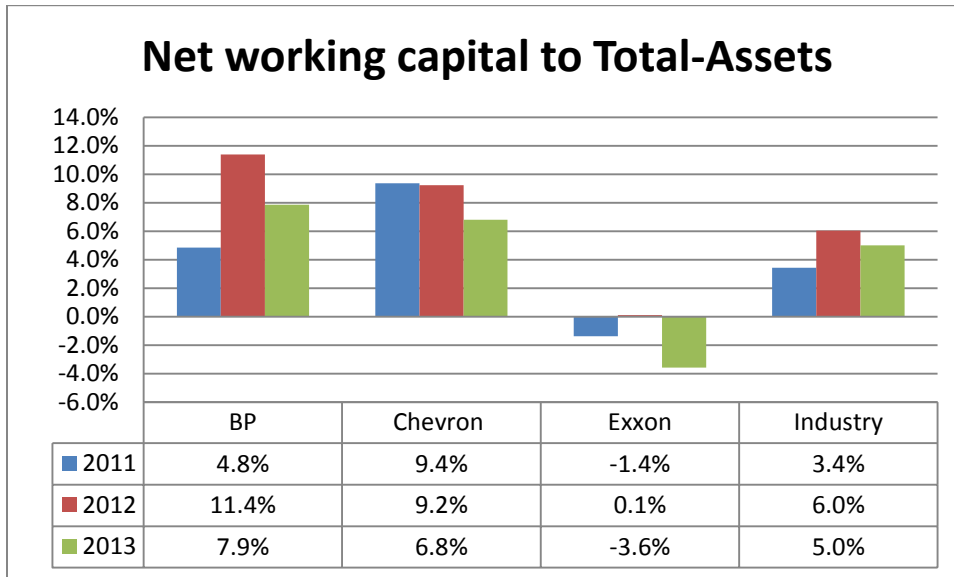


Figure 13. Net working capital to Total Assets

Net working capital to Total Assets measures company's ability to pay its short term debt. High ratio reflects company's ability to pay its current liabilities. In 2011 Chevron had the highest ratio and exceeded industry average however in 2012 and 2013, BP surpassed it and at the moment BP has a greater ability to pay its current liabilities. Exxon falls behind with minus ratio. This means that in 2011 and 2013 Exxon's current liabilities exceeded its current assets. In 2012 it improved yet still did not meet industry's performance and in 2013 its current liabilities surpassed its current assets even more (by percentage). Unlike the other ratios Exxon demonstrated low liquidity ratio which put the company at risk of not paying its debts. BP on the other hand has greater ability to pay its short term debt.

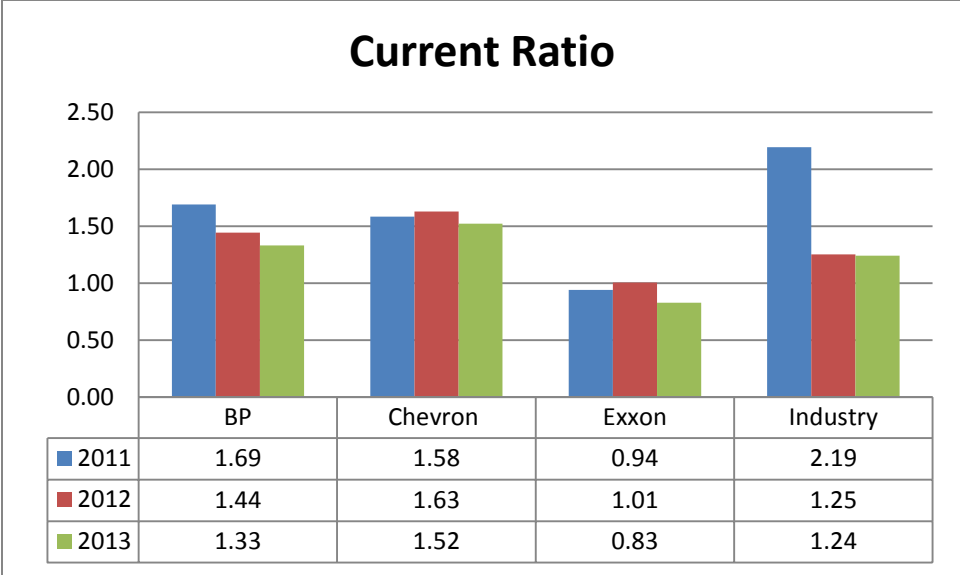


Figure 15. Current Ratio

Current ratio measures the ratio between current assets and current liabilities. If the ratio is lower than 1 it means the company has more liabilities than assets. The higher the ratio the better the company liquidity is.

The results demonstrate again that Exxon’s liquidity is low. It appears it has more liabilities than assets. In 2011 all companies demonstrated lower liquidity ratios than the industry however; in 2012 and 2013 Chevron had the highest liquidity ratios followed by BP. In the last two years BP and Chevron had better liquidity then industry average.

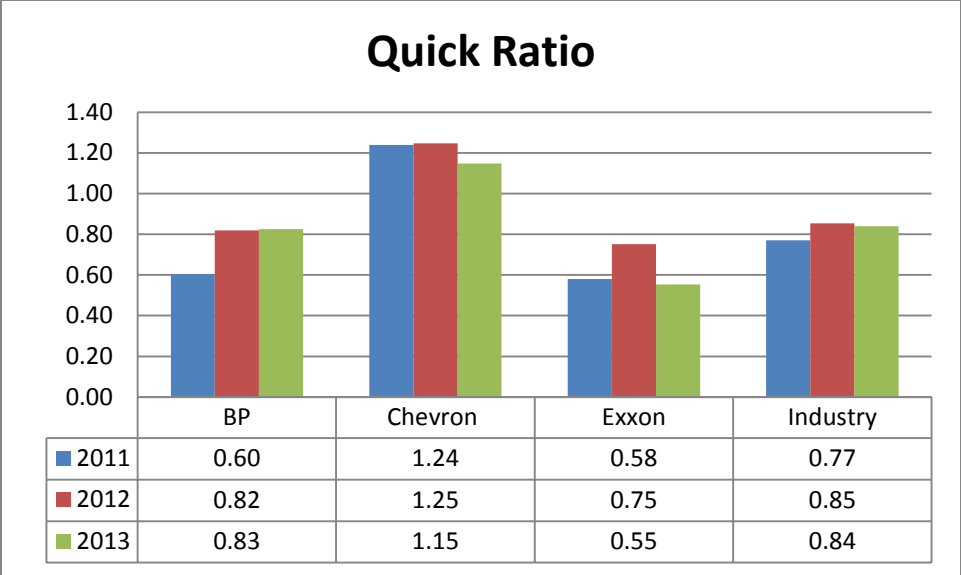


Figure 16. Quick Ratio

Quick (Acid-Test) Ratio is a rigorous measurement that demonstrates whether a company has enough short-term assets (cash and cash equivalents) to cover its immediate liabilities without selling inventory.

Similar to the previous formula, the higher the ratio the better the company liquidity is.

It appears BP, Exxon and the industry does not have enough cash and receivables to cover current liabilities. Nevertheless, Chevron demonstrates its immediate ability to pay its current liabilities and exceeds industry average

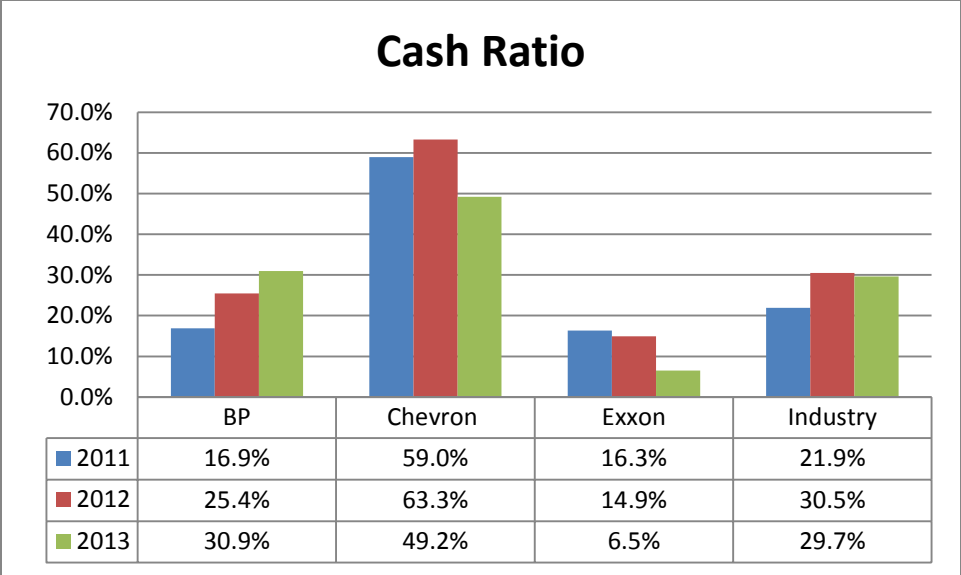


Figure 17. Cash Ratio

Cash ratio is an even more rigorous ratio than quick ratio. It is calculated the same however it leaves out the receivables since it is debt that to be collected.

Although the ratios are not exactly the same, the results are identical to the quick ratio.

Chevron demonstrates ones again it high level of liquidity.

3.3.5 Investor Ratios

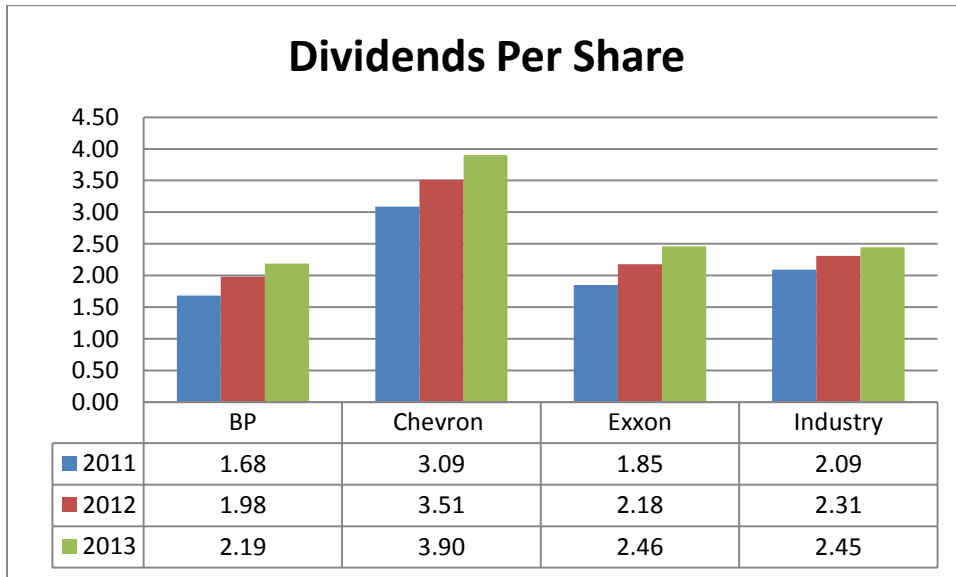


Figure 18. Dividends per Share

Dividend per share is the amount paid in dollars ordinary shareholders.

Chevron pays the highest dividends to investors, during 2011-2013. Moreover, it increased its dividend share over that time frame. Although BP and Exxon's dividends increased during that time as well, they still do not meet industry's average while Chevron exceeds it.

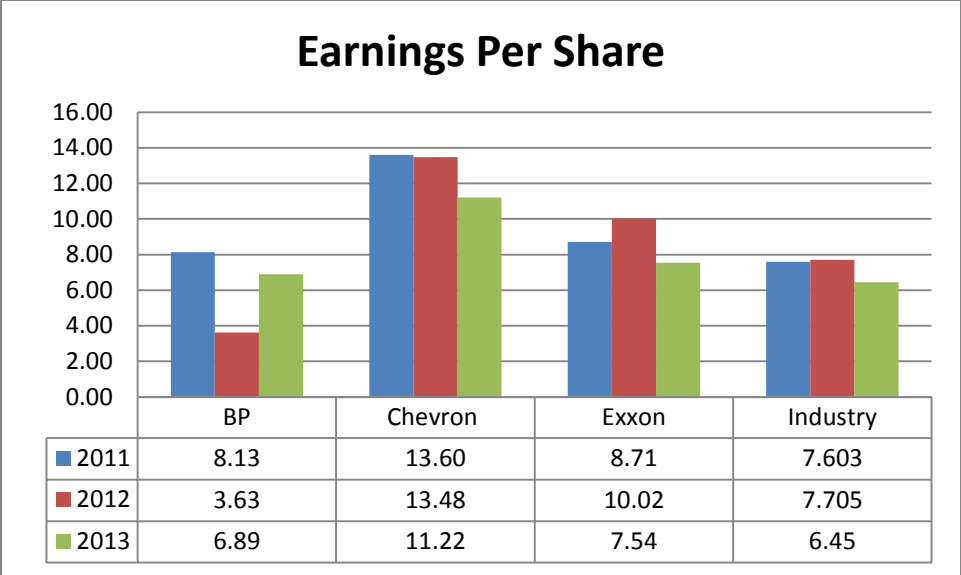


Figure 19. Earnings Per Share

Earnings per share measure the portion of a company's profit allocated to each outstanding share of common stock. High profit share suggests that the share price should be higher. It means that in the long run it will increase earnings per share and stock price increase and as a result - the company value will increase as well.

Chevron ones again, is the leading company, and exceeds industry's average. Nevertheless, its earnings per share decreases which suggest that Chevron might lose some of its value. Even though, it appears that the industry suffered the same decrease in 2013. Exxon exceeds industry average and even increases its earnings per share in 2012 however, it suffer a similar decrease as the industry average, in 2013. BP on the other hand exceeds industry average in 2011 and 2013 however, 2012 it suffered a sharp drop in EPS.

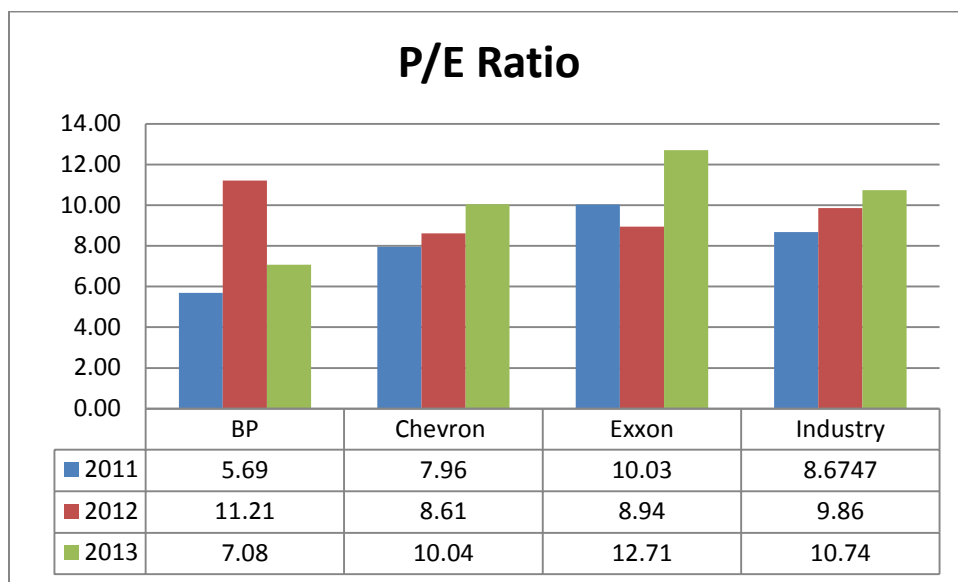


Figure 20. P/E Ratio

The Price Earnings ratio (P/E), measures the ratio between company's market capitalization and its EPS.

High P/E ratio reflects investors' expectations of the future profits will be higher than those presented their latest financial reports, and vice versa.

Therefore, a better performed company has lower ratio. BP has the lowest ratio in 2011 and 2013 however in 2012, it suffers a sharp increase in its P/E ratio that decrease its performance compared to the industry, Chevron and Exxon. Chevron meets industry's performance however suffers the same increase in P/E ratio in 2011-2013. Exxon has the worst performance and does not meet industry's average. Although in 2012 Exxon's P/E ratio decreases, it suffers a major increase in 2013 which means investors' expectations of the future profits are be higher than those presented their latest financial reports

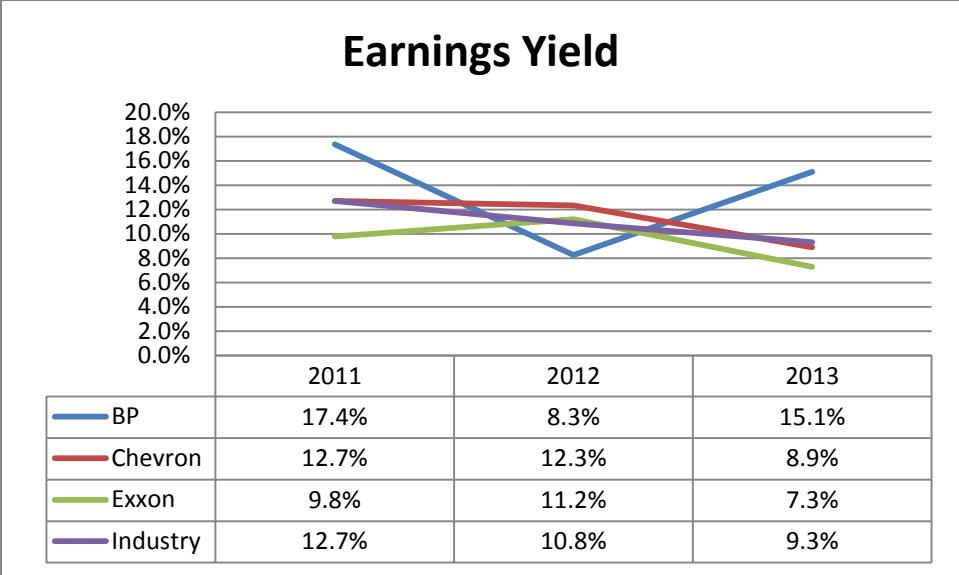


Figure 21. Earnings Yield

Earnings yield is a financial ratio that expresses the ratio between earnings per share and its market price in percent per year.

To establish whether company's Earnings yield is better than its competitors, the investor has to compare it to the market. Exxon's earnings yield is lower than the market average in 2011 and 2013, which means Exxon does not gain enough profit relatively to its stock price. Chevron's Earnings yield meet market average earnings yield in 2011 and 2012 however it earnings drop in 2013. Although it experienced a decrease in its earnings yield Chevron remains relatively close to the industry performance. For BP the situation appears to be similar to its performances in previous ratios. In 2011 it experiences high earnings yield, which exceeds substantially industry's average. This means BP gained enough profits relatively to its stock price and market expectations. As shown in previous ratios BP drops substantially and does not meet markets' expectations while in 2013 it recuperates and has the highest earnings yield relatively to competitors and industry average.

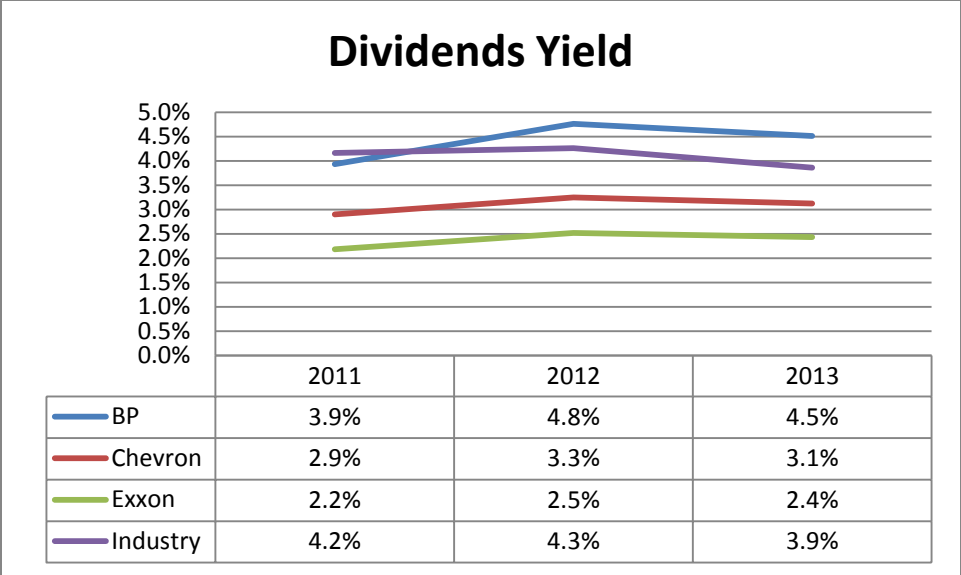


Figure 22. Dividends Yiled

Dividends yield ratio expresses the amount of dividends paid relatively to the market.

It appears BP meets the industry average. Chevron & Exxon on the other hand, did not pay enough dividends to their shareholders. Exxon has the lowest ratio that does not meet industry’s expected dividends payments. BP did not pay enough dividends in 2011 however; it increases its payments in 2012 and 2013.

3.4 WACC & EVA



Figure23. Cost of Capitl

The cost of capital table demonstrates the minimum return a company must gain to meet its stakeholder’s expectations. Higher number in this case, does not represent better performance. It simply means a company has more capital to return. As suggested from the table above all three companies have much more profit to gain than industry average, in order to meet stakeholders’ expectations. All three companies don’t meet industry’s cost of capital and have the highest cost of capital.

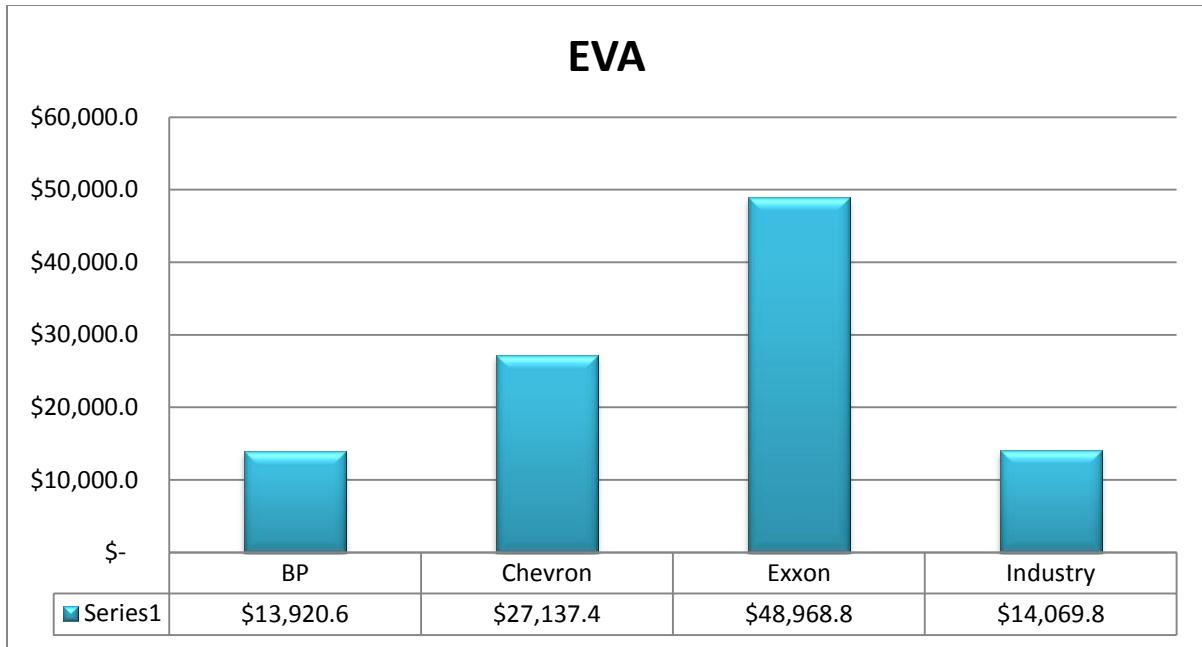


Figure 24. EVA

As mentioned in the literature review, the higher the profit is after taxes, the more economic value increases.

Although in the first graph shows all three companies had higher costs, it doesn't necessarily mean their performance fell short. A more accurate measurement is the EVA which examines the amount of profit after tax, interest and cost of capital. Although some companies have higher profits than others, the true economic value is measured by subtracting all costs, including the ones owed to the investor itself. It appears Exxon has substantially higher economic value than the industry average and its two other competitors. Chevron is above market average as well however, does not meet Exxon performance, and BP falls short and is below industry average. Nevertheless, all companies succeeded to create economic value to their investors.

3.5 Return on investment

One of the key measurements for an investor is an indicator that can demonstrate yield for its investment.

The Return on Investment (ROI) is a simple formula that helps its user to indicate the rate of its return in percentages. This ratio is important especially for an investor who wishes to weight and choose between different kinds of investments. It is not enough to consider the amount of money yielded solely. The ratio shows the investor how well one investment performed vs. another.

The formula is as follows:

$$\text{Return on Investment} = \frac{\text{Gain from Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}$$

The following table exhibits the stock price of the three examined companies; ExxonMobil, BP & Chevron, and the sum of dividend. The time frame is Dec 31st 2011 until Dec 31st 2013 since it correlates with the whole research time frame.

	Exxon	BP	Chevron
Stock purchase price (31.12.11)	\$ 84.76	\$ 42.74	\$ 106.40
Stock selling price (31.12.13)	\$ 101.20	\$ 48.61	\$ 124.91
Dividend sum (per share)	\$ 7.12	\$ 6.4	\$ 12.31
Rate of return	28%	29%	29%

The return rate is similar for BP and Chevron and it exceeds Exxon's return rate. Although it appears that both BP and Chevron has better return rates, Exxon is only slightly behind. Chevron has the highest return since its initial investment is higher than BP and Exxon and has a higher yield as well.

4 Conclusions

To reach a final conclusion, the author needs to examine each measurement separately starting with the financial ratios.

As mentioned in the research there are five key performance indicators the financial ratios examine and each include specific ratios that indicates company's performance, efficiency, liquidity, and market needs.

The performance ratios draw an interesting picture of the company's performance. All three ratios included in the performance ratios suggest Exxon is the best performing company. It gained the highest profit (in percentage) to its stakeholders, highest returns to shareholders and earning from its assets on its capital. Although in all three ratios its performance decreased in 2013, the industry average suggests a similar decrease in 2013 which may not be related to Exxon's performance however, to the industry value. Although Chevron demonstrate higher return than industry average, it appears its performance deteriorates over the time frame and is still falling behind Exxon's performance. Unlike the industry and its two competitors, BP experiences increase in all three ratios in 2013. Nevertheless it does not meet Industry average. Moreover its performance ratios was so low in 2012, it appears it is not increasing its ability to gain revenues but simply recuperates after great losses.

Efficiency ratios determine company's ability to use its assets properly. The efficiency ratios include asset turnover, receivables turnover and profit margin. For this group of ratios the results are not conclusive as the performance ratios results. Similar to previous ratios, Exxon is the leading company. It is most effective in using its assets to generate revenues and has higher abilities to collect its debt and granting credits to the right customers. For the operating profit formula, it surpass industry average and shows high ability to cut its costs however; Chevron surpasses Exxon and maintain more profit of its revenues. Nevertheless, Chevron shows the lowest ability to use its assets and collect its debt. During the time frame Chevron did not meet industry average in asset turnover, and for the receivables turnover it dropped under industry average in 2013. As for BP, it does meet industry average efficiency on asset turnover ratio.

Nevertheless, although BP succeeded to improve in 2013, on its receivables turnover and operating profit margin, it did not meet industry efficiency during the examined time frame.

Gearing ratios indicate the level of company's funding from debt and equity. Higher ratio has higher risk, i.e. the company has more debt to pay. All companies, including the industry, show improvement in their leverage ratios in 2011-2013. Exxon is the leading company and has the lowest gearing ratio. Chevron is also demonstrating relatively low gearing ratio and BP is the most leveraged company and does not meet industry's leverage requirements.

Liquidity ratios show company's ability to pay its short term debt. When the ratio is high the company has more than enough cash to meet its current liabilities. Chevron is the best performing company in terms of liquidity ratios. BP does not fall short and manages as well to be liquid enough to pay its short term liabilities.

Exxon demonstrates poor performance in liquidity. Its current liabilities exceed its current assets. It means that in time of crisis, Exxon will not only be left without cash available after payments, it cannot also meet its current liabilities.

Investor ratios examine expected market returns on the investment. In terms of dividends payment, Chevron has the highest on the industry and its competitors on 2011-2013.

Moreover, Chevron's earning per share exceeds its competitors and industry average. Although it decreases over the time frame, it appears the industry's EPS is also lower each year which may indicate Chevron stock is not less valued, but the market at the moment in whole is less valued.

In terms of P/E ratios, BP is answering its investors' expectations the most. In 2012 Chevron is the leading while in 2011 and 2013 it is second best after BP. Exxon's stock is overvalued in 2011 and 2013 and does not meet its investors' expectations like its competitors.

Chevron Earnings yields is second to BP's earnings yield in 2011 and 2013. Nevertheless, the literature review suggest that a less volatile share is safer and it is easier for the investor to forecast its future fluctuation. Therefore Chevron the best performing earning yield BP exceeds it

in 2011 and 2013 yet it is more volatile and Exxon Does not meet industry performance and demonstrate very low earning yield throughout the time frame.

It appears that BP has the highest dividends yield. Chevron and Exxon fall behind industry average however, Chevron better yields than Exxon.

In terms of financial ratios, Exxon is more profitable and efficient than Chevron However, Exxon's liquidity level are extremely low. Furthermore, Chevron has better investor ratios and is able to please its investors better than Exxon. It is important to emphasis that although the WACC and the financial ratios demonstrate the Exxon is more profitable, Chevrons' performance in profitability and efficiency ratios are above industry average and although it is not as profitable as Exxon it has a good condition relatively to the market. Furthermore Chevron's stock price average in the examined time period is higher than Exxon.

Chevron has the highest return since its initial investment is higher than BP and Exxon and has a higher yield as well.

Therefore in the author opinion, investment in Chevron's stocks in the NYSE is a more profitable investment than its two examined competitors.

5 References

Allen, F., Brealey, R., Myers, S., 2011 Principles of Corporate Finance Tenth edition USA: McGraw Hill.

Bodie, Z., Kane, A., Marcus, A.J., 2009. Investments. Eighth edition. USA: McGraw Hill.

C. Thorngren, 2011 Financial and Managerial accounting. Third edition. USA Pearson.

CNN Money 2011, GLOBAL 500 “Our annual ranking of the world's largest corporations” [online] Available at:
<http://money.cnn.com/magazines/fortune/global500/2011/full_list/index.html > [Accessed 28 April 2014].

CNN Money 2012, GLOBAL 500 “Our annual ranking of the world's largest corporations” [online] Available at:
<http://money.cnn.com/magazines/fortune/global500/2012/full_list/index.html > [Accessed 28 April 2014].

CNN Money 2013, GLOBAL 500 “Our annual ranking of the world's largest corporations” [online] Available at:
<http://money.cnn.com/magazines/fortune/global500/2013/full_list/index.html > [Accessed 28 April 2014].

CNN Money 2011, FORTUNE 500 Our annual ranking of America's largest corporations [online] Available at:
<http://money.cnn.com/magazines/fortune/fortune500/2011/snapshots/2255.html?iid=F500_sp_1_ead > [Accessed 28 April 2014].

CNN Money 2012, FORTUNE 500 Our annual ranking of America's largest corporations [online] Available at:
<http://money.cnn.com/magazines/fortune/fortune500/2012/snapshots/2255.html?iid=F500_sp_1_ead > [Accessed 28 April 2014].

CNN Money 2013, FORTUNE 500 Our annual ranking of America's largest corporations [online] Available at:
<http://money.cnn.com/magazines/fortune/fortune500/2013/snapshots/2255.html?iid=F500_sp_1_ead > [Accessed 28 April 2014].

ExxonMobil, 2014. Financial Statements and Supplemental Information 2013, USA: ExxonMobil Corporation.

ExxonMobil 2014 The Outlook for Energy: A View to 2040 [online] Available at: < <http://cdn.exxonmobil.com/~media/Reports/Outlook%20For%20Energy/2014/2014-Outlook-for-Energy-low-resolution.pdf> > [Accessed 28 April 2014]

Financial Times 2007, The new Seven Sisters: oil and gas giants dwarf western rivals. [online] Available at: < <http://www.ft.com/intl/cms/s/2/471ae1b8-d001-11db-94cb-000b5df10621.html#axzz30MSq4eKa> > [Accessed 28 April 2014]

Forbes 2013, The world's 25 Biggest Oil Companies [online] Available at: < <http://www.forbes.com/pictures/mef45edhmf/9-chevron-3-5-million-barrels-per-day-18/> > [Accessed 28 April 2014]

Helfert, E., 2001. Financial Analysis- Tools & Techniques a Guide for Managers USA: McGraw Hill.

Head, A., Watson, D., 2007 Corporate Finance: Principles & Practice, 4th Edition. USA: Prentice Hall/

Jordan, Ross, Westerfield, 2008 Fundamental of Corporate Finance. 8th ed. USA: McGraw-Hill Irwin.

KPMG Switzerland Cost of Capital Study 2012-2013. [online] Available at: < <http://www.kpmg.com/CH/en/Library/Articles-Publications/Documents/Advisory/pub-20131122-cost-of-capital-study-2013-en.pdf> > [Accessed 26 April 2014]

Leremarck, H., 2003, Steps to Basic Company Financial Analysis. Philadelphia University

London Stock Exchange 2013, Why Invest in Shares . [online] **Available at:** < <http://www.londonstockexchange.com/traders-and-brokers/private-investors/private-investors/about-share/why-invest-shares/why-invest-shares.htm> > [Accessed 26 April 2014]

The Economist 2013, The global oil industry, Supermajordämmerung. [online] Available at: < <http://www.economist.com/news/briefing/21582522-day-huge-integrated-international-oil-company-drawing> > [Accessed 28 April 2014]

World Energy Council 2013, World Energy Resources,[online] Available at: <<http://www.worldenergy.org/work-programme/strategic-insight/survey-of-energy-resources-and-technologies/>> [Accessed 26 April 2014]

6 Bibliography

Allen, F., Brealey, R., Myers, S., 2011 Principles of Corporate Finance Tenth edition USA: McGraw Hill.

Bloomberg 2014, United States Government Bonds [online] Available at:
< <http://www.bloomberg.com/markets/rates-bonds/government-bonds/us/> > [Accessed 28 April 2014].

BP Global 2013. BP at a glance[online] Available at:
< <http://www.bp.com/en/global/corporate/about-bp/bp-at-a-glance.html>> [Accessed 28 April 2014].

BP Global 2014. Annual Report and Form 20-F 2013, UK: BP Global.

Bodie, Z., Kane, A., Marcus, A.J., 2009. Investments. Eighth edition. USA: McGraw Hill.

C. Thorngren, 2011 Financial and Managerial accounting. Third edition. USA Pearson.

CNN Money 2011, GLOBAL 500 “Our annual ranking of the world's largest corporations” [online] Available at:
<http://money.cnn.com/magazines/fortune/global500/2011/full_list/index.html > [Accessed 28 April 2014].

CNN Money 2012, GLOBAL 500 “Our annual ranking of the world's largest corporations” [online] Available at:
<http://money.cnn.com/magazines/fortune/global500/2012/full_list/index.html > [Accessed 28 April 2014].

CNN Money 2013, GLOBAL 500 “Our annual ranking of the world's largest corporations” [online] Available at:
<http://money.cnn.com/magazines/fortune/global500/2013/full_list/index.html > [Accessed 28 April 2014].

CNN Money 2011, FORTUNE 500 Our annual ranking of America's largest corporations [online] Available at:
<http://money.cnn.com/magazines/fortune/fortune500/2011/snapshots/2255.html?iid=F500_sp_1_ead > [Accessed 28 April 2014].

CNN Money 2012, FORTUNE 500 Our annual ranking of America's largest corporations [online] Available at: <http://money.cnn.com/magazines/fortune/fortune500/2012/snapshots/2255.html?iid=F500_sp_1_ead> [Accessed 28 April 2014].

CNN Money 2013, FORTUNE 500 Our annual ranking of America's largest corporations [online] Available at: <http://money.cnn.com/magazines/fortune/fortune500/2013/snapshots/2255.html?iid=F500_sp_1_ead> [Accessed 28 April 2014].

Chevron 2013. Company Profile, Providing Energy for Human Progress [online] Available at: <<http://www.chevron.com/about/leadership/>> [Accessed 28 April 2014]

Chevron 2014. Annual Report 2013. USA: Chevron.

ENI S.P.A 2014, Annual Report On Form 20-F 2013. Italy: ENI S.P.A.

ExxonMobil 2013, Our History [online] Available at: <<http://corporate.exxonmobil.com/en/company/about-us/history/overview>> [Accessed 28 April 2014]

ExxonMobil, 2014. Financial Statements and Supplemental Information 2013, USA: ExxonMobil Corporation.

ExxonMobil 2014 The Outlook for Energy: A View to 2040 [online] Available at: <<http://cdn.exxonmobil.com/~media/Reports/Outlook%20For%20Energy/2014/2014-Outlook-for-Energy-low-resolution.pdf>> [Accessed 28 April 2014]

Financial Times 2007, The new Seven Sisters: oil and gas giants dwarf western rivals. [online] Available at: <<http://www.ft.com/intl/cms/s/2/471ae1b8-d001-11db-94cb-000b5df10621.html#axzz30MSq4eKa>> [Accessed 28 April 2014]

Forbes 2013, The world's 25 Biggest Oil Companies [online] Available at: <<http://www.forbes.com/pictures/mef45edhmf/9-chevron-3-5-million-barrels-per-day-18/>> [Accessed 28 April 2014]

Helfert, E., 2001. Financial Analysis- Tools & Techniques a Guide for Managers USA: McGraw Hill.

Head, A., Watson, D., 2007 Corporate Finance: Principles & Practice, 4th Edition. USA: Prentice Hall/

Hess corporation 2014, Annual reports 2013, USA: Hess corporation.

Jordan, Ross, Westerfield, 2008 Fundamental of Corporate Finance. 8th ed. USA: McGraw-Hill Irwin.

KPMG Switzerland Cost of Capital Study 2012-2013. [online] Available at:

< <http://www.kpmg.com/CH/en/Library/Articles-Publications/Documents/Advisory/pub-20131122-cost-of-capital-study-2013-en.pdf>> [Accessed 26 April 2014]

Lermarck, H., 2003, Steps to Basic Company Financial Analysis. Philadelphia University

London Stock Exchange 2013, Why Invest in Shares . **[online] Available at:**

< <http://www.londonstockexchange.com/traders-and-brokers/private-investors/private-investors/about-share/why-invest-shares/why-invest-shares.htm> > [Accessed 26 April 2014]

Marathon Oil Corporation 2014, Annual report on form 10-K 2013, USA: Marathon Oil Corporation.

New York Stock Exchange 2014, Listings Directory. [online] Available at:

<http://www.nyse.com/about/listed/lc_ny_industry_1.html?ListedComp=All&supersector=11§or=101&subsector=1120128534121&start=1&startlist=1&item=1&firsttime=done > [Accessed 28 April 2014]

PetroChina Company Limited 2014, Announcement of annual results 2013, China:

PetroChina Company Limited.

Shell Global 2014, Annual report on form 20-F 2013, The Netherlands: Shell Global.

Selezneva, A., 2012. Investing in the orthopedic implant industry BA. Arcada University of Applied Science.

Staats, W. 2002. Bank Director's Guide to Controlling Credit Risk. Graduate School of Banking at LSU.

Statoil 2014, Annual report on form 20-F 2013, Norway: Statoil.

The Economist 2013, The global oil industry, Supermajordämmerung. [online] Available at: < <http://www.economist.com/news/briefing/21582522-day-huge-integrated-international-oil-company-drawing> > [Accessed 28 April 2014]

Total S.A. 2014 Report of Independent Registered Public Accounting Firms Consolidated Financial Statements 2013 France: KPMG Audit.

U.S. Department of State Office of the historian 2013, MILESTONES: 1969–1976 Oil Embargo, 1973–1974,[online] Available at: < <http://history.state.gov/milestones/1969-1976/oil-embargo> > [Accessed 28 April 2014]

World Energy Council 2013, World Energy Resources,[online] Available at: < <http://www.worldenergy.org/work-programme/strategic-insight/survey-of-energy-resources-and-technologies/> > [Accessed 26 April 2014]