Valuation of Siem Offshore Inc.

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Master Thesis

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SIEM OFFSHORE

Copenhagen Business School
HANDELSHØJSKOLEN

Executive Summary

Oil Service/Offshore supply

14. May 2013

Siem Offshore Inc.

HOLD

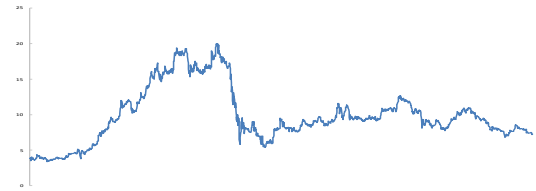
Shareprice 16.04.2013: NOK 7.3

Target price: NOK 7.6

Key data

Risk	High
Implied credit rating	B
Reuters ticker	SIOFF.OL
Bloomberg Ticker	SIOFF:NO
Market cap Usd	495m
Market cap NOK	2845m
NIBD, USD	672m
Enterprice Value, USD	1167m
Shares fully diliuted	390m
Average daily turnover NOK	0.5-1m

Shareprice performance 2005 - 2013



	-3mnd	-6mnd	-9mnd
Return	-14.4%	-7.7%	-23.3%
Price high	8.5	8.6	9.5
Price low	7.2	6.8	7.0

ROCE 2012E	0.8%
ROIC 2012E	0.7%
EBITDA-Margin 2012E	30%
EBIT-Margin 2012E	5%
WACC	10.1%

Not the preferred exposure given our market outlook

Siem Offshore Inc. is a strong Norwegian Offshore Supply player with operations in Brazil, West Africa, Gulf of Mexico and the North Sea. The company provides exposure towards the high-end AHTS, PSV and OSCV/MRSV segment with a total fleet of 33 vessels and ten newbuildings.

The major driver for SIOFFs revenues is the global offshore E&P spending. Petroleum companies investments is driven by the level of the oil price, and demand for OSVs is positively affected by the number of offshore rigs, platforms and subsea wells. Since the financial crises demand has picked up, but the market continues to be dominated by oversupply.

In 2013 global E&P spending is set to increase by 13%, with a high number of rig deliveries. Offshore activity in deepwater areas is the main contributor to this growth, as these operations are complex, driving vessel demand. Brazil and West Africa stands out as the regions with the highest expected growth, and SIOFF provides exposure towards both these markets. Petroleum companies prefer flexibility and quality of operations, and we therefore see a premium of dayrates and utilization going forward. On the other hand we see a strong supply growth, which will limit the upside potential of dayrates. The AHTS and OSCV/MRSV segment is best positioned as there are entry barriers limiting supply growth. However this is not the case for the PSV segment, and SIOFFs fleet of PSVs will experience limited earning growth.

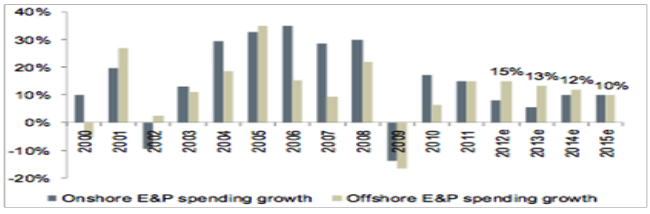
SIOFFs financial risk is modest as the balance sheet remains helalthy. Cash reserves is above USD 100m and only Farstad Shipping has a lower financial gearing.

Based on our estimated value we see the company as fairly priced, providing a limited upside potential. This is supported by the relative valuation, where SIOFF looks somewhat expensive based on 2013 multiples.

Key figures USD`000	2008H	2009H	2010H	2011H	2012H	2013E	2014E	2015E	2016E
Sales	194,262	184,955	230,326	322,014	309,606	326,166	452,546	556,649	609,732
EBITDA	81,216	60,378	82,947	114,286	94,100	113,059	171,257	237,869	269,176
NOPAT	41,213	23,603	22,234	4,799	11,445	40,816	82,366	128,879	156,645
EPS recuring	-0.07	0.26	0.03	-0.02	0.04	0.00	0.06	0.16	0.23
Sales growth	21%	-5%	25%	40%	-4%	5%	39%	23%	10%
EBITDA growth	0%	-26%	37%	38%	-18%	20%	51%	39%	13%
EBITDA-margin	42%	33%	36%	35%	30%	35%	38%	43%	44%

	EV/Sales		EV/EBITDA		EV/EBIT		P/B	
Multiples	**2013**	**2014**	**2013**	**2014**	**2013**	**2014**	**2013**	**2014**
Siem Offshore Inc.	3.6	2.6	10.4	6.8	24.7	12.2	0.66	0.57
Harmonic Average peers	3.3	3.1	8.1	7.3	11.9	10.0	0.52	0.47

Figure 3.3 E&P spending growth (Y/Y %)



Source: ABG Sundal Collier 2013

Estimates from Investment banks

Arcitc Securities	13
SEB Enskilda	9.5
Fondsfinans	12.5
Pareto Securities	12
Average	11.8
Stock price pr. 14.05.2013	7.87

Analyst
Henrik Eide Arnesen and Eivind Kjær Thorsen

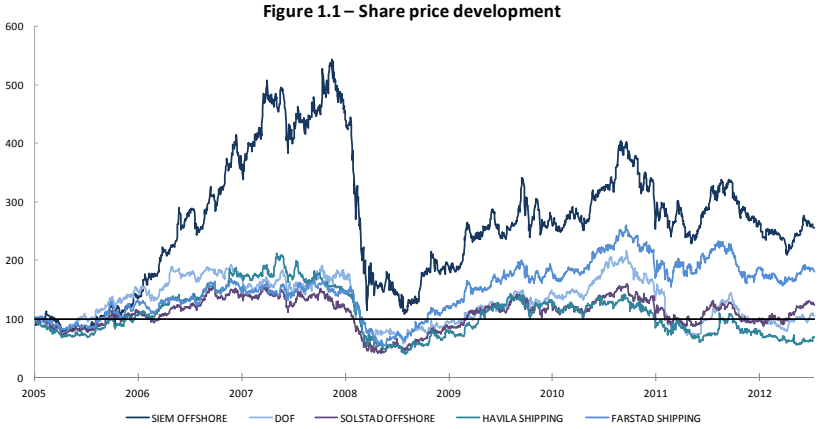
1.0 Introduction / Motivation

The subject of our thesis is a valuation of the Norwegian offshore supply company *Siem Offshore AS* (SIOFF). Our motivation for writing this thesis is based on numerous factors.

The *Offshore Supply Vessel* (OSV) industry is a highly complex and cyclical business. Dayrates, which is the main driver of revenue, has fluctuated between NOK ~80.000 and ~1.500.000 during the last 10 years. The industry is closely tied to petroleum companies offshore spending, which is affected by the global economic conditions. Compared to the traditional shipping segments, the OSV industry is providing a more diversified set of services. As the industry is scattered across all geographical areas, it is necessary to analyze the different macro factors in depth. The balance between supply and demand is constantly changing, and the supply factor is driven by vessel owner`s eager to obtain abnormal profits. It is therefore exciting to see how different decision makers operate.

The industry is characterized by many participants across the world, and traditionally, Norwegian companies have had a strong market position. Through yards, subcontractors, vessel owners, and investment banks, this industry is of great importance for the Norwegian GDP. Today, the industry is perhaps more important than ever, and Norwegian yards are characterized as market leaders in construction of high-end vessels.

Figure 1.1 – Share price development



Source: Compiled by authors / Oslo Børs

Among the listed OSV companies at Oslo Stock Exchange, we consider SIOFF to be the most interesting company to analyze. SIOFF is the youngest company, as it were spun off from Subsea 7 in 2005. Since then, SIOFF has grown significantly and today has a diverse fleet of vessels. From the IPO and until June 2008, the shareprice increased by more than 440%, before it dropped ~70% during the following nine months. This development is extreme compared to other listed companies, as can be seen from figure 1.1. Since the IPO, SIOFF can be described as a growth company with significant earning- and asset growth. Growth companies tend to underperform value companies, and SIOFF has certainly not been able to create satisfying shareholder returns. In 2014 the newbuilding program will be concluded and it will therefore be exciting to see how this will affect the future value of the company.

1.1 Problem statement

The purpose of the thesis is to determine the intrinsic value of Siem Offshore Inc. (SIOFF) by applying different valuation techniques. Our findings will be summarized in a recommendation to potential investors. We have formulated the following problem statement:

What is the intrinsic equity value for a marginal investor in Siem Offshore Inc. as of 16.04.2013, compared to the market capitalization at Oslo Stock Exchange?

Sub questions

In order to answer the statement we will categorize the thesis in different sub-sections. We will conduct different analysis in each section, by answering a series of sub-question. Our findings will be summarized in partial conclusions. These partial conclusions will be combined into a final conclusion at the end of the thesis, which answers the overall problem statement

Introduction to Siem Offshore Inc. and the OSV industry

A thoroughly understanding of the business is necessary, in order to conduct a successful valuation. It is important to understand the value chain of the petroleum industry, business sector, customers, suppliers and the service they provide. This will be important input in all the analysis and help us identify the right value drivers. In this part of the thesis we will answer the following questions:

- What are the main characteristics of SIOFF strategy and the business concept?
- What characterize the OSV market and the clients, and how has the industry developed?
- Who are the main competitors/comparable firms?

Strategic analysis of the OSV market and the company

This part of the thesis serves as an analysis of the non-financial drivers that affect SIOFF. We will analyze how the business environment and market cycles affect the company´s value creation. The internal factors will explain how SIOFF exploits market opportunities and adjust to changing market conditions. The analysis will first look at the macro perspective and the supply/demand balance in relation to the industry structure. In the internal analysis we will look at the value chain and the company´s resources.

- How is the dayrate mechanism determined by the supply/demand relation?
- How does the industry structure affect the future earnings prospects?
- Does SIOFF hold a competitive advantage?

Financial analysis

The purpose of the financial analysis is to uncover SIOFFs historical performance, and break down all the components for further analysis. Future performance is not necessarily equal to historical results, but the latter can be used as a reference and indicator to the forecasting. In order to get a clear picture of SIOFFs performance we will benchmark the results to a chosen group of peers.

- How has SIOFF performed financially through the last five years and compared to peers?
- How has SIOFF and peers been affected by the latest downturn in the industry?
- How has the growth rate affected the company´s OPEX?
- What are the prospects for the future financial performance?

Forecasting

In the forecasting the findings from the strategic and financial analysis are tied together to form realistic projections for the future. Since the valuation model will be based on future cash flow, accuracy and analytical knowledge will be key components in the forecasting.

- How will SIOFFs key value drivers be affected by the expected market outlook?
- How will the spot market for the different segments develop in the future?
- What is the future CAPEX need, and when is the company likely to reach state of steady growth?

Valuation

There are many different valuation models to choose from, which rely on different set of assumptions. By using more than one model we will be able to triangulate the result. A common feature of the present value models is the need of a risk adjusted discount rate. To estimate the equity value, we will use the following sub questions as a basis:

- What is the proper discount rate for a marginal investor in SIOFF?
- What is the forecasted cash flow from operation?
- How is SIOFF price relative to peers?
- How sensitive is the estimate to changes in general and company specific parameters?

1.2 Models and data collection

1.2.1 Data collection

This thesis is written from an independent analyst's point of view, and we have only used publicly available information. As we will apply both financial and strategic analysis, the data input consists of both quantitative and qualitative aspects. Our sources of date are annual reports, market data and research from investment banks. In addition, we will apply different theories from academic books, financial literature, and articles. We have also conducted phone interviews with shipbrokers, analysts, and industry specialists. Combining all of these resources, we are confident that we have a sufficient foundation to estimate a fair value of Siem Offshore.

1.2.2 Supply/Demand – The shipping market model

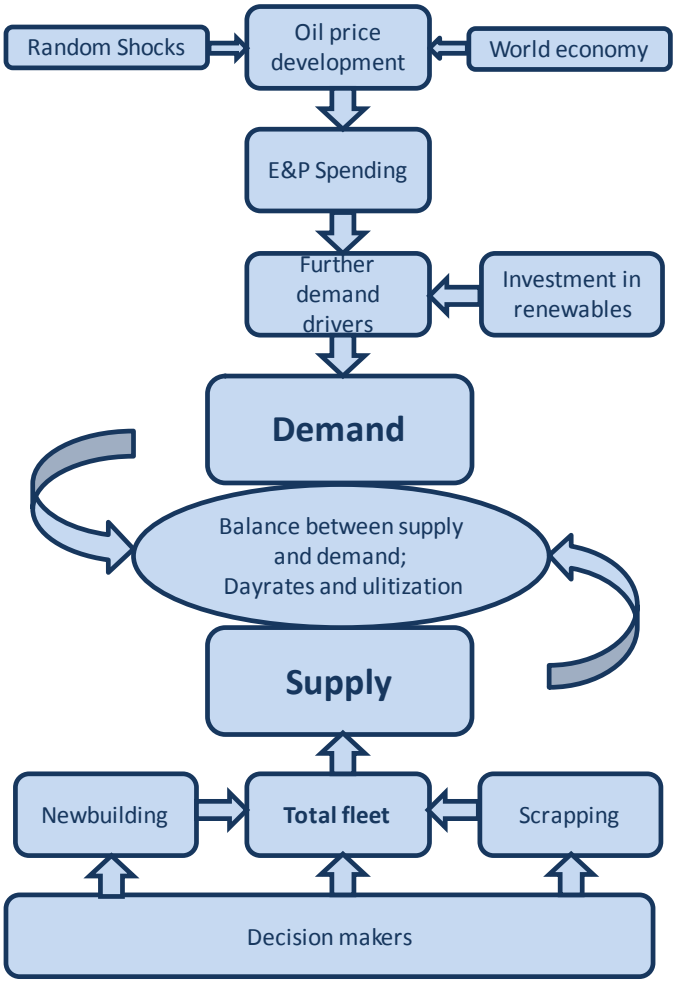
To analyze the macroeconomic environment of the company there are various strategic models to choose from. It is important that the choice of model is applicable for the industry that is analyzed.

In a commodity industry, the relation between demand and supply is the key factor determining prices. As the OSV industry is a global business with mobile assets and a high number of competitors it can be viewed as a "commoditized industry´". Together with utilization, dayrates is the key factor affecting revenue, and the mechanism determining rates must therefore be thoroughly analyzed.

We have chosen "The shipping market model" developed by Martin Stopford in 1997. The purpose of the model is to identify the main market drivers that affect the OSV market, and how these influence the level of dayrates.

The model is intended for analysis of the traditional shipping markets (bulk, tank, and container).

Figure 1.2 The shipping market model



Source: compiled by authors / Stopford

As the OSV market is a specialized shipping segment, the model need adjustments in order to be applicable. We have therefore used the original model as a guideline and replaced those factors not suitable for the OSV market.[1]

By using this model we will detect and analyze the supply and demand factors affecting the OSV industry, and thus SIOFFs revenues and risk.[2] The model therefore separates the market in three components; demand, supply and the balance between these two. This is a fundamental approach, and the aim of the analysis is to explain the mechanisms which determine dayrates in a consistent way.[3] This will be essential input to the forecasting in part 6.

The shipping market model will cover all the relevant factors that could have been analyzed separately through a PEST(EL) model, but is more tailored for the OSV industry. In the same manner as the PEST(EL) the shipping market model is a strategic tool for understanding the market´s outlook and the potential and direction for future operations. This is based on both a theoretical and practical assessment.[4]

Demand: The demand for OSV vessels is a function of the offshore activity. This will be analyzed through a top-down approach where we first look at the oil price and those factors affecting the price development. Then we will examine how this affects the exploration and production (E&P) spending among the petroleum companies. We will also look at other demand factors, and as a partial conclusion we will narrow down to general demand for the OSV industry.

Supply: The supply of vessels is determined by a few decision makers, and we will analyze how they influence the market. We will look at the existing supply and estimated supply (current orderbook). We will also analyze the global fleet age and the importance of scrapping. The findings will be summarized in a partial conclusion, where we estimate the future supply of vessels in each segment.

The balance between supply and demand will be analyzed at the end of the model, summarizing the findings from section 1 and 2. This balance works as a dayrate mechanism and utilization will be determined separately. The results from the model will be important input to the forecasting of dayrates and OPEX.

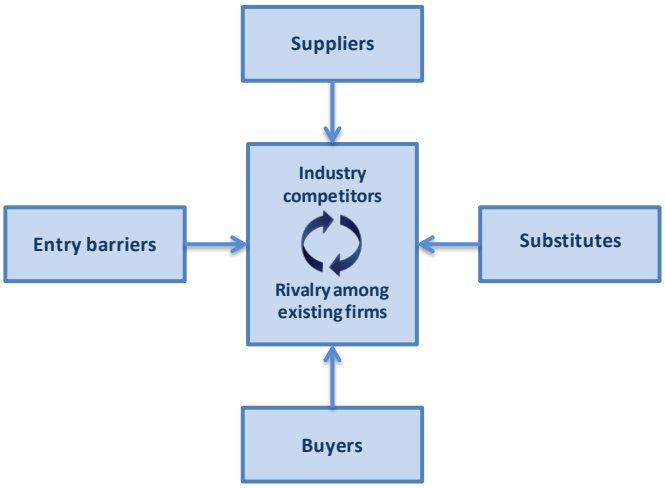
[1] Eg. Seaborne commodity trades and Average haul is not relevant for the OSV market
[2] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 187
[3] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg.136
[4] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg.136

1.2.3 Industry analysis: Porters Five Forces of Competition Framework

In a strategic analysis it is important to understand the industry structure and how this drives competition. The competitiveness of an industry will affect the profitability and thus the attractiveness. The profitability is measured as the rate of return on capital relative to capital cost.

In an industry there are many variables influencing competition and profitability, and we find the Porters five forces framework in figure 1.3 as the best suitable model.[5] Through this approach we will be able to cover the most important aspects of the industry. These five forces of competition include three sources of *horizontal* competition: competition from substitutes, competition from entrants, and competition from established rivals. There are two sources of *vertical* competition: the power of suppliers and power of buyers.

Figure 1.3 – Porters five forces



Source: Compiled by authors / Grant

Once we have this understanding the results of the analysis can be applied; first to forecast future industry profitability, and secondly to position the firm in relation to the competitive forces.[6]

1.2.4 Internal analysis: VRIO

There are two major sources of superior profitability: industry attractiveness and competitive advantage.[7] The former is unlikely to be sustainable and it is therefore important to understand the potential for competitive advantage.

The competitive advantage is a result of a company´s internal resources and capabilities. We find the resource-based VRIO model as the best model suited to analyze these factors of the company. To identify the factors we will analyze the value chain of the company and classify these in four broad categories: Financial resources, Physical resources, Individual Resources, and Organizational resources.[8]

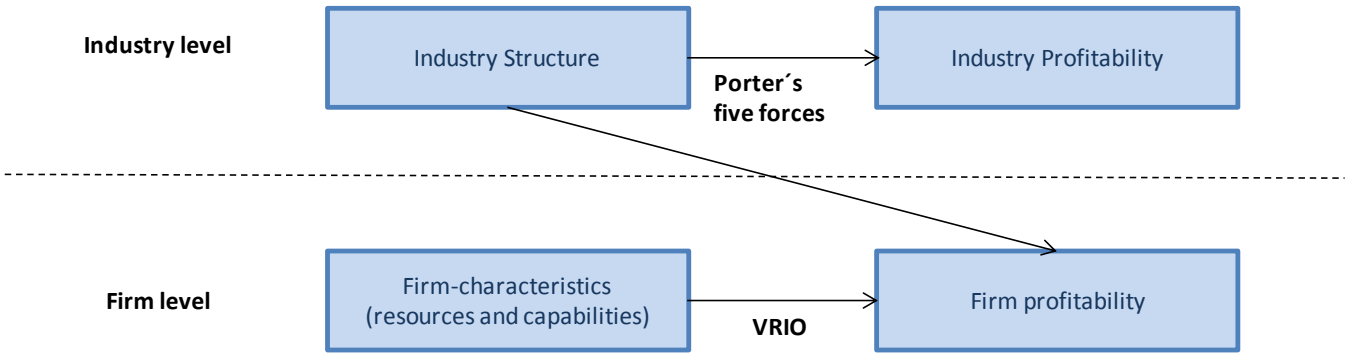
[5] Grant, R. M (2010). *Contemporary Strategic Analysis*. 7th edition. pg. 69.
[6] Grant, R. M (2010). *Contemporary Strategic Analysis*. 7th edition. pg. 78.
[7] Grant, R. M (2010). *Contemporary Strategic Analysis*. 7th edition. pg. 124
[8] Barney, Jay B. And Hesterly, William S. (2012). *Strategic Management and Competetive advantage.* 4th ed. pg. 66

The VRIO model is a mechanism that integrates two existing theoretical frameworks: the positioning perspective and the resource-based view. VRIO is the primary tool to perform an internal analysis.[9] We will analyze each resource and capability by answering the following four questions to each factor.[10]

- *The question of **V**alue:* Does a resource enable a firm to exploit an environmental opportunity and/or neutralize an environmental threat?
- *The question of **R**arity:* Is a resource currently controlled by only a small number of competing firms?
- *The question of **I**mitability:* Do firms without a resource face a cost disadvantage in obtaining or developing it?
- The question of ***O**rganization:* Are a firm´s other policies and procedures organized to support the production of its valuable, rare, and costly-to-imitate resources?

We apply this framework to understand SIOFFs internal strength, and combine these findings with the result from Porters framework applied on the industry.

Figure 1.4 – Industry and internal analysis structure



Source: Compiled by authors

An alternative approach could have been to use a logistic model to analyze the value chain. As previously described SIOFF operates in a specialized segment where the logistic function is less important compared to conventional shipping. The main logistic function in SIOFF is fleet composition and allocation, which is best analyzed through the VRIO approach.

[9] Barney, Jay B. And Hesterly, William S. (2012). *Strategic Management and Competetive advantage.* 4th ed. pg. 68
[10] Barney, Jay B. And Hesterly, William S. (2012). *Strategic Management and Competetive advantage.* 4th ed. pg. 70

1.2.5 SWOT

SWOT is a framework to understand the internal and external factor influencing SIOFF. The matrix evaluates the Strength, Weaknesses, Opportunities, and Threats affecting the company. In our thesis we will use the matrix as a partial conclusion based on our findings in the strategic and financial analysis.

Regression analysis – SAS Enterprise Guide

We have applied a regression analysis to predict future dayrates for the AHTS segment. Based on historical time series of different explanatory variables, we will run multiple regressions to obtain a linear relationship with our dependent variable (AHTS dayrates). Description of the model can be seen in appendix 6.1.

Approaches to Valuation

There are numerous approaches to estimate the value of a company. As each approach have different strengths, weaknesses and limitations, it is necessary to choose a valuation method best suitable for our company.

The choice of model must be based on the inputs available and whether the company is valued as a going concern. The time available for the analyst will also affect the choice of model, as some models are more time demanding than others.

The two most common valuation approaches are present value and relative valuation.[11] Present value approaches require a high number of inputs and are considered more labor intensive. As SIOFF is a publicly listed company, there is plenty of information readily available. We have therefore chosen the Discounted Cash Flow (DCF) and Economic Value Added (EVA) model, supplemented by a relative valuation to triangulate results. Both the DCF and EVA model relies on the same input, and will yield the same present value. However the two models provide different information for how value is created for shareholders.

1.2.6 Discounted Cash Flow Model

Discounted cash flow analysis is the most accurate and flexible method for valuing projects, divisions, and companies.[12] The Discounted cash flow model can be conducted in two ways; either estimate the enterprise value of a company or estimate the equity value of a company. We have chosen the former. The result from the DCF model will be the first step in estimating the intrinsic value of SIOFF.

[11] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 210.
[12] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 303

The value is determined by a forecast of free cash flow to firm (FCFF) in the forecast horizon and terminal period, which again is discounted by the weighted average cost of capital (WACC). FCFF is calculated by using the following formula.[13]

$$FCFF = NOPAT + depreciation \pm \Delta NWC \pm \Delta non\ current\ liabilities \pm \Delta CAPEX$$

Change in non-current liabilities is not considered to be part of NWC or CAPEX, and therefore included as a separate element. With the estimated FCFF and WACC, we can use the following formula as a two-stage model to forecast enterprise value:[14]

$$Enterprise\ value_0 = \sum_{t=1}^{n} \frac{\mathrm{FCFF_t}}{(1+\mathrm{WACC})^{\mathrm{t}}} + \frac{\mathrm{FCFF_{n+1}}}{(\mathrm{WACC}-\mathrm{g})} \times \frac{1}{(1+\mathrm{WACC})^{\mathrm{n}}}$$

In order to obtain the estimated market value of equity, we simply deduct the market value of net interesting bearing debt and the value of minority interests, from our estimated enterprise value.[15]

1.2.7 Economic Value Added

According to the EVA model the value of a company is determined by the initial invested capital plus the present value of all future EVAs. The model use the invested capital in the beginning of the period as a starting point for valuation, and then adds the present value of all future EVAs, which yields the enterprise value of a company. The EVA is calculated as follows:

$$EVA_t = NOPAT_t - WACC \times invested\ capital_{t-1}$$

We can specify the EVA model in a two-stage formula and calculate the enterprise value of a company.[16]

$$Enterprise\ value_0 = Invested\ capital_0 + \sum_{t=1}^{n} \frac{EVA_t}{(1+WACC)^t} + \frac{EVA_{n+1}}{(WACC-g)} \times \frac{1}{(1+WACC)^n}$$

As with the DCF model, we simply deduct market value of net interesting bearing debt and the value of minority interests.[17]

[13] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 180
[14] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 216
[15] Plenborg & Petersen (2012) – Financial Statement Analysis pg.217
[16] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 220
[17] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 217

1.2.8 Relative Valuation

Both the DCF and EVA model, however, is only as accurate as the forecasts it relies on. Therefore we have chosen to perform a relative valuation by using several multiples. By applying this valuation we will test the plausibility of cash flow forecast and look at how the market prices future sales, revenue and book value of assets relative to peers. A multiple analysis can yield information for how attractive a company is priced compared to peers. If a company have a multiple higher than that of peers, it might indicate a higher pricing with less upside potential. But I can also be a sign of superior market outlook and business prospects. Through this analysis we will gain input to the discussion of whether SIOFF is a good investment opportunity.

McKinsey mention three requirements in order to carry out a useful analysis of comparable companies.[18]

1. Use the right multiples
2. Calculate the multiple in a consistent manner
3. Use the right peer group

With regard to the first requirement, there are numerous multiples to choose among. We will present our choice of multiples in part 8 section 8.3. We have only used forward looking multiples based on current market values, as there are limited transactions and thus none transaction multiples available.

Multiples for the peer group are obtained from Bloomberg, and are based on an average revenue forecasts from 4-8 investment banks. We will also compare our estimated multiples for SIOFF with market consensus from Bloomberg. This will provide us with information for the quality of our forecast.

A valuation based on multiples critically relies on the assumption that we find comparable companies with similar economical characteristic and outlook. A complete overview of the peer group can be seen in appendix 1.2, with an introduction at page 28.

[18] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 304

1.2.9 Sensitivity analysis

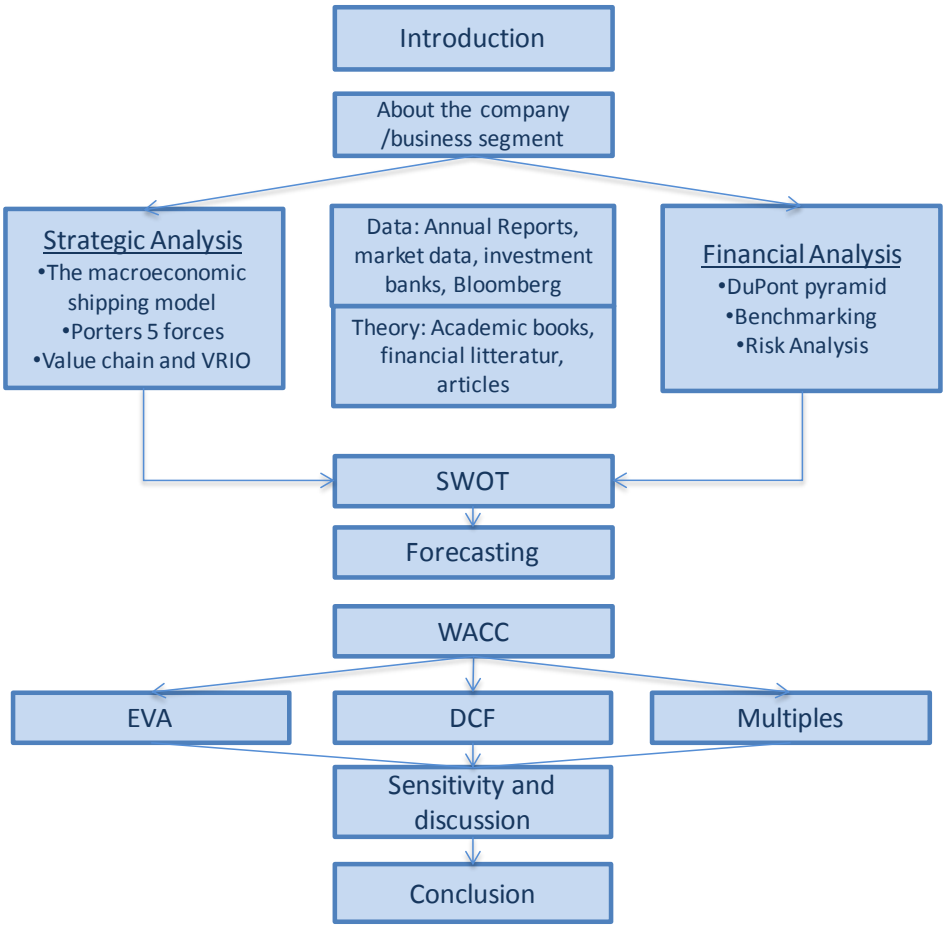
The output from DCF and EVA model is based on subjective assumptions, and the estimate can therefore be biased by analysts' opinion. Some assumptions are more critical than others, and it is important for the investor to understand how changes in the underlying figure might impact the value of the company.

We have therefore constructed several sensitivity analysis to discuss the most critical assumptions. This process will illustrate the potential up- or downside as a result of changing market conditions or internal factors.

1.2.10 Research Structure

On the basis of the models presented we will structure our thesis in six different sections. Under each section, we will analyze different aspects in depth, and link our findings with the other sections. By applying this structure, we will obtain a high degree of consistency.

Figure 1.5 – Research structure



Source: Compiled by authors

1.3 Delimitation

- As SIOFF is a publicly listed company, we have only used publicly available information.
- Our benchmark for SIOFFs shareprice is set to 16th of April 2013, as this is the date the annual report from 2012 was publicly available. Any information after this date has not been taken into consideration.
- In some of the analysis we have only used four years of historical data, as a result of lack of segregation in the annual report.
- Some vessels have contracts which can be extended by charterer. There is great uncertainty if these options will be exercised. We have assumed that options will be renegotiated at market terms, which will reflect our forecast for spot rates. Options will therefore not affect the final output.
- The gas price is closely correlated with the oil price in all markets except from US. We have therefore only forecasted the oil price as we expect the gas price to follow closely.
- We have not activated operational leasing as it would not impact the final output due to insignificance.
- SIOFF has operations in a business segment called Scientific Core Drilling. This segment consists of one very old vessel (JOIDES Resolution), and not considered as core business. We have therefore excluded this vessel from our analysis to value SIOFF core operations.
- The well intervention vessel (Big Orange XVIII) is part of income from associated companies.
- The FSV, FCV and OSRV in Brazil are on long term contracts with fixed rates. We have therefore not analyzed this segment in depth. The very old vessels are assumed scrapped end of 2012, as all the new FSV/FCV vessels now are delivered.
- Siem WIS is owned 60% by SIOFF, and is a venture company within the area of drilling pressure technology. As this is neither core operations nor have historical revenue of significance, we have excluded this associated company from our analysis, and estimated the market value to NOK 0.

2.0 Introduction to Siem Offshore and the offshore supply vessel (OSV) industry

2.1 Siem Offshore Inc.

Siem Offshore Inc. is one of the fastest growing Norwegian offshore supply companies (OSV), offering marine services to the offshore oil and gas industry worldwide.[19] The company was established in July 2005 following a spin-off from the company Subsea 7 Inc. The customers are primarily upstream petroleum companies and Siem provides a broad specter of services such as movement of marine equipment, supply to offshore installations and various range of subsea construction support. These tasks are performed trough the management and ownership of 33 vessels and 1078 employees, of which 250 are employed onshore and 828 are employed on vessels.[20] The headquarter is located in Kristiansand, Norway, and the company is listed at the Oslo Stock Exchange under the ticker SIOFF. The current market cap is NOK 2.85bn and the total operating revenue for 2012 was USD 310 million. Before we go on and describe SIOFF further, we will first present the OSV market where SIOFF operates.

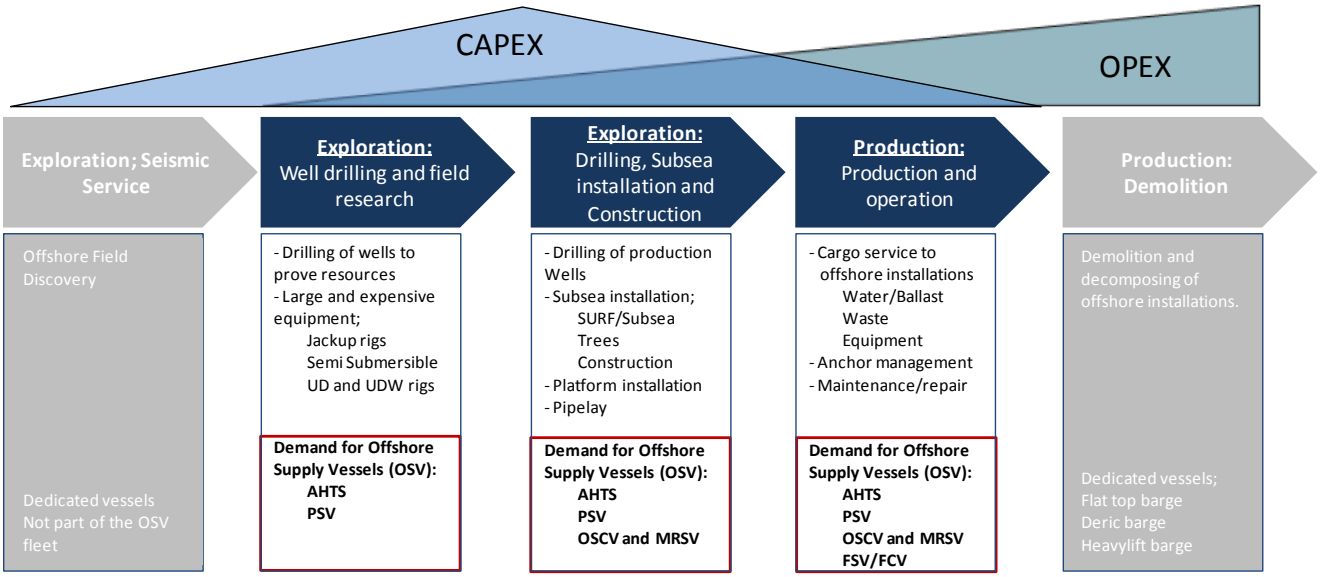
2.2 The offshore supply market (OSV)

The offshore supply market is a highly fragmented market with 95 companies controlling a fleet of 10 vessels or more. There are few dominant players, and none of the companies have any particular pricing power.[21] With an efficient organization, technical competence and fleet quality the companies can affect the utilization of the vessels. Higher utilization is equal to greater revenue potential.

While onshore petroleum production can be a fairly simple business, offshore production is highly demanding and operationally challenging. The operator needs to address challenges such as extreme weather conditions, ultra deep water, advanced technology, long distances and high operational risks.[22] The demand for OSV vessels can therefore best be described by the value chain for the petroleum industry:

[19] Siem Offshore – Annual report (2012) pg. 7
[20] Siem Offshore - Annual report (2012) pg.9
[21] ABG Sundal Collier – Offshore Supply – Sector initiation (10.04.2013) pg. 10
[22] The Macondo accident in Gulf of Mexico is one example of this risk.

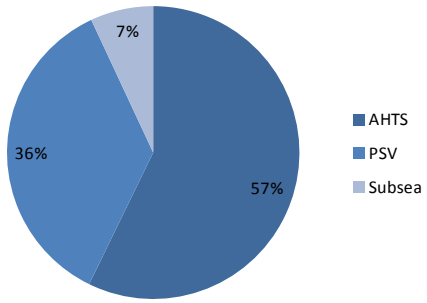
Figure 2.1 Oil and gas: Value chain and OSV demand



Source: Compiled by authors

Each of the three stages has different demand for OSV services. The vessels can be split into three main segments; PSV´s, AHTS and OSCV/MRSV.[23] Except from the seismic survey and demolition, OSV´s are involved in the entire lifecycle of offshore production. SIOFF has exposure to all three segments and the aspects of the industry will be analyzed in detail over the following pages. The relative size of the three main segments is illustrated in figure 2.2.

Figure 2.2 World OSV fleet by selected vesseltype



Source: Compiled by authors / Pareto 2013

In addition to service the petroleum industry, the supply vessels are also used for non-petroleum related activities such as maritime standby, search & rescue and windfarm installations.

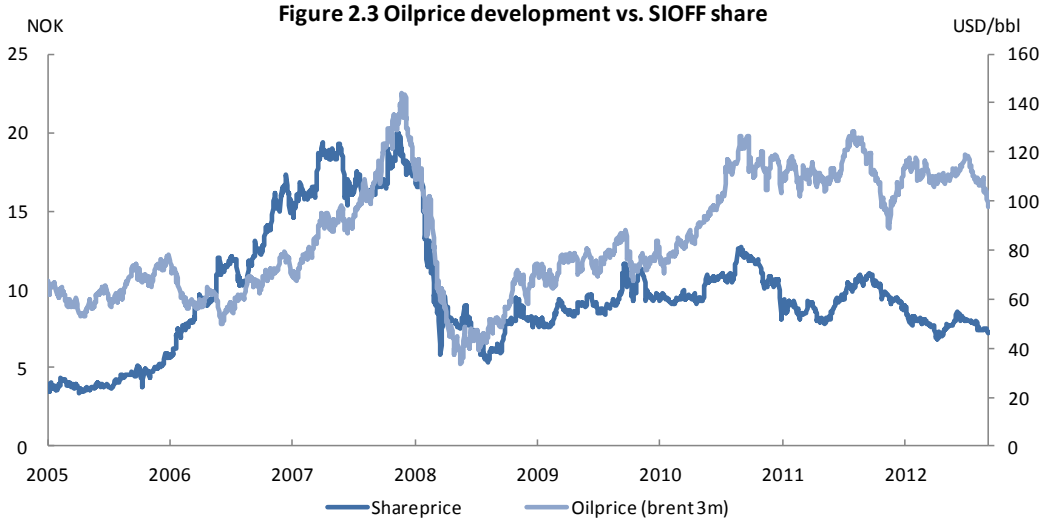
Historical development of the OSV market

The OSV industry first appeared in the 1950s, as the US oil production started in the Gulf of Mexico. As other offshore markets developed, OSV became a global industry. One of the key demand factors is the oil price, and figure 2.3 illustrates the correlation between the oil price and SIOFFs share price. The relationship can be explained as the oil price directly affects the petroleum companies' revenue and ability to invest for future production.

[23] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 15

Their E&P spending directly affect the demand for OSV`s, as can be seen from the first stages in figure 2.1. The cost associated with petroleum production is tremendous and the companies therefore monitor the price trends closely.

Figure 2.3 Oilprice development vs. SIOFF share



Source: Compiled by authors / Oslo Børs / FRED Data

During the period from 2005 – 2008 the oil price reached levels never previously seen. Offshore investments reached an all time high, and OSV dayrates were booming. As there are few dominant participants, vessel owners reacted independently, vigorously ordering new tonnage.[24]

In 2008 the financial crises evolved and the oil price plunged. As a reaction, the petroleum companies nominal growth in E&P spending turned negative, removing half the OSV demand.[25] Other offshore projects were also postponed or cancelled, affecting the submarine cable and renewable energy business.

In 2009 the global economy showed signs of improvement, but as more and more of the newbuildings were delivered, a huge imbalance occurred between supply and demand.[26] Since then, overhang of tonnage has dominated the development in the OSV industry, which can explain the weakened relationship between the oil price and SIOFF´s share price. Today the demand has turned more towards the high-end segment of both the AHTS and PSV market, where SIOFF has its main exposure.[27]

[24] RS Platou Market – The Platou Report June (2008) pg. 10
[25] Pareto Securities: Supply Research report (19.09.2011) pg. 1
[26] Siem Offshore – Annual Report (2009) pg. 11.
[27] Arctic Securities: Offshore Supply – Sector initiation (10.04.2013) pg. 57

2.3 Major historical events and SIOFFs share price development

The major historical events can be observed and explained by the development of the shareprice, as illustrated in figure 2.4. In 2005, the company had a fleet of 6 PSV and 10 small vessels in Brazil. Since then, the company has grown rapidly, expanding the fleet both organically and through M&A. In 2011, SIOFF expanded its subsea fleet by ordering 4 OCSV, thus increasing their subsea exposure. Further description of historical events can be read in appendix 2.1.

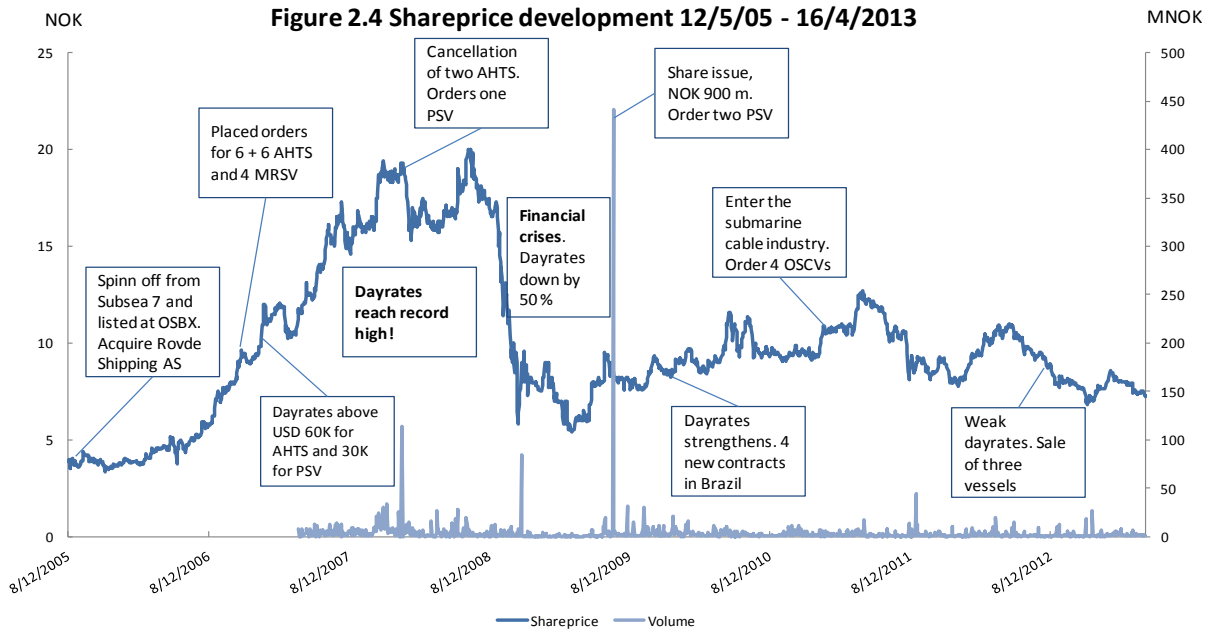


Figure 2.4 Shareprice development 12/5/05 - 16/4/2013

Source: Compiled by authors / Oslo Børs / www.siemoffshore.com

Since the IPO, the share price development has been volatile. The initial price was NOK 3.84 at the IPO, and reached a record high of NOK 20 at 18 June 2008. Nine months later, the price declined by ~70% as a result of the financial crises. In addition to general market movements, the decline was explained by the sharp drop in the oil price, which was followed by the reduced E&P spending among the oil & gas companies. This relationship will be further explained in the shipping market model.

Today the share price trades at NOK 7.29, providing an annual return of 9% since the IPO.[28] This is the best return among peers, as can be seen from the comparison at page 4.[29] However most of this return was created in the first years of operation. Since 2009 returns has been all but satisfying. The company has not paid dividends since the listing, but initiated a share repurchase program after the annual general meeting in 2012.

[28] CAGR = (IPO price/Price Today)^(1/Years)-1
[29] Total Return basis

2.4 Organization

SIOFF is a fully integrated OSV company, in terms of both ownership and operations. The company´s operation is mainly run from Norway, with additional offices in Germany, the Netherlands and India. The fleet is located in the North Sea, South America and West Africa. The Brazilian fleet is managed and operated through Siem Consub, a fully owned Brazilian subsidiary. The remaining subsidiaries have little organizational importance except from dispersing of the ownership of the vessels. There are also some minority interests, regard four of the PSVs. The whole organizational structure can be seen from
appendix 2.2

Objectives, strategy and business concept

In order for a company to achieve its goals and create value for the owners, it needs a clear strategy with outlined objectives. In a valuation perspective it is therefore important to understand SIOFFs objectives and business concept. Through the thesis we will analyze the business internally and externally, and evaluate how successful SIOFFs strategy has been.[30]

- *Siem Offshore aims to grow the company within offshore support vessels, both organically and through combination with other operators, in order to achieve economies of scale and stronger presence in the market.*
- *Siem Offshore aims to become a preferred supplier of marine services to the oil & gas industries based on quality and reliability and provide cost efficient solutions for its customers by understanding their operation and applying technology and experience.*
- *The Company builds its business around a motivated workforce with the appropriate technical solutions and creating sustainable value to all shareholders.*

[30] www.siemoffshore.com – Investor relations – Corporate governance

2.5 Management team and board of directors

The management team of SIOFF consists of five members, all Norwegian citizens.[31] None of the members have familiar ties to the largest owners.

CEO – Terje Sørensen (born 1964)

Mr. Sørensen was appointed CEO in 2005, thus SIOFF has only had one CEO during the eight years of operations. He came from the position as CFO for Siem Offshore Inc. with prior experience from various companies such as Mosvold Shipping AS and Norsk Skibs Hypotekbank AS. Mr. Terje Sørensen, holds 1.900.000 shares in SIOFF, ~0.48 % of outstanding shares.[32]

CFO – Dagfinn B. Lie (born 1972)

Mr. Lie is the youngest member of the management team and has been SIOFFs CFO since 2009. He holds an MBA for the Norwegian School of Business and has gained experience from companies such as Wallenius Wilhelmsen Logistics and ABB Offshore.

COO – Svein Erik Mykland (born 1966)

Prior to his promotion to COO in 2010, Mr. Mykland was employed as AHTS director in SIOFF since 2008. For the last 25 years, Mr. Mykland has been employed in the offshore industry and has a broad experience from both onshore and offshore operations. He was originally recruited from Acergy (Subsea Constructors) where he held the position as Group Operation Manager.

In addition to those mentioned, Mr. Bernt Omdal is employed as Chartering Director and Mr. Tore Johannessen is employed as Global HR Director.

Board of directors

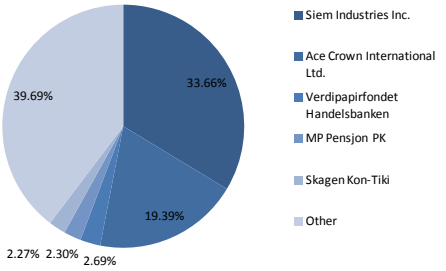
The board of directors consists of five men, where two are Norwegian citizens. Mr. Eystein Eriksrud is the chairman and is also the Deputy CEO of Siem Industries Inc., SIOFFs main shareholder. Mr. Kristian Siem is the owner of Siem Industries, and is also represented as Board Member for SIOFF. The other members of the board are Mr. Michael Delouche (U.S.), Mr. David Mullen (Ireland) and Mr. John C. Wallace (Canada).

[31] www.siemoffshore.com – Company – Management Team
[32] Siem Offshore – Annual Report (2012) pg. 91

2.6 Ownership structure

While many of the Norwegian offshore companies are dominated by family ownership, SIOFF is controlled by an individual private investor.[33] The 20 largest shareholders control more than 76 % of the shares outstanding, and the top 5 shareholders owns ~60 %.

Figure 2.5. Ownership structure



Source: Compiled by authors / Annual Report 2012

The dominating shareholder is Siem Industries Inc. with ~34 % of the ownership. Over 70 % of the shares in this company is owned and controlled by the Norwegian investor Kristian Siem and his family. The second largest shareholder is Ace Crown International Ltd., an investor group based outside European legislations. The remaining shares are spread among mostly Norwegian trusts and funds.[34] The average trading volume is between NOK 0.5 – 1 mill per day.[35]

2.7 The SIOFF fleet and business areas

The SIOFF fleet counts a total number of 33 operating vessels plus 10 newbuilds with delivery in the upcoming two years, as can be seen in table 2.1. This newbuilding program represents more than USD 2.3 bn. in investments.[36] Since the spinoff from Subsea 7 the fleet growth has been remarkable. Over the years the fleet has grown by more than 20 vessels. Today the fleet is the youngest among peers, with average age of 3-4 years.[37] The entire fleet list can be seen in appendix 2.3.

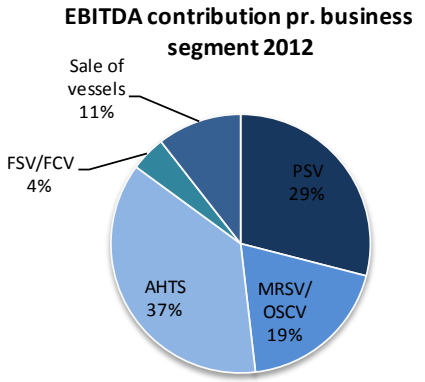
Table 2.1

Vessel type	Number	Newbuilds
PSV		
>900m2	4	3
<900m2	7	
AHTS		
>25.000	8	
Subsea		
OSCV		4
MRSV	2	
Other	1	1
Brazilian fleet		
FCV	2	
FSV	7	
OSRV	2	2
Scientific Drilling	33	10

Source: Compiled by authors / SIOFF AR 2012

[33] Family ownership; DOF (55 %), Farstad (60%) Havila (55%) Solstad Offshore (45%)SIOFF (36%)Eidesvik (67%)
[34] Siem Offshore – Annual Report (2012) pg. 91.
[35] Datastream - SIOFF
[36] Siem Offshore ASA – Company presentations, Pareto conference (12.08.2012), pg. 2
[37] Siem Offshore ASA – Company presentations, Pareto conference (12.08.2012), pg. 2

As can be seen from the figure 2.6, SIOFF has operations within four different business areas. The core business is the operation of OSV vessels, in the AHTS, PSV and subsea segment. In 2012 this accounted for 85% of EBITDA.[38] The Brazilian vessels are small cargo/personnel carriers and have limited contribution to the result. Sale of vessels has fluctuated between USD -8 and 13 million and is treated as a result of core operation. While asset plays is common for traditional shipping segments, it is not usual for OSV companies to practice this. Sale of vessels is therefore not likely to account for as much as 11% of EBITDA in the future.



Source: Compiled by authors / Annual Report

2.7.1 The AHTS segment (Anchor-Handler-Tug-Supply)

The AHTS vessels are specifically designed for the purpose of towing and anchoring offshore installations, such as Jackup rigs, semi rigs and floating production units (FPSO). This equipment is of high value and can weigh several hundred tons. The largest AHTS vessels are therefore fitted with engines up to 35.000 bhp. A recent trend is that UDW[39] rigs are equipped with DP (Dynamical Positioning).[40] This can possibly reduce demand for AHTS, since the rigs are capable of transporting and positioning themselves. Despite this, UDW rigs might still demand service from AHTS vessels when drilling in shallow water, for long distance transportation and when drilling at the same field for longer period of time.[41] As installations and equipment has become larger, the demand has shifted more towards the high-end segment.[42]

Picture 1.1 AHTS Vessel

Source: www.siemoffshore.com

[38] Siem Offshore – Annual report (2012) pg. 58
[39] Ultra Deep Water
[40] DP is a system that allow for the rigs to maneuver themselves
[41] Arctic: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 15
[42] Characterized as more than 20.000 Bhp.

As can be seen from the table 2.1, SIOFF owns 8 AHTS vessels. The whole AHTS fleet is built in Norway and with its 28.000 bhp. we classify the fleet as being high-end. The average fleet age is three years and the newbuilding price is USD 88m today. Over the last 10 years average quarterly dayrates have fluctuated between NOK 200 and 600k.

2.7.2 The PSV segment (Platform Supply Vessel)

PSVs are the "work horse" of the ocean and were among the first vessels developed for serving the petroleum industry. The vessels are designed for transportation of various supplies to and from the variety of offshore installations. Therefore the vessels are equipped with large tanks to contain water, ballast and fuel, and large deckspace for pipes, hauling risers and waste.[43] Compared to the AHTS vessels, the design is simple and the complexity is correspondingly lower. The demand-trend is the same as for AHTS, with increasingly focus on high-end vessels with large deckspace. PSVs are classified by cargo deck area (CDA), where high-end is above 900m^2.[44]

Picture 1.2 PSV Vessel

Source: www.siemoffshore.com

SIOFF has currently a fleet of 11 PSVs with an additional three for delivery in 2013/2014. Two of these are under construction in Brazil. The majority of the fleet is built in Norway and is classified as large size/high-end. But SIOFF has also exposure towards the mid size segment with a total of 6 vessels.

[43] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 15
[44] The Platou Report (2013) pg. 37

2.7.3 The (OSCV) Subsea Segment – Offshore Construction Vessels

The OSCV segment is a more specialized segment than those previously mentioned. These vessels are designed for performing various offshore and subsea construction tasks. This can be everything from inspection, maintenance and repair to more heavy operations such as pipelaying, seabed trenching and heavy lift. The customers are both in the oil and gas industry and in the renewable energy market. Therefore the segment is much more diversified than the rest of the OSV industry, and the vessels are equipped with construction cranes, remotely operated vehicles (ROV) and other construction gear.[45] As petroleum production moves into deeper water, equipment must be installed at the seabed and connected to a floating processing unit and the ocean surface.[46] This subsea technology is also used to extract petroleum from smaller reservoirs, and connect these to already existing fields. The subsea systems and their complexity are illustrated in appendix 2.4

Picture 1.3 OSCV Vessel

Source: www.siemoffshore.com

The OSCV segment is heterogeneous and is segmented based on the vessels specification, crane size and loading area. The definition of high-end/low end is therefore less obvious. A part of SIOFF´s strategy is to expand the subsea fleet, and the fleet will count 7 vessels when all the newbuildings are delivered. SIOFFs vessels can be classified as being in the most "commoditized" part of the subsea market and the newbuilding price for the OCSV´s is USD 98 – 105mn.[47] In appendix 2.4 we have illustrated how the OSCVs operates.

[45] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 16
[46] Terje Thorsen – VP Project Controls Estimation, Statoil, Appendix 10.2
[47] Pareto Securities: Oil services research report (11.02.2013) pg. 49

The FSV (Fast Supply vessels), FCV (Fast Crew Vessels) and the OSRV (Oil Spill Recovery Vessels)

As can be seen from table 2.1, the Brazilian fleet counts 11 vessels plus two newbuildings. FSVs and FCVs are specialized for high speed passenger and light cargo transportation, and are easy to both build and operate. The newbuilding price is only USD 5 – 10 m, and the dayrates are correspondingly lower compared to the other OSV segments.[48] The OSRVs are standby vessels in case of offshore accidents. All these vessels are on long term contract with the Brazilian company Petrobras. The FCV/FSV vessels were delivered in 2011/12 and replaced older vessels. Two OSRVS will be delivered mid 2013.

Siem Offshore Contractors - SOC

Siem Offshore Contractors was owned 50% by SIOFF until 2011 when the remaining 50% was acquired. SOC is a submarine cable contractor and through this business area, SIOFF provides cable and umbilical installation, repair and maintenance services. The company is managed as a subdivision and provides service to both the renewable and petroleum sector. By utilizing in-house resources such as PSV, AHTS and Subsea vessels, SOC can install, maintain and repair submarine cables as well as subsea umbilical in any water depths and geographical area.[49] In 2014 SIOFF will take delivery of one ISV (Installation Support Vessel) to support the renewable business. The CAPEX for this vessel is approximately USD 52.5 m.[50] The Company has a order backlog of USD 180m over the next two years.[51]

2.8 Contract coverage and utilization

To reduce the operational risk and to secure future cash flow, a common feature in the OSV industry is to fix vessels on firm contracts. A part of SIOFFs strategy is to fix vessels on long-term charters. The vessels not fixed on long-term contracts are exposed to the volatility in the spot market.[52] The average utilization for 2012 and the future contract coverage are summarized in table 2.2.

Table 2.2

Segment	Utilization `12	Contract `13	Contract `14
AHTS	77%	76%	55%
PSV	91%	54%	19%
MRSV	100%	67%	50%

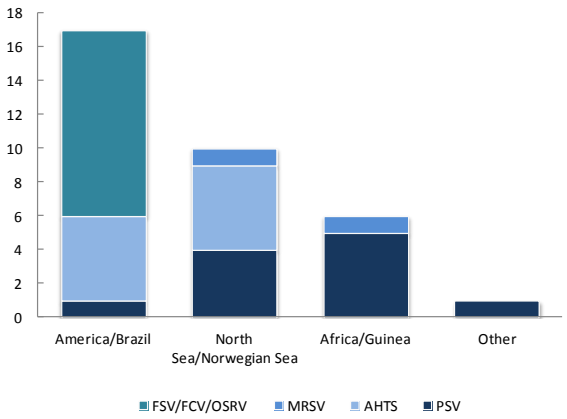
Source: Compiled by authors / SIOFF Annual Report 2012

[48] Siem Offshore – Company presentation (2009) pg. 12.
[49] www.siemoffshorecontractors.com
[50] Pareto Securities: Oil services research report (11.02.2013) pg. 48
[51] www.siemoffshore.com – Investors – Stock Exchange Notices
[52] Siem Offshore – Annual Report (2011), pg. 52

2.9 Geographical segments

SIOFF has three main geographical areas of operation. Figure 2.7 illustrates the current distribution of vessels in each of the markets. The markets have many similarities and important differences. We will here give a short summary of each market, a detailed overview can be seen in table in appendix 2.5.

Figure 2.7 Geographical fleet distribution by segment



Source: Compiled by authors / Annual Report 2012

North Sea

The dayrates in the global OSV industry are to a large extent determined by the North Sea rates. The reason is that the North Sea was among the first region for offshore E&P operations, and is the only well functioning spot market. The spot rates in other regions are determined by development in North Sea rates, adjusted for a higher cost level.[53] Hence, margins is similar accross different regions as the vessels are highly mobile assets. The development in spot rates will be analyzed in detail under the demand and supply section.

The North Sea is characterized as one of the harshest environments for offshore operations. During the 80`s and 90`s the region experienced a boom in new discoveries and the activity was high. In the last decade, production has been diminishing due to declining faith in new discoveries. Petroleum companies were under the impression that the remaining potential was limited. However, during the last two years Statoil and other operators have made some of the largest discoveries since the early eighties. This has brought back a lot of the optimism among operators. Combined with the development of already discovered fields, this will lead to a higher demand for high-end OSV vessels.

West Africa

Over the last 10 years the offshore activity in West Africa has multiplied, driving demand for PSV, AHTS and subsea vessels. The region is seen as one of the most promising offshore regions, with expectations of more than 220 fields to enter production over the next five years.[54] The ultra deep water possesses challenges to the operators and the political instability is a key risk factor driving costs higher.[55]

[53] Fearnley Securities: Offshore Supply (2Q 2011) pg. 9
[54] Infield systems, Offshore Mag 2012, "Global Data"
[55] Pareto Securities: Oil services research report (11.02.2013) pg. 39

South America

Brazil has over the last decade become one of the world´s leading petroleum regions with growth in reserves of more than 68.5%.[56] The fields are located far from shore (three times as far compared to North Sea) in some of the world`s greatest water depths. This requires larger rigs for complex operations, as well as higher demand for subsea installations.[57]

Although Brazil is a high growth market with opportunities for OSV players, it's a difficult market to operate. Brazil has internal challenges in terms of bureaucracy, corruption and requirements for local content. In order to protect national interest the Government has adopted strict regulations that require vessels to be Brazilian built and staffed with Brazilian crew. Vessels built in other countries can enter the market only after paying government import tax. This has created problems of cost inflation, particularly due to the tight supply of labor.

2.10 Definition of peer group

The purpose of defining a peer group is to analyze SIOFF´s relative performance over an historical period. The peer group will be used as a benchmark in the strategic- and financial analysis, in addition to the relative valuation (multiples).

A peer group does not necessarily need to comprise of competitors, but there are several consideration that must be taken in consideration. Most importantly the firms need to be comparable in terms of operation and business characteristics, and the financial statements must be based upon the same accounting principles.[58] The risk profile in the peer group should also be alike, and for the use of multiples, peers should have similar outlook for long term growth and return on capital (ROIC).[59]

As previously described, the OSV industry is a highly fragmented shipping segment with hundreds of vessel owners. Of practical considerations it is therefore impossible to identify the specific competitors, as they differ in each market. The selection of a Norwegian peer group was eventually natural as Norwegian owners have the most comparable fleet, typically classified within the medium- to high-end segment. They also have operations in many of the same geographical markets, and are thus competing for the same employment. By comparing companies in the same industry with similar characteristics, we will secure appropriate relevance of financial ratios.[60] An alternative could have been to look at companies in other industries, with similar organizational structure, value chain or financial performance. As the OSV industry is a specialized market, we find it more advantageous to benchmark towards other industry peers.

[56] DOF ASA – Annual Report (2011) pg. 19
[57] Terje Thorsen, VP Project Controls Estimation, Statoil Appendix 10.2
[58] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 64
[59] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 305
[60] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 65

To determine the peer group we have performed a comparison of the eight OSV companies listed at Oslo Stock Exchange. The companies have been ranked based on operational criteria´s and the comparison can be seen in appendix 1.2. Based on the peer group analysis, the following companies have been chosen; DOF ASA, Farstad Shipping ASA, Solstad Offshore ASA and Havila Shipping ASA.

Although there are similarities among peers, we acknowledge the individual differences. Most importantly Farstad Shipping has a strong presence in the Indian Pacific and DOF has more than 70 % of its revenue from the Subsea segment. Despite of this we see the peer group as the most acceptable comparable firms as they have similar organizational structure and comparable value chain. This is confirmed by industry analysts.[61] A short presentation of the companies in the peer group will be given in the following section:

DOF ASA

DOF is the largest Norwegian OSV company with a total of 74 vessels.[62] This includes 7 newbuildings. Over the last five years DOF has been the most aggressive player in terms of vessel orders, and as a consequence of this the company is heavy leveraged.[63] DOF has traditionally had a high degree of contract coverage and the main area of operation is the North Sea, Brazil and Indian Pacific. [64] In 2012 the company had a total operating income of NOK 8.1bn. and employed more than 4.000 people. Contract coverage for 2013 is 81%.

Farstad Shipping ASA

Farstad is the second largest of the Norwegian players with 57 vessels and 7 newbuilds.[65] The last year's fleet growth has been funded through operational cash flow, equity and debt, making the balance sheet particularly strong compared to the industry. The company is recognized as a "blue chip" company with historical industry leading returns.[66] Farstad has a strong presence in Brazil through a wholly owned subsidiary. Other areas of operation include North Sea, Gulf of Mexico Indian Pacific. The total operating income for 2012 was NOK 3.7bn. and the company employed more than 2.000 people. Contract coverage for 2013 is 65%.

[61] Arctic Securities, Pareto Securities, First Securities.
[62] DOF ASA – (Q3 2012) pg. 4
[63] Pareto Securities: Oil services research report (11.02.2013) pg. 121
[64] DOF ASA – (Q3 2012) pg. 4
[65] Farstad Shipping – (Q4 2012) pg. 3.
[66] Pareto Securities: Oil services research report (11.02.2013) pg. 112

Solstad Offshore ASA

Solstad is a strong global player in the OSV market with operations in North Sea, Africa, Gulf of Mexico, Brazil and Asia Pacific. The fleet counts a total of 50 vessels plus one newbuilding. Over the last years Solstad has expanded the fleet of subsea vessels and are increasing its focus on this segment.[67] In 2012 the total operating income was NOK 3.4bn and the company employed around 1400 people. Contract coverage for 2013 is 78%.

Havila Shipping ASA

Havila was listed at Oslo Stock Exchange in 2005, the same year as SIOFF. The company operates a fleet of 28 vessels where four are owned by a joint venture and one is leased. Over the last years the company has grown the fleet tremendously and as a result the company is highly leveraged with high cost of debt. The company follows a strategy with high contract coverage, but is currently running 6-8 vessels in the spot market.[68] The total operating income in 2012 was NOK 1.4bn. and the total employment is approximately 600. Contract coverage for 2013 is 81%

The shareprice development of the peer group can be seen in figure 1.1 pg. 4 in the introduction.

[67] Pareto Securities: Oil services research report (11.02.2013) pg. 117
[68] Pareto Securities: Oil services research report (11.02.2013) pg. 134

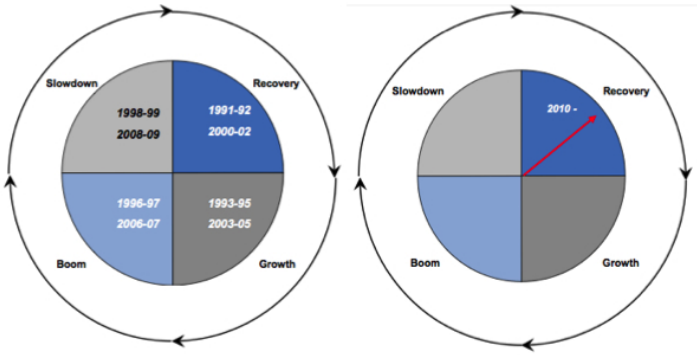
2.11 Business cycle and state of now

A cyclical company is recognized as one whose earnings demonstrate a repeating pattern of significant increase and decrease. As we saw in the previous section, the OSV industry is a cyclical business and this can clearly be seen from the peer group´s shareprice development at page 4. The cycle is amplified by the fragmentation of the industry, as none of the players show market discipline.[69] This introduces additional complexity, and the historical performance must be assessed in the context of the cycle.[70] According to Pareto Securities the typical business cycle in the OSV industry is 7-10 years.[71]

Understanding the OSV business cycle is therefore important in order to analyze SIOFFs historical returns and avoid forecasting errors. Taking this approach will identify the current stage of the cycle and provide the analyst with useful information about the firm´s ability to adapt to upturns as well as downturns.[72] This will also impact the estimation of dayrates, and will be analyzed through sensitivity analysis.[73]

The OSV industry is currently in the recovery face. It has been at this stage since 2010 and the future development will be analyzed in the following sections.

Figure 2.8 OSV business cycle



Source: Pareto Securities 2011

[69] ABG Sundal Collier: Offshore Supply – Sector initiation (10.04.2013) pg. 10
[70] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 731
[71] Pareto Securities: "The Offshore Market in 10 minutes" (May 2011) pg. 8
[72] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 67
[73] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 739

3.0 Strategic analysis

3.1 The shipping market model

To understand the balance between supply and demand in the the OSV market, we will use the Shipping market model by Stopford, as described at page 7. Based on the findings in this model, we will be able to understand the dayrate mechanism and forecast the future development of dayrates.

3.1.1 Demand for OSV

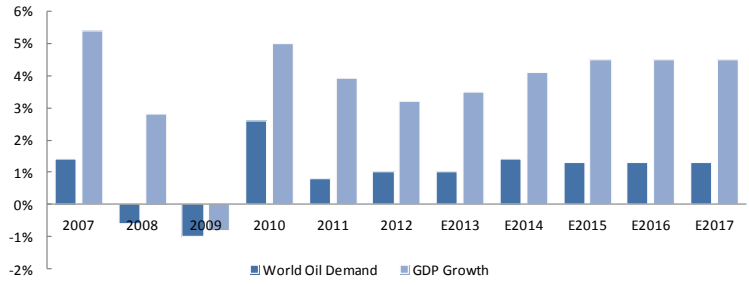
Demand for OSVs is a function of a numerous factors, and the most important is the global E&P spending, as seen in appendix 3.4. The petroleum companies cash flow is to a large extent determined by the level of the oil and gas price, which they have no power to influence. The price level of oil is therefore the single most important factor affecting their investment budget.[74] The correlation between petroleum companies E&P spending and the oil price is high, as can be seen in appendix 3.1. We therefore start with a thoroughly analysis of the factors affecting the oil price.

The world economy

The growth of the world economy is the single most important factor affecting oil demand. As can be seen from appendix 3.2, the relationship between growth in GDP and oil demand has strengthen over the last 20 years.[75]

Since the financial crises in 2008, developed markets have experienced negative GDP growth. Despite of this, the oil price has remained high as can be seen in figure 2.3 at page 18. This can be explained by the higher demand coming from non-OECD countries. Going forward, the main driver of growth will be India and the Asian countries.[76] Demand from these countries is expected to surpass the total OECD demand by 2014. Over the next five years the world economy is expected to grow by 3-4 % annually increasing oil demand by 1 – 1.5 % YoY.[77] In the short run, demand is inelastic to price changes, as the available substitutes require long term investments.[78]

Figure 3.1 GDP growth and world oil demand (Y/Y %)



Source:Compiled by authors / Pareto Securities / IMF

[74] DnB Markets: E&P Spending report 2012 (20.08.2012) pg 17.
[75] Pareto Securities: Oil services research report (11.02.2013) pg. 13 and 14, growth estimates from IMF
[76] Nordea Markets: Oil market outlook 2013-14 (03.12.2012) pg. 2
[77] Pareto Securities: Oil services research report (11.02.2013) pg. 13 and 14, growth estimates from IMF
[78] Fournier, J. *et al.* (2013), "The Price of Oil – Will it Start Rising Again?", OECD report. pg. 7

3.1.1.1 Global oil supply

The global oil supply is expected to increase in the coming years, but new capacity will partly be offset by a natural decline in the mature production base.[79] A high portion of the supply increase is expected to come from deep water areas and US shale oil. Both of these sources are technically and operationally challenging to exploit, with break even rates for production above USD 90/bbl.

Random shocks and geopolitical premium

The oil price is not only a function of the balance between supply and demand, and "black swans" can have major impact in short term. This has been seen during the financial crises, the Arabic spring and the current embargo towards Iran. Nordea Markets estimate that an escalation of the Syrian civil war can lead to a 73% price increase. In their low price scenario they estimate that a hard landing in China (4 % GDP growth) can result in a 30% price drop. In the current scenario we see a modest geopolitical price premium, as the situation in Iran and North-Africa still is uncertain.[80]

Outlook for the oil price

The outlook for the oil price looks positive even though supply is expected to increase. New sources of supply have higher breakeven rates, and deepwater projects are competitive compared to onshore projects in the US. Cost of onshore and offshore production is converging.[81] US will increase domestic production but it is uncertain how this will impact the global supply/demand relation.[82] OPEC countries are depending on an oil price between USD 85-90 bbl. to cover the commitments agreed upon to stall the Arabic Spring. OPEC will probably adjust supply to keep prices above this level. Combined with expectations of higher demand, we therefore see prices below USD 80-90 bbl.[83] as unlikely. In appendix 3.3 we have summarized oil price expectations from different brokerage firms. Table 3.1 shows the average of these expectations, and we will use these prices as a baseline for forecasting E&P spending and demand for OSVs.

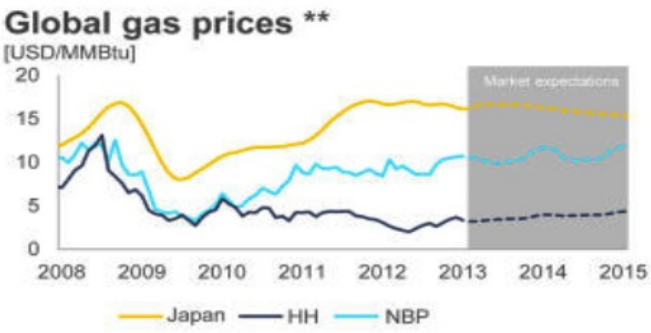
Table 3.1

Year	$/bbl. Real
2013	119
2014	125
2015	133
2015-->	140

[79] Nordea Markets: Oil market outlook 2013-14 (03.12.2012) pg. 2
[80] DNB Markets: "Økonomiske utsikter 2013" (January, 2013) pg. 76
[81] DnB Markets: E&P Spending report 2013 (08.01.2013) pg. 13
[82] Terje Thorsen, VP Project Controls Estimation, Statoil Appendix 10.2
[83] Arctic Securities: Oil market outlook 201 (14.05.2012) pg. 54

Gas price

Figure 3.2



Source: Statoil / www.dn.no

The market for natural gas is fragmented, and the price depends on the distance between the reservoir and the consumer. Gas can be transported through both pipes and vessels, where the latter is most expensive. The mode of transportation therefore determines the price. Thus profitability of proven resources depends on the location and the available infrastructure. Demand for both oil and gas is affected by many of the same fundamental factors, and can to some extent be seen as substitutes. If price of oil rises, part of the demand will shift towards gas, driving prices in the same direction. Except from the U.S. market, the price of gas is closely correlated with the oil price.[84] The regional price levels and outlook can be seen in figure 3.2 to the right.[85]

Some market participants fear that the surplus of US shale gas can distort the market balance in Europe and Asia. A survey by the Norwegian Central bank finds this fear unfounded as the profitability of LNG transportation from US still is too uncertain.[86]

The global gas market can therefore be seen as an extension to the oil market, with the same factors affecting both E&P spending and demand. In the perspective of this thesis it is therefore satisfactory to look at the future development of the oil price.

3.1.1.2 E&P Spending

The oil price is the single most important factor affecting the E&P spending, which is a leading indicator for the OSV demand. Figure 2.1 at 17 illustrates the relationship between different stages of the production and the demand for OSVs. OSV companies revenues is therefore a positive function of the global E&P spending. This historical correlation is high, as can be seen in appendix 3.4. The most important budget measure for the companies is the average breakeven rate of production, or the hurdle rate. When the oil price drops below this point, exploration and development of new fields is scaled back as the cost per barrel is higher than the sales price. According to DnB Markets annual spending report the hurdle rate has increased to USD 72/bbl in 2013, which is well below the current and expected oil price.[87]

[84] Winje, Pål et al. (2011), "Økt gasseksport men hva med prisen?", Aktuell kommentar, Norges Bank pg. 4
[85] http://www.dn.no/energi/article2584272.ece
[86] Winje, Pål et al. (2011), "Økt gasseksport men hva med prisen?", Aktuell kommentar, Norges Bank pg. 9
[87] DnB Markets: E&P Spending report 2013 (08.01.2013) pg. 7 and 8

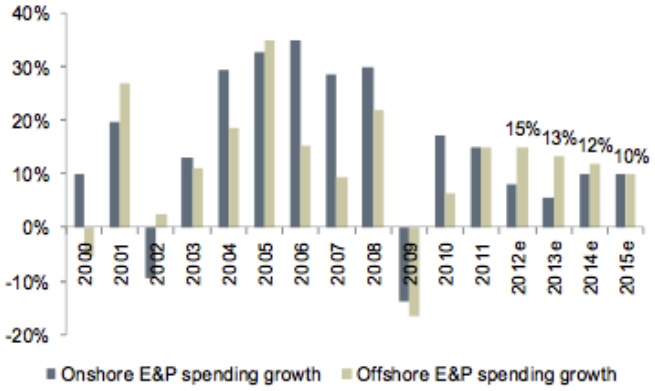
This bodes well for future investments. For upwards revision of the E&P budget there is a time lag of 6-18 months towards the oil price.[88]

The global oil demand is increasing and at the same time, the descent rate of existing fields is 4.5%.[89] The current versus future oil production can be seen in appendix 3.5. Therefore there is a constant need to explore and develop new fields, and all the major petroleum companies are under pressure from shareholders to increase production. Total spending reached a record high of USD 578 bn. in 2012. With the exception of year 2009, the historical growth rate has been above 10% for the last 10 years. Spending has been driven by the momentum of the current oil and gas mega cycle, and attractive commodity prices. [90]

Outlook for E&P spending

The global offshore E&P spending is estimated to increase by 10-13 % yearly for the next three years according to ABG Sundal Collier and DnB Markets.[91] The main driver of this development is the expectation of higher oil price as discussed in section 3.1.1.1. However this is not the only factor and we will break down the components of E&P spending further to see how higher E&P spending will affect the demand for OSVs.

Figure 3.3 E&P spending growth (Y/Y %)



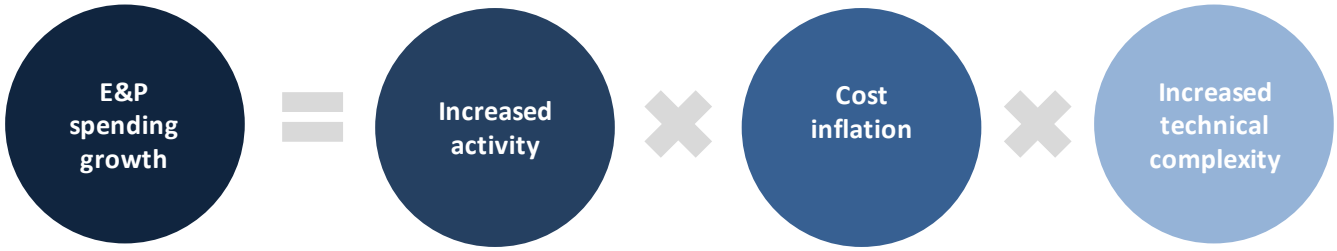
Source: ABG Sundal Collier 2013

[88] DnB Markets: E&P Spending report 2012 (20.08.2012) pg. 24
[89] DnB Markets: E&P Spending report 2012 (20.08.2012) pg. 30
[90] DnB Markets: E&P Spending report 2012 (20.08.2012) pg. 3
[91] ABG Sundal Collier: Offshore Supply – Sector initiation (10.04.2013) pg. 5 and DnB Markets: E&P Spending report 2012 (20.08.2012) pg. 2

3.1.1.3 Components of E&P spending growth

According to DnB Markets, growth in E&P spending can be explained by the following factors:

Figure 3.4 E&P spending components



Source: Compiled by authors / DnB Markets 2013

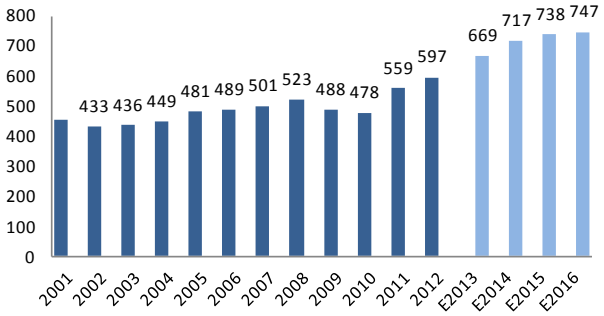
Increased activity

As petroleum companies explore new areas in search for hydrocarbons, the demand for drilling equipment, production units and subsea support increases. As can be seen in figure 2.1. at page 17, the number of jackup, UDW-rigs and subsea tree orders are leading indicators for OSV demand. Activity increase is expected to account for half the increase in E&P spending in 2013.[92]

Number of rigs

The current rig fleet counts ~597 units and this is an all time high in a historical perspective. Since the bottom in 2010, number of rigs has increased by more than 25%. This reflects the petroleum companies increased E&P spending over the last decade. The growth is driven by delivery of FPSO, Jackup- and UDW-rigs, which today account for more than ~65 % of the fleet. The growth in the UDW and FPSO segment reflects the increased focus on deepwater areas. Over the next four years we expect delivery of 51 FPSO, 85 jackups and 65 UDW.[93] UDW is the most important driver for the PSV segment, demanding 2x PSVs pr. rig, compared to x1 for other assets.[94] A number of these rigs are equipped with Dynamic position (DP), but will still demand service from the high-end AHTS fleet, as discussed at page 23.

Figure 3.5 Number of rigs and orderbook



Source: Compiled by authors / Pareto Securities 2011 / ISI

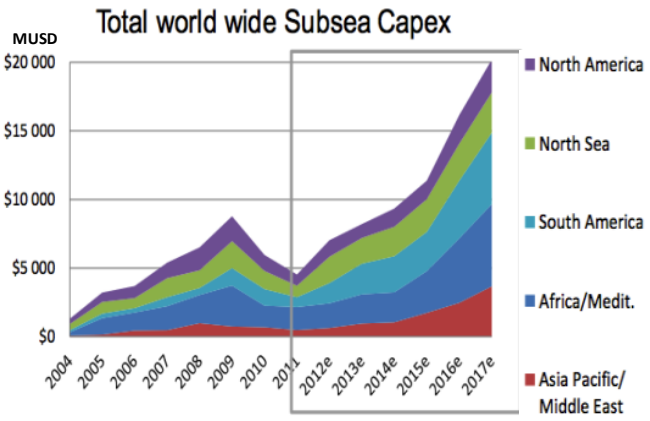
[92] DnB Markets: E&P Spending report 2013 (08.01.2013) pg. 11
[93] Pareto Securities: Supply sector research report (19.09.2011) pg. 43, Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 30 and ISI Sector update – Monthly Offshore Drilling Unit Update (Jan. 2013) pg. 8
[94] Pareto Securities: Oil services research report (11.02.2013) pg. 59

This can possibly change the future demand balance, but there is currently not enough information available to forecast the impact with precision. Based on estimates from Westshore Shipbrokers, one rig is moved three times a year, and one move requires assistance from three AHTS vessels. FPSOs are capable of maneuvering by them self, but require one AHTS pr. move to assist with anchor handling.[95]

Subsea and number of wells

As the number of rigs increase, so do the number of drilling and production wells. Morgan Stanley estimates that the number of subsea wells will increase 25% by 2015, from just over 4.000 today.[96] Number of deepwater wells will increase by 50%, and 70% of new equipment shall be installed at >1.500 ft.[97] At these water depths, diving is impossible and the installation requires assistance from OSCVs with Remotely Operated Vehicles (ROV). Demand for these services is closely related to the number of rigs and wells. Demand for OSCVs will also benefit from increase in SURF systems, which is related to the number of operating wells. As the number of wells increase, so do the demand for Inspection, Maintenance and Repair (IMR) services, with a lag of a couple of years.[98] New reservoirs located far from existing infrastructure will also increase demand for pipelaying. This drive demand for subsea services and follow the rig activity closely.[99] SIOFFs OSCV newbuilds is well suited to perform this construction services.

Figure 3.6



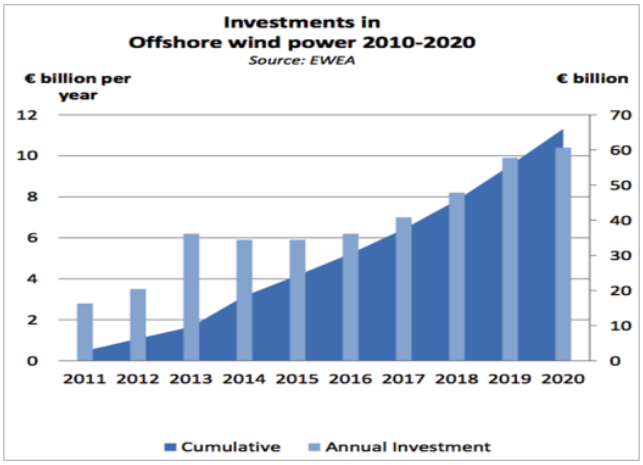
Source: Fearnley Offshore Supply

According to Fearnley Research the total worldwide subsea CAPEX is expected to triple over the next 5 years, reaching close to $20.000m in 2017. Recent years` discoveries in South America and West Africa form a healthy backlog for the industry. These areas will therefore experience the highest growth in the next period.[100]

[95] The Navigator – Issue 17, (Jan 2013) pg. 9
[96] Morgan Stanley Research: Big Subsea Opportunity, (04.01.2013) 14 pg. 10
[97] Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 54
[98] Morgan Stanley Research: Big Subsea Opportunity, (04.01.2013) 14 pg. 10
[99] Pareto Securities: Oil services research report (11.02.2013) pg. 36 and Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 54
[100] Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 54

A part of SIOFFs subsea exposure is towards the market for offshore wind power installation, through the subsidiary SOC. This is a growing market, as wind power is seen as an alternative energy source compared to hydrocarbons. The market is expected to increase from annual CAPEX ~€6bn in 2013 to ~€10bn in 2020. The main growth market has been the Northern Europe, and governments in Germany, UK, Belgium and Denmark have shown support in terms of subsidies. The current market outlook is uncertain as Western economies are struggling with budget deficits and low growth. The renewable market is depending on subsidies, and there is a threat of governments scaling back these subsidies.

Figure 3.7



Source: Fearnley Offshore 2013

SIOFF is through their subsidiary *SOC* the first traditional OSV Company entering this segment.

Cost inflation

Of the anticipated increase in E&P spending, 50% is due to inflation in costs.[101] The activity level in the E&P sector has been record high in the years following the financial crises, and some parts of the value chain is about to be overheated. Inadequate access to skilled personnel and know-how is threatening to limit future activity growth.

Another explanation for the cost inflation is government regulations in all geographical markets; In Brazil and West-Africa the local content act has led to a severe increase in labor cost. To operate in these markets OSVs must be crewed with a high share of local personnel.[102] Higher activity has increased demand for skilled labour but there are currently too few sailors being educated.[103] Labour costs have thus increased. Going forward we believe these regulations will further increase OPEX for OSV owners.

After the Macondo accident in the Gulf of Mexico in 2010 the petroleum industry has been subject to a whole new set of regulations regarding Quality, Health, Safety and Environment (QHSE). This has been a global development, and requires higher technical competence and more focus on safety among the petroleum companies.[104]

[101] DnB Markets: E&P Spending report 2013 (08.01.2013) pg. 11
[102] Nordea Markets: Oil market outlook 2013-14 (03.12.2012) pg. 4. Local content is different depending on the fields of operation
[103] www.marinemoney.com – OSM, Jan Morten Eskilt presentation (06.10.2010) pg. 2
[104] Nordea Markets: Oil market outlook 2013-14 (03.12.2012) pg. 4.

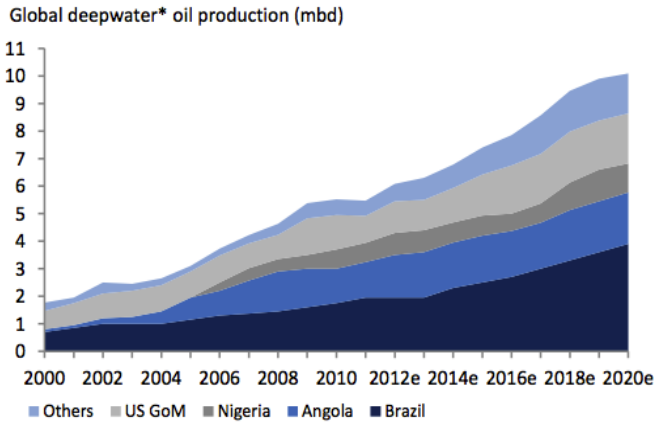
Today charterers demand vessels no older than 10-15 years with DP II (Dynamic positioning system).[105] This has affected the OSV market, shifting demand towards modern, high-end vessels with good operational management.

For the OSV industry, supply of AHTS and PSVs are still higher than demand, and higher cost has therefore not yet been transformed into higher dayrates.

Increased technical complexity

New reservoirs are found in areas with extreme depths, harsh environment and often long way from shore. With declining production base, petroleum companies are under pressure from shareholders to explore and develop new reservoirs. As easily accessible oilfields are already developed, petroleum companies must look to new areas to increase production.[106] Deepwater discoveries have increased significantly over the last years, and the average water depth has more than doubled, as can be seen in appendix 3.6. The global deepwater oil production is therefore expected to increase further in the next years as figure 3.8 illustrates.

Figure 3.8



Source: Pareto Securities 2013

Offshore production in deep water areas is operationally challenging and requires more advanced equipment compared to shallow water activity. More government regulations have lead to a trend towards increasingly complex vessels, adding requirements such as firefighting and oil recovery capabilities.[107] As focus on harsh environment has increased, petroleum companies are eager to avoid production disruptions. They are therefore willing to pay a premium for high-end assets.[108] The demand for large, high-end OSV vessels is therefore expected to increase.

[105] RS Platou Markets: The Platou report (2013) pg. 36
[106] Barclays Equity Research: Global E&P capital spending update (18.05.2013) pg. 16
[107] ABG Sundal Collier: Offshore Supply – Sector initiation (10.04.2013) pg. 7
[108] Terje Thorsen, VP Project Controls Estimation, Statoil Appendix 10.2

3.1.1.3 Regional demand

North Sea

The North Sea is one of the most developed offshore regions, with declining production rate. Today the region has started to regain some momentum as a result of recent exploration successes and new fields coming on-stream during the next few years.[109] Petroleum companies have therefore increased their exploration activities, and E&P spending is expected to increase by 6% in 2013.[110] More than 50 % of the high-end PSV fleet operates in the North Sea, reflecting the high production activity. As exploration has increased, ~20% of the high-end AHTS fleet is also present.

The water depths are challenging, but the main difference from other regions is the extreme weather conditions and harsh environment. For years petroleum companies has therefore requested large and sophisticated vessels. High-end vessels have therefore been termed "North Sea assets", but today this demand-trend is also important in Gulf of Mexico, Brazil and West Africa.[111] This is a result of government regulations, and as Norwegian OSV companies are used to own and operate this kind of vessels they might have an advantage.

America

Offshore E&P activity at the American continent has been rather unstable over the last five years. After the Macondo accident in 2010 all exploration activity was postponed. At the same time major reservoirs was discovered at the Brazilian continental shelf. This led to a boom in Brazilian activity. New regulations are now in place in the Gulf of Mexico and petroleum companies are optimistic for future activity. Despite this, E&P spending is not expected to increase in 2013. This is not the case for Brazil, where several projects are expected to come on-stream over the next years. E&P spending is therefore expected to increase by 15% in 2013. Demand from Petrobras has been the main driver for the Brazilian OSV industry, but the company has now announced reduced future growth as a result of an overheated industry. The long term prospects for the region has therefore been somewhat lowered, reducing the attractiveness of the region.[112]

The American continent is the most important market for UDW rigs, currently employing 83 units. This is due to the extreme water depths. Outside Brazil the distance between surface and reservoir can be more than 7000m. The region is therefore the largest market for high-end AHTS, with 34% of the fleet in operation. Because of the long offshore distance and high activity, ~40 % of the high-end PSV fleet is also present.

[109] DnB Markets: E&P Spending report 2012 (20.08.2012) pg. 35
[110] TTGS Nopec Geophysical Company – Guidance announcement (08.01.2013) pg. 5
[111] Pareto Securities: Oil services research report (11.02.2013) pg.. 58
[112] ABG Sundal Collier: Offshore Supply – Sector initiation (10.04.2013) pg. 12, Pareto Securities: Oil services research report (11.02.2013) pg. 54

West Africa

The West African region has been the second most important growth regions for the offshore industry over the last decade. As growth in Brazil is expected to slow down, West Africa is among the most promising regions going forward. With ocean depth from 1000 – 2100m the region has been an important driver for the deepwater development, especially for the subsea segment. There are currently~30 UDW rigs in the region, employing 20% of the high-end AHTS fleet. The region is still in the development face which explains why only ~7% of the high-end PSV fleet operates here.[113] Barclay's Capital expects the E&P spending for the region to increase by 4.5% in 2013.[114]

Although the outlook for the West African region has been buoyant for years, there have been numerous project delays affecting the growth rate. Local governments have struggled with a dysfunctional approval process for new oil laws and conflicting interest with IOCs and NOCs.[115] Political bureaucracy and uncertainty for local content is the biggest concern going forward.[116] Despite this, West Africa is the most important growth region, and the main question is the timing rather than the potential.[117]

3.1.1.5 Summary – Demand for OSV

The oil price is the most important factor affecting the global E&P spending, which is a leading indicator for OSV demand. Based on fundamental factors such as higher GDP growth and modest supply increase, the oil price is expected to incline from today´s level. New production has break even rates above $80/bbl., which we see as a lower bound for the price. The average current hurdle rate of production is $72/bbl providing a strong cash flow for the petroleum companies. This bodes well for growth in E&P spending which is expected to increase by 13% in 2013. Petroleum companies are under pressure to increase production, and activity is shifted towards deepwater areas with harsh environment. Together with increased technical, safety and environmental focus we therefore see strong demand for modern, high-end vessels. The high-end AHTS segment will be driven by a 25% growth in rig deliveries and the high-end PSV segment will in addition be driven by increased production activity. The demand for subsea services is also expected to increase significantly, as CAPX will more than triple over the next 5 years.

The development is fueled by the high number of deepwater installations and renewable energy projects. Overall we expect demand for OSVs to increase by ~20 – 30 % over the next four years.

[113] Pareto Securities: Oil services research report (11.02.2013) pg. 63 and 64
[114] TTGS Nopec Geophysical Company – Guidance announcement (08.01.2013) pg. 5
[115] Pareto Securities: Oil services research report (11.02.2013) pg. 39
[116] Pareto Securities: Oil services research report (11.02.2013) pg. 39
[117] Pareto Securities: Oil services research report (11.02.2013) pg. 38

3.1.2 Supply of OSV

The supply of OSVs is characterized as slow in response to changes in demand. This is due to the construction time of vessels which range from 1-3 years, depending on vessel type and yard capacity.[118] In this section, we aim to explain and analyze the factors affecting supply.

3.1.2.1 Five decision makers

The supply of vessels is controlled or influenced by four groups of decision makers: shipowners, shippers/charterers, bankers/financial institutions and regulatory authorities.[119] In addition, shipyards are seen as a fifth decision-maker.[120] Because of the nature of these decision-makers, the supply-side relationship in the model is behavioral and difficult to predict. Table 3.2 summarizes the influence these parties have on supply and how we see the situation today.

Table 3.2

Decision-maker	Influence on Supply	Current situation
Shipowners	Order new vessels when the market is expected to improve, and decide when to scrap old ones. Always seek for profit.	Weak market yields low cash flow and return on capital below WACC. Shareholders unlikely to contribute funds other than at great discounts. High leverage.
Shippers/charterers	May stimulate new orders by issuing long-term time charters or become shipowners themselves	Shippers mainly use the spot market, decreasing new orders.
Financial institutions	Access to debt affects to which extent shipowners can invest in new vessels. In a weak market both access and service of debt is limited, reducing supply growth and might lead to scrapping	Lending institutions unwilling to provide debt. Norwegian export financing agency reduce debt available to fund construction of PSVs However, well functioning high-yield market in Norway.
Regulatory Authorities	Affect supply through new safety and environmental legislations. Regional regulations	Local content regulations. Requirements for fire fighting, HSEQ and environmental impact
Shipyards	Capacity Cabability / know-how	Asian yards build on speculation, increasing the supply (PSVs and less sophisticated vessels). Limited numbers of shipyards that are capable of building high-end vessels

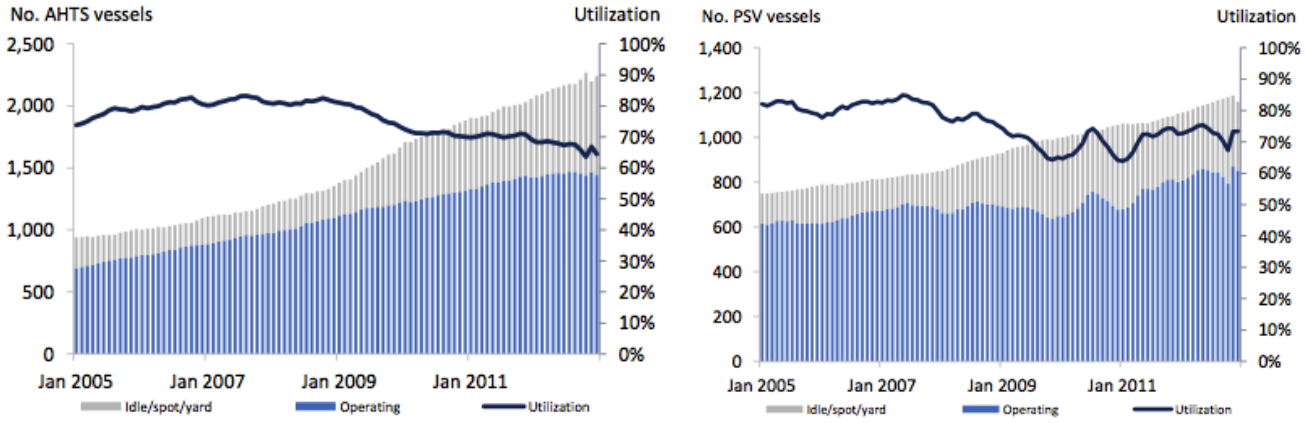
Source: Compiled by authors

Influence from shipyards and government regulations, will be further analyzed in Porter´s Five Forces.

[118] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg. 150, Interview Simen Granerød appendix 10.3
[119] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg. 150
[120] Interview Simen Granerød, Clarksons Shipbrokers, appendix 10.3

3.1.2.2 The total World Fleet

Figure 3.9



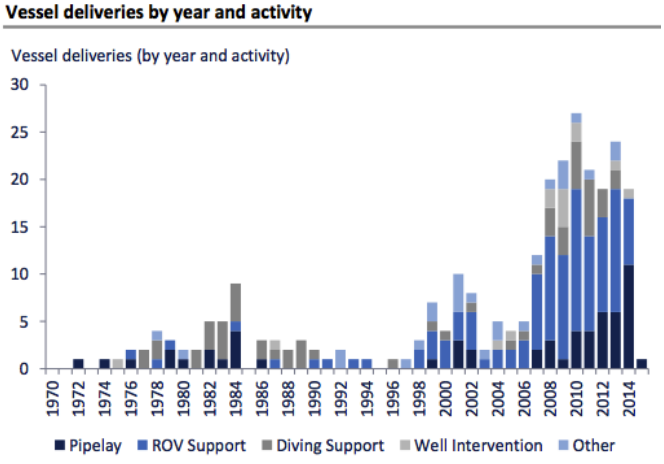
Source: Pareto Securities 2013

The current fleet of AHTS and PSVs counts 1897 and 1190 vessels.[121] There has been a substantial amount of newbuilds in recent years, where the PSV fleet has grown by an average of 60 vessels pr year since 2000. This growth can be explained by the booming dayrates between 2001-2003 and 2006-2008, caused by the high growth in E&P spending. In a booming market, vessel owner's cash flow increase significantly and stimulate their interest in fleet expansion. This behavioral pattern is characteristic for all shipping segments.[122] Because of the financial crisis, many newbuilds were delayed and first delivered during 2009 and 2010. This had major impact on the dayrates as figure 3.18 on page 49 illustrates.

In the subsea segment there has been a large influx of capacity since 2008 and up till today. The largest increase is seen in the ROV support and pipelay segment. This reflects the findings in the demand section, as demand for subsea installations is increasing in deepwater areas.[123]

Figure 3.10

Vessel deliveries by year and activity



Source: Pareto Securities 2013

[121] Pareto Securities: Oil services research report (11.02.2013) pg. 64
[122] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg 134.
[123] Pareto Securities: Oil services research report (11.02.2013) pg. 47

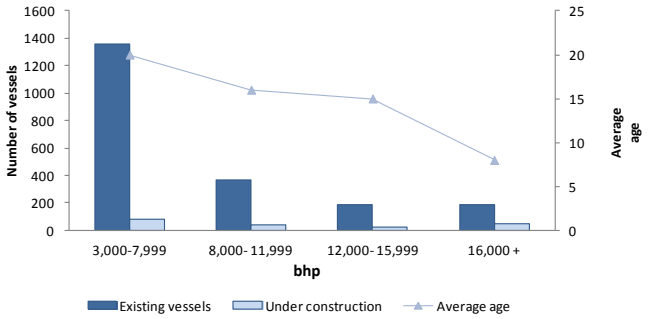
3.1.2.3 Newbuilding

The OSV market is undergoing a structural shift towards modern, high-end vessels. In this section we will analyze the current orderbook for the different segments, and determine the expected supply growth. The underlying date behind the graphs can be seen appendix 3.7.

PSV and newbuilds

The current PSV orderbook is historically high and the fleet is expected to grow by as much as 27% over the next two years.[124] If we look at the high-end segment, the orderbook is higher than the existing fleet, counting a total number of 214 vessels. However, it is not expected that all vessels will be delivered, as cancellation and postponements is common. The high orderbook is a direct result of the shift in demand towards modern, high-end vessels. Even though the activity is expected to increase, the influx of newbuildings might put further pressure on the market. Asian built vessels will increase competition in areas such as Brazil and West Africa, and there is a fear that Asia shipyards will construct additional vessels on speculation of better market.[125] These factors will be further analyzed through Porters 5 Forces.

Figure 3.12 AHTS world wide fleet and orderbook

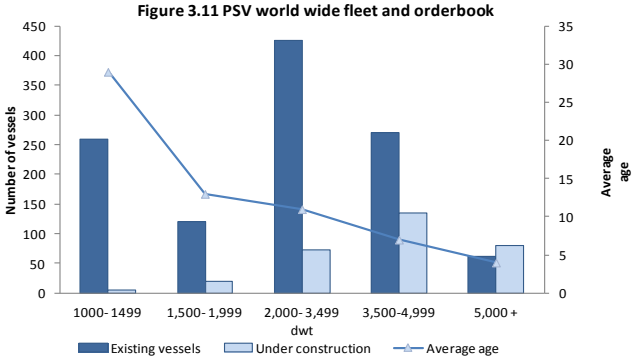


Source: Fearnley Offshore 2013

AHTS and newbuilds

For the AHTS segment there has been lower ordering of newbuilds in 2013, and consequently the orderbook stands at 9% of existing fleet.[126] The highest relative growth is expected in the high-end segment, where the orderbook is 24% or 44 vessels. As we will see in the industry analysis, there are a limited number of shipyards capable of building high-end vessels.[127] The risk of the segment being overbuilt is therefore low, but as the market tightens, more vessels will be ordered by eager vessel owners.

Figure 3.11 PSV world wide fleet and orderbook



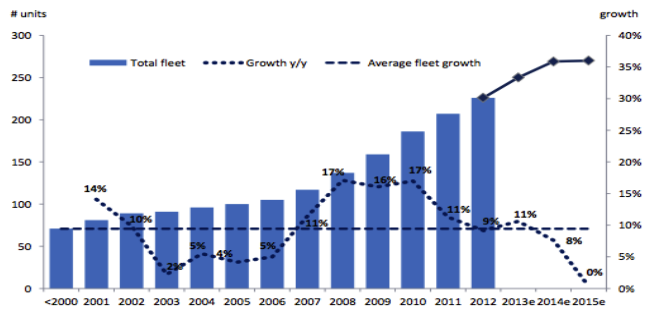
Source: Fearnley Offshore 2013

Subsea and newbuilds

[124] Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg 58, high-end > 5,000 dwt
[125] Pareto Securities: Oil services research report (11.02.2013) pg. 59 and Porters 5 Forces
[126] Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 57, high-end > 16,000 BHP
[127] Discussed under Porter´s Five Forces.

As seen from figure 3.13, the subsea segment has grown tremendously. This market has been the best performing OSV segment supported by strong fundamentals. The fleet growth has consequently been high with a rush of vessel orders in 2012.[128] Over the next three years the fleet is expected to grow by 55 vessels or ~22%. This far in 2013, 6 newbuildings has been added to the orderbook, by shipowners eager to exploit the strong market. There is thus a fear of the segment being saturated but as there are limits to financing we believe the orderbook to grow modest.

Figure 3.13
Fleet growth for Subsea vessels (LOA>90m; DP II+; Ship shape)



Source: Pareto Securities 2013

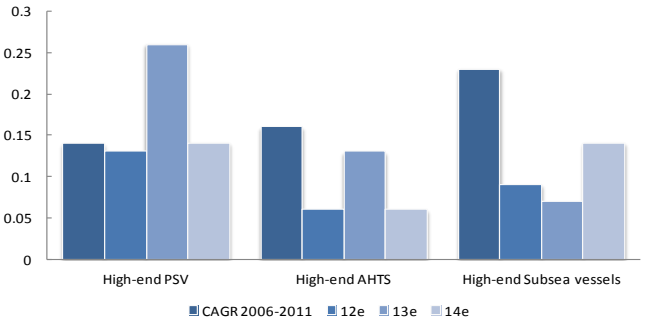
3.1.2.4 Scrapping

It is clear that scrapping has a significant impact on the supply of vessels. However, different vessels are scrapped at an age ranging from 25-40 years. Analysis of the supply side is thus complicated. The main factors that determine scrapping is age, technological obsolescence, scrap prices, current earnings and market expectations.[129] The scrapping in the high-end OSV fleet has been close to zero in the previous years.[130] As we can see from graphs at the previous page, the average fleet age for the high-end segment is 5-8 years and we therefore expect scrapping to be insignificant going forward.[131]

3.1.2.5 Summary Supply

The annual average supply growth in the period 2006-2011 has been 20%.[132] In the years leading up to the financial crisis, good market conditions lead to strong supply growth in all segments. When demand weakened, the market was unbalanced with oversupply of tonnage. This unbalance continued into 2010, due to long construction time and vessel delays. Today we again see a high orderbook, driven by good market prospects for the high-end segment.

Figure 3.14 OSV Fleet Supply Growth



Source: Pareto Securities 2013

[128] Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 59.
[129] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg. 158
[130] RS Platou Markets – Platou Finance (July 2012) pg. 15.
[131] RS Platou Markets: The Platou Report (2013) pg. 36
[132] Pareto Securities: Oil services research report (11.02.2013) pg. 1

The Subsea and AHTS market will grow by 10-22 % while the PSV market might experience a growth of ~30 %.[133] As we will see in *Porters five forces,* there is still a risk for the PSV orderbook to grow further, as Asian yards might utilize excess capacity to build vessels on speculation of improved market. The Subsea and AHTS market looks stronger based on entry barriers, but eager shipowners might distort the market balance.

3.1.3 The dayrate mechanism

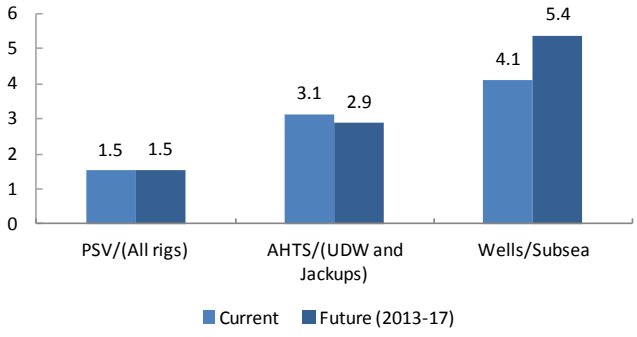
The final stage of the shipping market model is the relationship between supply and demand, and the influence on dayrates. Demand is fairly inelastic to price changes, as it only accounts for a small portion of the petroleum companies' expenses and there are limited substitutes.[134] Supply is inelastic in the short term, as scrapping and layup is insignificant.[135] As a rule of thumb, supply has no difficulty keeping up with demand in the long run.[136] This will therefore limit the potential long term upside. Dayrates are therefore volatile and determined by the current supply/demand relationship.

Based on the supply/demand section we expect growth in demand of ~20-30% as a result of higher E&P spending. At the same time the orderbook is transparent and we expect the fleet growth of AHTS and Subsea to be 10-17%, and the PSV to be ~30%.

To analyze the market balance, we take a closer look at the relationship between orderbook of vessels, rigs and drilling wells. This relationship is important in forecasting the future dayrates. Complete calculations can be seen in appendix 3.8.

The current ratio of PSV pr rig is 1.5, inclusive FPSO. New UDW rigs will increase PSV demand by a minimum of two units, and other assets will increase demand 1:1. The implied demand growth is therefore 284 vessels. Seen in relation to the previously analyzed supply side, there will be an increase in the number of vessels pr. rig. Although some of these vessels will be utilized for other projects, the fear of excess supply looks well-founded. For the AHTS segment, the implied demand from the growth in number of rigs will exceed the supply of vessels.

Figure 3.15 Rig and wells vs. # Vessels



Source: Compiled by authors / Fearnley / Pareto / Morgan Stanley

[133] Pareto Securities: Oil services research report (11.02.2013) pg. 1
[134] Reference to Porters 5 Forces
[135] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg. 158-160
[136] Stopford, Martin (2009). *Maritime Economics* 3rd ed. pg. 134.

According to Marine Money, rig growth implies an increase in the number of AHTS fixtures of 1.500, which implied a higher demand for AHTS. As figure 3.15 implies, supply will grow somewhat less than the implied demand, which will improve the supply/demand balance.

In the subsea segment the number of deepwater wells is expected to increase by more than 50%. The ratio will therefore increase from 4.1 to 5.4 which imply more work for each vessel. This bodes well for increase in freight rates and utilization for both segments.

Dayrates

Vessel owners can choose between two markets to deploy their vessels, the spot market and the term market. The two markets are closely related, and are equally important to the owner`s. We characterize the spot market as contracts lasting less than 30 days, and term market for contracts exceeding 30 days. Petroleum companies have fluctuating demand for vessels and use the term market to cover their long term demand, and the spot market to cover temporarily needs. Vessel owners reallocate vessels between spot and term market, depending on the market outlook and their hedging strategies. In the spot market there is a risk of lower utilization, but as dayrates changes the upside potential can be significant.

Spot market vs. term market

The spot market is a snapshot of the current supply/demand balance. None of the vessel owners have any pricing power and the market can be described as having close to perfect competition. Dayrates therefore tend to fluctuate considerably, and can range from 80.000 – 1.500.000 NOK.[137]

Term contracts are awarded for periods ranging from one month to several years. The rate is negotiated between the owner and the customer, and depends on the current spot rate, operational cost, length of the charter and the future market outlook.

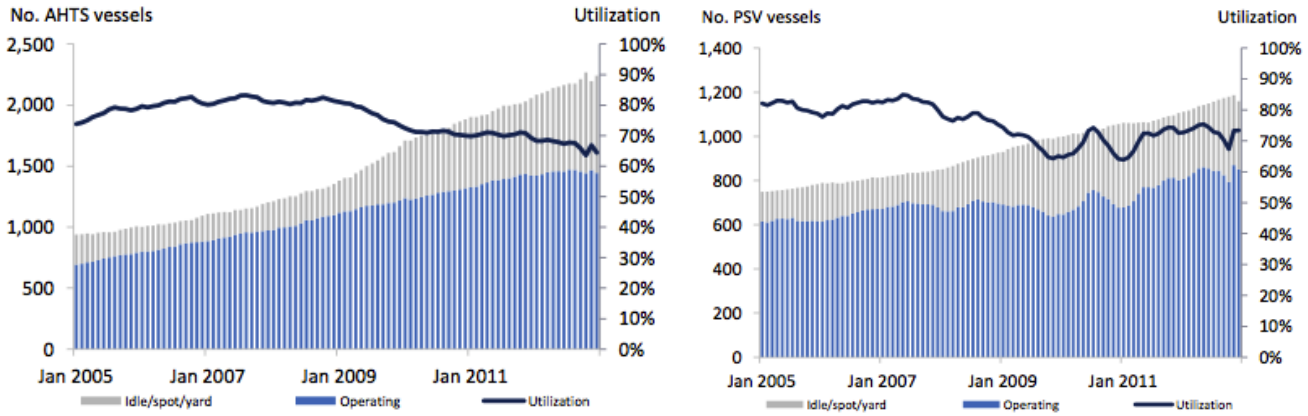
Due to the nature of their services, the different segments have different spot market exposure. PSVs are generally used for cargo transportation for extended time periods, and have thus a higher degree of term contracts. AHTS vessels are used for rig deployment and anchor handling, and are more frequently traded in the spot market. Subsea vessels are more specialized and are generally fixed on longer term contracts.

[137] RS Platou Markets: The Platou report (2013) pg. 35

Utilization

Utilization is a measure of efficiency, and refers to the number of days vessels are in operation. The remaining time is either spent in ports waiting for contracts or for service at yards. Higher spot exposure is usually followed by lower utilization. This can be seen from 3.16, as the average utilization for large AHTS is between 70-80 % while PSVs enjoy utilization around 70-90%.

Figure 3.16 AHTS and PSV utilization

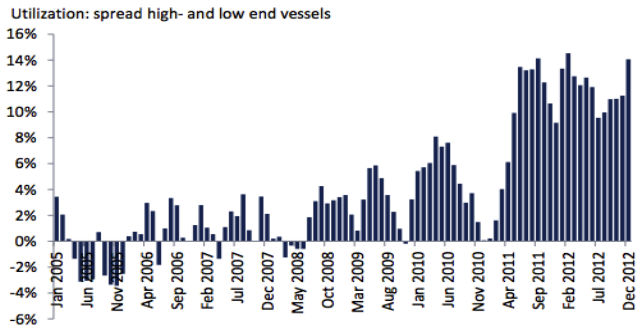


Source: Pareto Securities 2013

Vessels on long term contracts will usually have utilization close to 100%. Subsea vessels are therefore enjoying higher utilization in the current market, as long-term contracts are common.

If we look at the historical relationship between high-end and low-end vessels we see an increased utilization spread in favor of the high-end segment. This is consistent with our previous findings, as deepwater and harsh environment activity requires modern, high-end vessels. Regulatory requirements is also supportive for this trend.

Figure 3.17

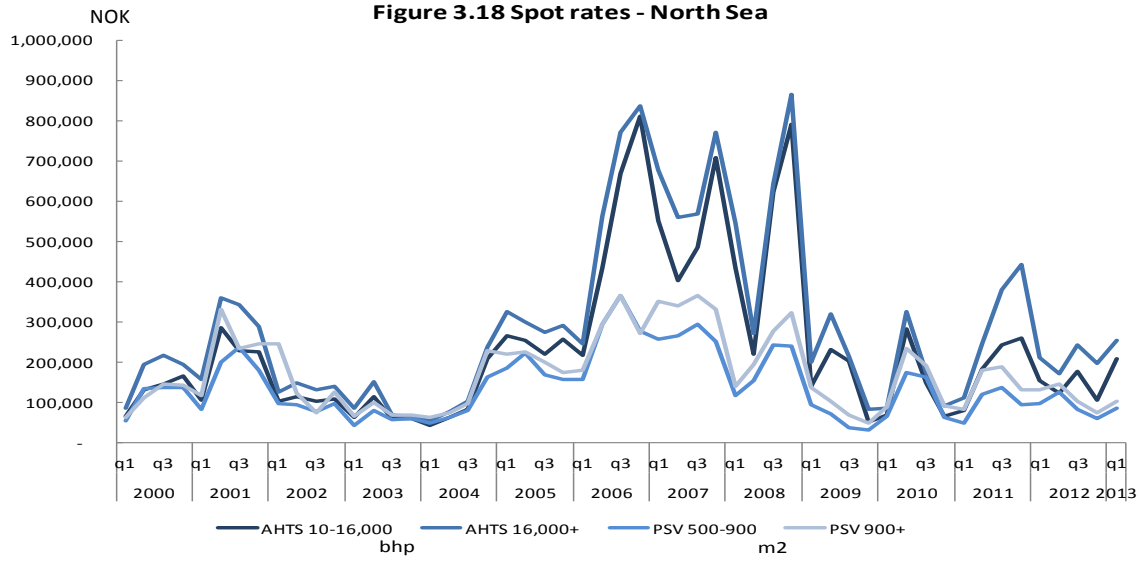


Source: Pareto Securities 2013

Geographical differences

The North Sea market is the only well functioning spot market in the world, as term contracts are more common in other markets. This market is therefore widely recognized as the best barometer for the OSV dayrates. Spot and term rates in other regions are based on the Norwegian spot rate, adjusted for a regional premium depending on the cost level. As vessels are highly mobile, owners quickly exploit profit opportunities across markets. Profit margins are therefore similar. This premium reflects the higher costs associated with local content requirements, lack of skilled labor, political instability, bureaucracy and taxes. Higher costs are also a result of increased environmental and safety requirements. A closer look at the historical development of the Norwegian spot rates is therefore representative.

Figure 3.18 Spot rates - North Sea



Source: Compiled by authors / Platou Shipbroking

As can be seen from figure 3.18, the spot rates have been highly volatile over the last 10 years. The first peak was in 2001, driven by a good financial market and subsequent higher E&P spending. This boom was short lived as the world economy went into recession and the oil price fell. The spot market remained depressed until 2005, when higher oil price fueled E&P spending. As supply was modest, rates reached an all time high. The largest AHTS vessels could earn more than 800.000 NOK/day and large PSVs made as much as 380.000 NOK/day. At the same time as the financial crises deteriorated the demand side, the high influx of vessels lead to increased supply, as discussed in the supply section. This has been the main concern for the last 4 years, and rates still suffer from this oversupply. In Q1 2013 the AHTS market has improved compared to the previous year.

In addition to geographical differences, spot and term rates depends on vessel segment, specifications and age.

3.1.4 Conclusion to the shipping market model

The oil price is expected to increase going forward, based on higher GDP growth and limited growth in supply. Petroleum companies will increase their E&P budget based on this development, as they need to both replace and grow their current production. As the easy available resources have been exploited, activity will move towards deepwater and harsh environment areas. Number of deepwater wells is therefore expected to increase by 50%, and based on the current orderbook we see more than 170 rig/production units entering the market. This will increase demand for OSV services by 20-30% over the next four years, in particular the high-end segment. The newbuilding orderbook is transparent and we see a supply growth of 10-22% for the high-end AHTS and OSCV segment. We therefore expect dayrates and utilization to increase from today`s level. Higher activity will also bode well for increased high-end PSV demand, and the utilization spread is in favor of high-end vessels. But as the orderbook implies a supply growth of ~30%, we are afraid of a weak market balance affecting dayrates and utilization for PSVs going forward.

3.2 Porters Five Forces

The attractiveness of an industry is ultimately a result of the possibility of earning returns above the cost of capital. In general the attractiveness is a function of the competitive landscape, and high competition reduces the chances of obtaining abnormal returns.[138] For the investor it is therefore highly important to analyse the different forces affecting the competition, and thus returns.

3.2.1 Competition from substitutes

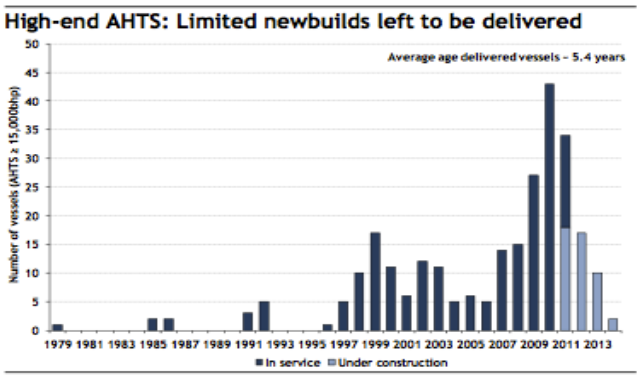
All three segments deliver specific services to the petroleum clients and there are practically no available substitutes. As described in the shipping market model petroleum companies E&P spending is highly dependent to the oil price. OSV expenses accounts for only a small fraction of this budget. The price elasticity is therefore low, amplified by the lack of alternative services. *Based on this we find the threat of substitutes as very low.*

3.2.2 Threat of entry

In order to analyze the potential threats of new entrants to the OSV industry, we need to look at the barriers to entry. In this process it is necessary to distinguish between the different segments, and low-end vs. high-end. The factors that affect the ability of market entrance are yard capacity, complexity of operations, construction time, capital requirements, legal barriers and economies of scale.

For the ATHS segment, there is a substantial difference between the high- and low-end vessels. The latter is a highly commoditized asset, due to high capacity at Asian shipyards and the relatively short construction time.[139] As a result, this segment has been overbuilt in recent years. In the high-end segment however, the entry barriers are significant. There are few yards with expertise and capacity to construct these vessels and the current orderbook is placed at mainly Norwegian yards.[140] The limited number of newbuilds can be seen in figure 3.19. Due to the complexity of the vessels, the construction time is around two years and the cost is USD 75~90m.[141] Entry barriers are therefore high for the high-end AHTS segment.

Figure 3.19



Source: ODS Petrodata, Arctic Securities

[138] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 189
[139] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 23.
[140] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 24.
[141] Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 49

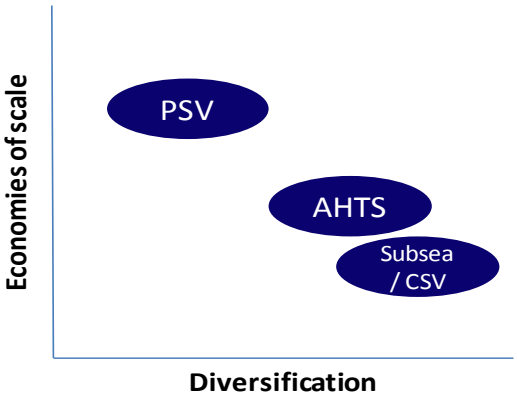
The same applies to the Subsea segment, which is characterized by even more sophisticated vessels. The price of these vessels can be more than USD 100m, and the capital requirements are thus high. Operation requires skilled labor capable of operating complex machinery and equipment. The subsea segment has therefore even higher entry barriers compared to the other segments.

The PSV segment is characterized as the most commoditized segment of the OSV market. As the vessels are utilized mainly for cargo- and personnel-run, the complexity is low. The construction time and cost is also low compared to the other segments. A vessel can be built in 1 – 1.5 years and the cost is USD 30~60m.[142] Therefore there are a high number of yards capable of construction these vessels in Europe, Brazil and Asia.[143] From an operational point of view the vessels are less demanding and require only limited expertise and technical knowledge. The segment is therefore more easily accessible for owners, and this support our findings in the supply section, of the high orderbook. Entry barriers are therefore characterized as low.

Overall the OSV market is a capital intensive industry, and medium to large scale operation is required to be efficient. Most of the companies are organized in a similar way, with centralized management groups. Some of the owners have therefore established dedicated training facilities and invested in more comfortable vessels to attract personnel.

Owners have also experienced benefits of simultaneous vessel orders, as operation of identical vessels require less training and can provide economies of scale in operation. If we distinguish between the three segments, it is easier to achieve economies of scale in the PSV segment as there are fewer specifications and the vessels are used for cargo/personnel run. For the AHTS and the subsea segment it is more difficult to achieve high economies of scale. Vessels are heterogeneous, and operation is complex. Despite this, SIOFFs order of eight identical AHTS vessels might represent an economy of scale and a competitive advantage compared to peers. This will further be analysed by management cost per vessel and crew cost per vessel in the financial analysis and in the internal analysis.

Figure 3.20 diversification and economies of scale



Source: Compiled by authors

[142] Siem Offshore – Annual report (2012) pg. 84, Astrup Fearnley Offshore and Shipping Conference, presentation (15.01.2013) pg. 49.
[143] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 26.

Local and governmental laws also influence the possibility of entering the OSV market. There are strict requirements to protect the environment, in addition to crew safety.[144] There are also limitations to how freely companies can operate. For instance, in Brazil vessel owners need special government permission in order to operate. This is part of the Brazilian government's strategy which requires local personnel onboard vessels and other offshore assets.[145] Government regulations therefore possess barriers for new entrants.

Figure 3.21 Increasing barriers to entry

Source: Compiled by authors

We conclude the threat of entry to be high for the PSV segment and medium for AHTS and subsea.

3.2.3 Bargaining power of Buyers

The strength of bargaining power that OSV companies face depends on two set of factors: buyer´s price sensitivity and relative bargaining power.[146] In the *threat from substitute analysis* we concluded that customers are insensitive to price changes. The relative bargaining power is necessary to analyze in more detail.

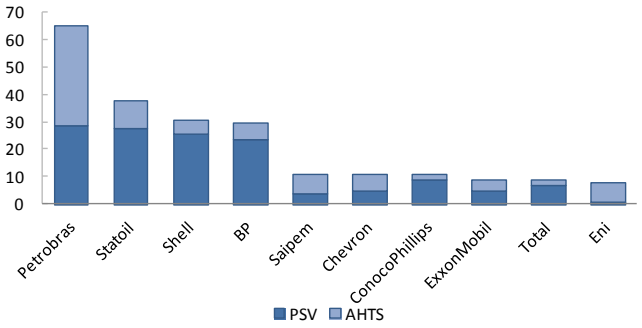
Petrobras and Statoil stand out as the top two high-end OSV clients, as can be seen in figure 3.22 This is reflected in SIOFFs contract coverage as six high-end vessels are contracted to Petrobras and three vessels are chartered to Statoil.[147] Petrobras is a semi-public company, where the Brazilian government owns 64% of the shares.[148] Over the last years, Petrobras has been the most important driver for OSV demand. Statoil is a smaller, but a similar company where the Norwegian government owns ~70% of the shares.[149] The company is among the world´s largest producers of crude oil, and the second largest supplier to the European gas market[150].

The relative size of these companies indicates a strong bargaining power. *Petrobras* is the main driver of demand for OSVs in the Brazilian market, and it is therefore essential for SIOFF to maintain the good relationship to secure vessel employment.[151] The same is true for Statoil, Shell, BP and other majors operating in other regions. Petroleum companies focus on efficiency of operations, on time delivery and zero accidents.[152] In order to be the preferred supplier, SIOFF must meet their expectations.

[144] BSEE, Regulations and guidance; http://www.bsee.gov/Regulations-and-Guidance/index.aspx
[145] Marinelink:, (01.06.2012) "*Supplying Brazils Booming OSV Market*"
[146] Grant, R. M (2010). *Contemporary Strategic Analysis*. 7th edition. pg. 76
[147] Fleet list, Appendix 2.3.
[148] www.petrobras.com, 2013
[149] http://www.statoil.com/no/InvestorCentre/Share/Shareholders/Top20/Pages/default.aspx
[150] Statoil ASA – Annual Report (2012)
[151] Siem Offshore ASA – Prospectus: Private Placement (01.07.2009) pg. 31.
[152] Terje Thorsen – VP Project Controls Estimation, Statoil, Appendix 10.2

Market conditions affect the bargaining power of customers. In a bust market, customers will have relative high bargaining power as vessel owners compete to secure employment in order to cover operating expenditures. In a booming market the reverse is true, and petroleum companies are more concerned with vessel fixtures than the actual cost.

Figure 3.22 Top 10 high-end OSV clients



Source: Compiled by authors / Pareto Securities 2013

Another way to look at the clients bargaining power is to determine the ability of vertical integration.[153] As already stated, the clients are large and have both the capital and operational knowledge to overcome the entry barriers. By gaining control over the value chain they could reduce dependence of suppliers. This is unlikely to happen as petroleum companies value the flexibility of multiple OSV suppliers and are under pressure from shareholders to increase returns from assets in place.

We conclude the bargaining power of buyers to be medium.

3.2.4 Bargaining power of Suppliers

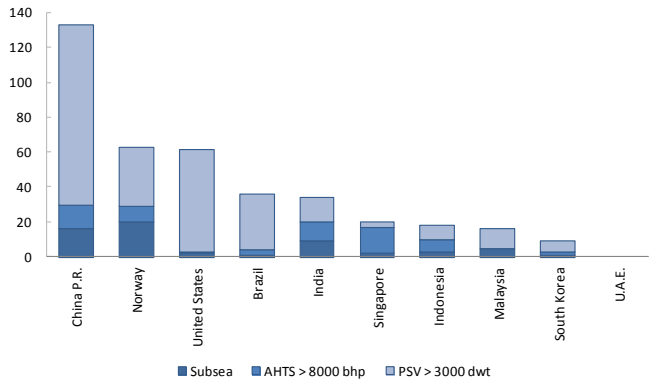
The OSV industry relies on several different suppliers, and their relative bargaining power can therefore influence vessel owner's margins. To analyze the OSV industry we will look at the most critical suppliers which we consider to be shipyards and labour.

Shipyards

There are numerous shipyards capable of building OSV vessels, but only a few yards have the knowhow and experience of building high-end AHTS and Subsea vessels. China is the largest constructor of low and medium-end vessels in addition to high-end PSVs, while US and Norway is leading constructors of high-end AHTS and Subsea vessels.

Shipyards building OSVs are also involved in conventional shipping construction. At the moment there are few or none newbuilds in these segments. Almost 90 per cent of Chinese shipyards received no orders in 2011, and ~28% have not received orders since the end of 2009.[154]

Figure 3.23 Offshore orderbook 1st Jan 2013 - Medium / High End



Source: Compiled by authors / Pareto Securities 2013

[153] Grant, R. M (2010). *Contemporary Strategic Analysis*. 7th edition. pg. 77
[154] Bloomberg (07.06.2012), "Chinas shipyards fail to win orders as Greek owners shun loans"

In the same period only a few Asian yards have went bankrupt, which has led to huge excess capacity. In the last two years owners have become more reluctant to order vessels from Asian yards, as a result of several delays and technical faults. One example of such problem is the Norwegian company Mosvold Shipping order of four AHTS at an Indonesian shipyard with delivery in 2009. The first vessel was delivered in June 2011.[155] Despite of this, yards with excess capacity are building vessels on speculation, as can be seen from figure 3.23.[156] These vessels are delivered to new owners when delivery is certain, and can threaten the market balance.

Going forward we must expect yards to improve their competence, but near term Asian suppliers have low bargaining power.

United States and Brazil is the 3rd and 4th largest constructer of high-end OSVs. Due to Brazilian regulation, Petrobras awards more contracts to local suppliers with vessels built in this region.[157] The Brazilian yards are considered relatively inexperienced in building high-end vessels, and this is expected to cause construction delays going forward.[158] Today the Brazilian yards are fully utilized, indicating strong bargaining power. As the orderbook is already high, the stronger bargaining power is less likely to have any major impact for OSV owners.

Norwegian yards are market leading within high-end vessels and more sophisticated vessels. This can be seen from figure 3.23, where Norwegian yards account for about 15% of high-end orderbook in 2012. The OSV market is undergoing a structural shift towards new, high-end vessels.[159] Going forward we expect Norwegian yards to be among the preferred constructors, but as vessel owners are price sensitive, their bargaining power is limited.

Labour

Crew expenses accounts for 60-80% of vessels OPEX, and is therefore the single most important driver of costs.[160] Due to the strict local content requirements in Brazil and soon in West Africa, ship-owners are required to hire and train local crew. This has proved to be costly and very difficult, mainly due to a lack of modern training facilities and procedures.[161] Currently there are too few officers educated and graduated in Brazil compared to the demand. This has created a deficit of skilled labour and subsequently higher wages.[162]

[155] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 24.
[156] Interview Simen Granerød, Clarksons Offshore, appendix 10.1
[157] Marinelink:, (01.06.2012) "*Supplying Brazils Booming OSV Market*"
[158] Wall Street Journal (08.12.2011), "Brazil Shipyards Suffer Growing Pains In Struggle To Meet Demand". And Pareto Securities: Oil services research report (11.02.2013) pg. 128
[159] Pareto Securities: Oil services research report (11.02.2013) pg. 57.
[160] www.marinemoney.com – OSM, Jan Morten Eskilt presentation (06.10.2010) pg. 2
[161] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 35
[162] www.marinemoney.com – OSM, Jan Morten Eskilt presentation (06.10.2010), pg. 7

This requirement has also created a very competitive environment where key personnel change positions on a regular basis.[163]

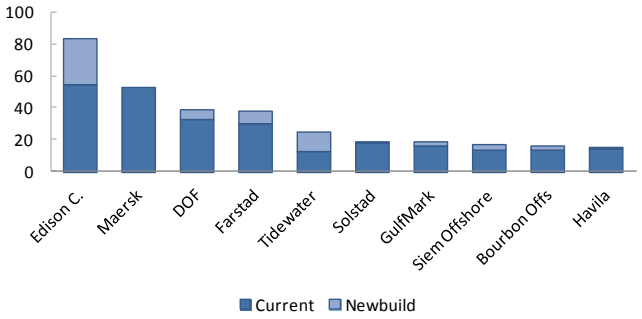
Attracting crew is therefore essential, and it is easier with a brand new vessel with superior accommodation and equipment.[164] High-End fleet can therefore be an edge in attracting crew.

We conclude the bargaining power of suppliers to be low within the PSV segment, and medium for the more sophisticated vessels.

3.2.5 Rivalry between established companies

There are 178 operators within the medium and large supply vessel segment.[165] Tidewater Inc is the largest operator of AHTS and PSVs, but the medium and high-end segment only contributes 44% of total revenue.[166] With focus on owners of high-end OSV owners, Edison C. and Maersk is the largest, followed by DOF and Farstad. SIOFF is ranked as the 8th biggest owner. In regard to the subsea segment (MRSV/OCV), DOF Management is the largest player with 23 vessels. The top 5 firms operate 73 vessels.[167]

Figure 3.24 Top 10 high-end OSV owners

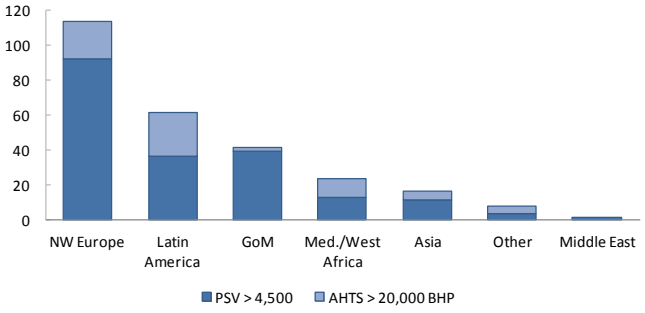


Source: Compiled by authors / Pareto Securities 2013

North West Europe and Latin America are the regions currently employing most of the high-end fleet. Especially the North Sea is the most developed market in terms of high-end, and vessel owners from more than 30 countries are present.

In bust periods with excess capacity, exit barriers to the industry are of significant importance. There is a well-developed second hand market for vessel transactions, organized through shipbrokers.

Figure 3.25 Cumulative high-end PSV & AHTS, No. Units 1. Jan 2013



Source: Compiled by authors / Pareto Securities 2013

[163] Arctic Securities: Siem Offshore ASA – Initiation of coverage (16.08.2011) pg. 29
[164] Pareto Securities: Supply sector research report (19.09.2011) pg. 22
[165] Farstad Shipping – Business Review (2012), pg. 52.
[166] Tidewater Inc. – Annual Report (2012) pg. 22
[167] Clarksons Research Service Limited: Offshore intelligence monthly, (Jan, Feb, March, April 2013)

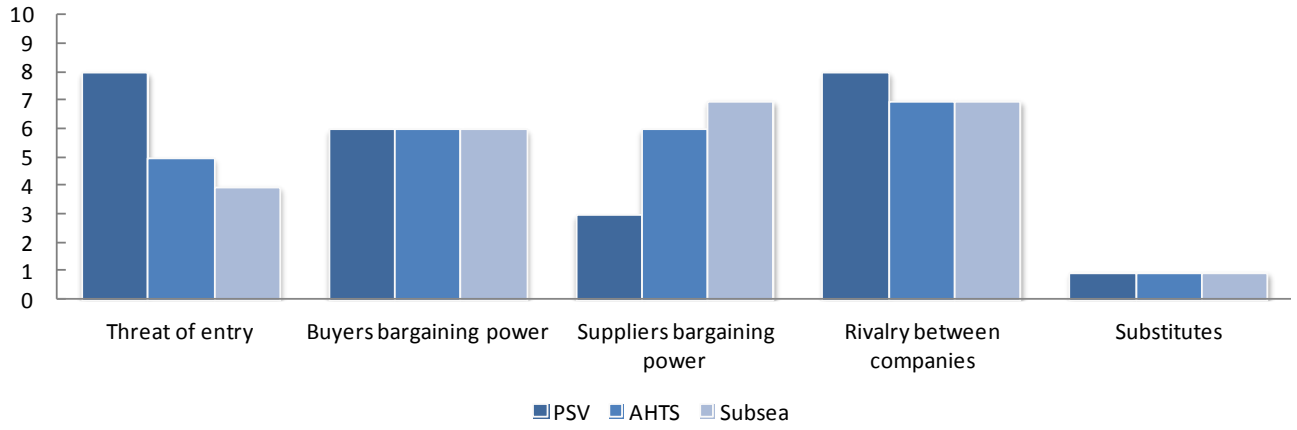
However, second hand values follow the general market movement, and the latest bust has reduced the amount of deals concluded.[168] In addition, increased focus on a new and modern fleet has led to fewer transactions of older vessels. This indicates that there is cost associated with leaving the industry, which is higher in bust markets as vessel values are lower. This increases the rivalry between existing companies as few participants leave the market.

We conclude the rivalry among existing companies to be high.

3.2.6 Conclusion

In the following we have summarized Porters five forces and the potential threat these forces possess. This will influence the attractiveness of the different segments and the possibility for excess returns. The potential threats are ranked from 0 to 10, where 10 indicate a big threat to the segment.

Figure 3.26 Conclusion Porters five forces



Source: Compiled by authors

[168] Interview Simen Granerød, Clarksons Offshore, appendix 10.1

3.2.7 Market outlook for the OSV industry

Porter's five forces give us an implication of how the industry attractiveness is today. In order to forecast profitability in the long run, we need to predict whether there will be potential structural changes within the OSV industry.

Today, there are few (or none) companies which own only high-end vessels. Due to financial constraints and capacity at yards, we do not believe there is a climate for M&A activity. Few companies are likely to leave the market as a result of currently high exit barriers. As a result of low M&A activity, we forecast that the number of companies within the OSV industry will remain high, and the rivalry between companies will be unchanged. We also believe there will be higher entry barriers in terms of higher capital requirements as a result of demand after more sophisticated vessels.

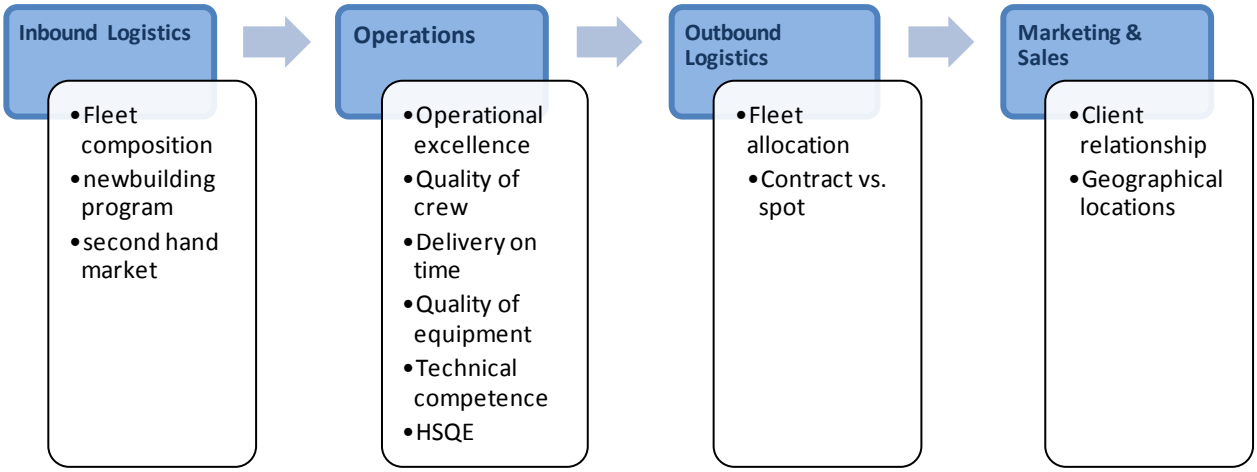
Due to the historical fluctuations in the industry, we expect companies in the future to diversify their fleet composition to be able to deliver a broader set of services. An example of this is SIOFFs focus towards the renewable energy business with one dedicated newbuilding. It is also likely to see companies expand their business towards new geographical areas, to meet new demand trends. There are many players in the industry, and therefore difficult for SIOFF to increase their market share significantly within the next 5-10 years. As a result of these findings, we do not expect any structural changes in the OSV industry which will change the industry profitability in the long run.

3.3 Internal analysis

3.3.1 Value Chain Approach

We have now analyzed the competitive environment and the supply/demand balance in the OSV market. In the next section we will analyse SIOFFs internal resources and capabilities and how the company utilizes these resources to generate returns. We will start this process by study SIOFFs value chain and identify the core resources.[169]

Figure 3.27 SIOFFs value chain



Source: Compiled by authors

One of the most important strategic factors for an OSV company is to determine the composition of vessels. Offshore supply is cyclical business and it is thus essential to have the proper fleet composition in up- and downturn. The outbound logistics of the firm is to obtain the optimal fleet allocation according to clients demand and the future market conditions. If the market is expected to improve, it can be beneficial to have low contract coverage to utilize higher spot rates.

In order to optimize the steps in the value chain, SIOFF need physical resources in terms of vessels and geographical locations, in addition to human resources that analyze market trends and determine the fleet composition. Due to the high competition in the industry, it is essential that SIOFF focus on operational excellence in order to maintain and obtain new contracts with charterers. Hence, the focus on skilled crew and high technical competence is a vital resource. In order to optimize the value chain and efficiently exploit these resources, SIOFF need a strong financial and organizational foundation

Each part of the value chain requires the application and integration of different resources and capabilities. These will be analyzed by applying a VRIO framework[170].

[169] Barney, Jay B. And Hesterly, William S. (2012). *Strategic Management and Competetive advantage.* 4th ed. pg. 72
[170] Barney, Jay B. And Hesterly, William S. (2012). *Strategic Management and Competetive advantage.* 4th ed. pg. 68

3.3.2 VRIO

Based on the different steps of the value chain we will analyze physical, human, financial, and organizational resources in order to determine potential competitive advantage.

3.3.2.1 Physical resources

The fleet and competitive advantage

SIOFFs fleet is the main source of revenue. As previously mentioned, SIOFF has a fleet of modern, high-end vessels, the youngest among peers. This has proven valuable as demand from petroleum companies has shifted towards modern vessels suitable for deepwater and harsh environment.[171] For charterers, like *Statoil* and *Petrobras*, it is extremely important not to be associated with environmental damages, and therefore they demand modern vessels with high quality of operations. The modern fleet of high-end vessels is therefore a competitive advantage and put the company in a position for further growth.

SIOFF has pursued a growth strategy, by ordering multiple vessels at the same time, with the same specifications. In this way they have been able to obtain lower construction price.[172] After delivery, identical vessels allows for greater economies of scale in crew training, inventory/spare part management and vessel repair. The whole fleet of AHTS vessels is of the same class, and the same is the case for the OSCV under construction.

The modern fleet of similar vessels that SIOFF possess is rare among OSV companies. Due to low financial gearing relative to peers, the company will have the opportunity to maintain this advantage in near future. Construction time and limited yard capacity will make other companies lag a couple of years after SIOFF.[173]

This analysis suggests that the fleet is highly valuable and a strength for SIOFF. The modern fleet and fleet composition is rare, making it a temporary competitive advantage.

[171] Siem Offshore – (Q4 Report) pg. 21
[172] Siem Offshore – Annual Report (2006), pg. 6: approx NOK 3.2 billion for first 6 vessels, approx USD 80m per vessel. Compared with historical values in Fearnley foil pg. 49, is seems that SIOFF managed to achieve a lower construction price.
[173] Ref. Porters Five Forces

Geographical location and competitive advantage

SIOFF is present all over the world, with the majority of employees from Brazil and Norway.[174] The Brazilian subsidiary Siem Consub has more than 20 years experience in Brazil. This company manages the vessels operating in Brazil, all which are under contract with Petrobras. SIOFF has been awarded *Petrobras* highest awards for quality operation several times.[175] Currently four vessels are under construction in Brazil (2 PSV and 2 OSRV). The long-time experience in the area and the good relationship with the biggest petroleum company, gives SIOFF a strong position in the market. Currently only Farstad has a similar subsidiary in Brazil. The Brazilian subsidiary is therefore a valuable resource for the company.

Table 3.3

Employees	Onshore	Offshore	Sum
Norway	88	363	451
Brazil	125	400	525
Germany	20	1	21
Netherlands	6	64	70
USA	4		4
India	2		2
Ghana	5		5
Sum	250	828	1078

Source: Compiled by authors / SIOFF AR

The African continent stands out as a fairly new market for OSVs, with high expected demand growth. Going forward we expect local content regulations to tighten which will translate into higher operating costs. The area lacks infrastructure and few OSV companies have onshore personnel. SIOFFs position is therefore in line with that of peers, but their experience from operation in Brazil might be valuable when increasing their international presence. Overall SIOFF has operations and experience in a broad specter of geographical areas with a flexible organization.

The geographical locations is seen as a valuable resource and a strength to the company, as we expect petroleum activity to move into new areas. Due to limitations in rarity and cost-to-imitate, we see this resource as a temporary competitive advantage only in the Brazilian market.

Siem Offshore Contractors and Competetive Advantage

SIOFF is the only company of the peers that has targeted the renewable offshore energy industry. Through this strategy SIOFF has managed to obtain a competitive advantage by combining installation expertise and current asset base.[176] This will result in higher fleet utilization compared to the average market. SOC became a wholly owned subsidiary in March 2011, and we believe the effect will be greatest for the new OSCVs . However, this resource is not inimitable in the long run, as competitors also can shift strategies towards renewable in the future.

This analysis suggests that Siem Offshore Contractors is seen as valuable and a strength to SIOFF. The resource is seen as a source of temporary competitive advantage.

[174] Siem Offshore ASA – Annual Report (2012) pg. 8 and 9.
[175] Siem Offshore – Prospectus: Private Placement (01.07.2009) pg. 31
[176] Siem Offshore – Company presentation, Pareto Conference (12.09.2012) pg. 5

3.3.2.2 Individual and Human Resources

The human resources include training, experience, and insight of individual managers and workers in the firm. In this section we will analyze crew and executive managers

Crew

The knowledge and the experience of the crew is a vital resource for SIOFF. With the already mentioned demand after quality of operations from charterers, the crew plays an important role in this matter. It is therefore essential for SIOFF to have a high quality of training of employees. SIOFF has a long-term collaboration with *Offshore Simulator Centre* and *Ålesund University College* in order to achieve an optimal training of crew.[177] This is part of SIOFFs plan for a comprehensive and systematic personnel and training development.[178] As mentioned in Porters, a new and modern fleet will attract experienced crew. This is beneficial for SIOFF as they have one of the most modern fleets among competitors. Another attracting factor is zero work related accidents from 2009-2012.[179]

There is nothing to suggest that SIOFF do not fully exploit their qualified crew. However, this is in line with competitors. There is progressively more focus on training and safety among competitors, which gives the companies an incentive to invest more in their sailors.[180] It is believed that those who do not seek to obtain highly qualified personnel will lose market shares in the long run.

This analysis suggests that the crew is valuable and a strength for SIOFF, but due to limitations in rarity and cost-to-imitate, we see the resource as a competitive parity.

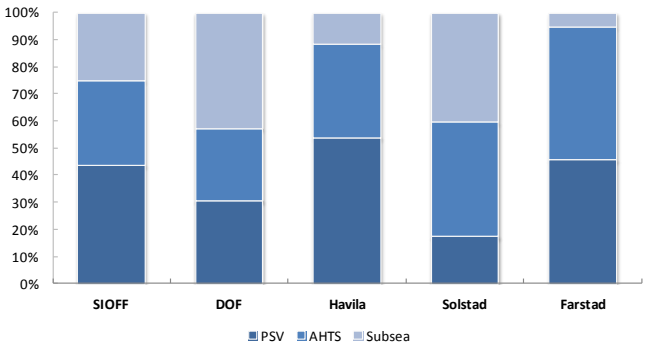
Management and Board of Directors

The board of directors has been very stable since the beginning in 2006.[181] This underpins a long-term focus, and gives management time to comply with their strategy. The current CEO has been with the company for the entire period and there have only been minor changes in the management.[182] As described in section 2.5, the management team has relevant experience from related industry through former employments in other maritime companies. The Norwegian maritime cluster is small, and this indicates good influence towards Norwegian yards, lenders and charterers. With the top management skills and expertise, SIOFF is able to exploit opportunities within the industry. In the following we will analyze how management has performed in order to determine a potential competitive advantage.

[177] Siem Offshore ASA – Annual Report (2011) pg. 14
[178] http://www.skipsrevyen.no/nyheter/11020.html
[179] Siem Offshore ASA – Annual Reports (2009-2012)
[180] Annual reports 2012: Havila pg. 22, DOF pg. 27, Farstad pg. 6, Solstad pg. 19.
[181] Siem Offshore – Annual Reports (2007-2012) board of directors report
[182] www.siemoffshore.com - Management

The *fleet composition* is a strategic operational choice made by the management. In 2006, they placed order for 6+6 AHTS at the same yard. As a result of the general market turmoil and declining spot rates in the beginning of 2009, SIOFF cancelled four of these vessels in March 2009.[183] The subsea segment improved during 2011, and SIOFF ordered four new OSCVs in 2012 on attractive term.[184] This looks like a good strategic choice as the subsea market is expected to improve, analyzed in the shipping market model. The management has not guided any further investments in vessels beyond 2014.

Figure 3.28 Fleet composition, peers



Source: Compiled by authors / Annual reports 2012

The strategic choices made by management indicate that they have the ability to quickly adjust their strategy to meet changing market outlook. As can be seen from figure 3.28, SIOFF has one of the most diversified fleet today. This increased diversification will reduce market risk, which is valuable in a cyclical industry.

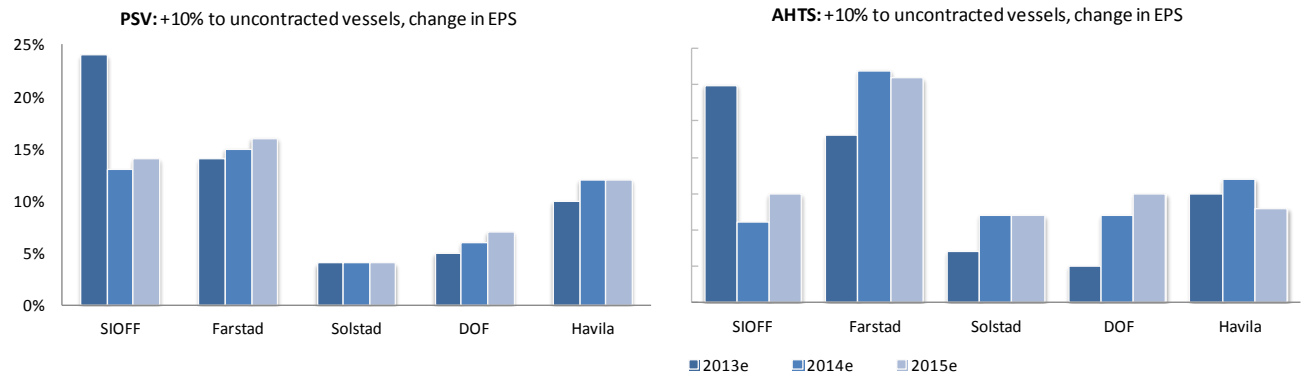
One of SIOFFs stated strategies has been to increase presence in different regional areas.[185] The management has successfully accomplished this strategy by securing long term contracts in areas such as Far East, South America and West Africa.[186] In addition, *Petrobras* decided to charter 4 of the new AHTS vessels from SIOFF in June 2010. However, these vessels operating in Brazil are locked in at unattractive rates, on average, through 2014.[187] This was a result of market turmoil, and *Petrobras* having greater bargaining power. In perspective this has been a poor decision as EBITDA contribution from these contracts has not been satisfying, but they successfully increased their competitive position in the Brazilian market.

Vessels ordered at Brazilian yards can also be seen as a part of the strategy to increase geographical presence. These orders have been delayed several times, which can question whether the decision has been made at the expense of current income.

[183] www.siemoffshore.com – Stock Exchange Notices
[184] Pareto Securities: Oil services research report (11.02.2013) pg. 126
[185] Siem Offshore – Annual Report (2009) pg. 10
[186] Siem Offshore ASA – Annual Report (2009) pg. 10
[187] Pareto Securities: Oil services research report (11.02.2013) pg. 126.

In figure 3.29 we can see that SIOFF and Farstad are the most spot exposed of peers. This exposure can be valuable if dayrates improve, increasing volatility of earnings. Going forward this might be a positive factor for the AHTS segment as vessels in Brazil finish contracts with Petrobras. Based on our findings in the supply & demand analysis we expect AHTS dayrates to improve. For the PSV segment, high spot exposure can be unfavorable due to weak dayrates as a result of the analyzed overcapacity.

Figure 3.29 Spot exposure AHTS and PSV



Source: Compiled by authors / Pareto Securities 2013

The management has only released result guiding in 2008. They were "*confident that the market will provide a positive return for Siem Offshore in 2009.*[188] Their guidance turned out correct, with a net profit of USD 102 million where the majority was attributable to financial items.[189]

As the company has revenues in different currencies they are exposed to exchange risk. It is common to hedge this risk through forward contracts, and SIOFFs management has engaged in this activity. As can be seen from the historical financial statement in appendix 4.1, the net effect has been fluctuating. Therefore there is no clear sign that these activities create value for shareholders. Hedging is therefore not seen as management's core skill.

The senior management has exploited their knowledge and experience, and their choices have been successful to some extent. Management has turned out to be a valuable resource making good strategic choices regarding growth and fleet composition. Combined with good relationship with clients, SIOFF has managed to achieve higher utilization. Despite this, management has not been able to create satisfying shareholder return.

[188] Siem Offshore ASA – Annual Report (2008) pg. 11
[189] Siem Offshore ASA – Annual Report (2009) pg. 12

SIOFF is not the only company with experienced management, and it is too early to state whether the management represent a competitive advantage. Many of the peers have management which has worked together for a longer period of time.[190] In addition, management is a tangible asset which the firm does not control.

The management is a highly valuable resource for SIOFF, but due to limitations in rarity and imitations, we consider them as a competitive parity.

3.3.2.3 Financial resources

In 2012, the debt ratio was 58%, retained earnings were USD 17 millions, and cash amounted to USD 107 millions.[191] As can be seen from the financial analysis, SIOFF and Farstad are the least leveraged firms. Despite SIOFFs aggressive newbuilding program, growth has been funded through several channels. One example is the private placement in July 2009, were gross proceeds of NOK 900 millions where raised.[192] All current newbuilds are likely to be funded through export credit facilities and available cash, including the recent bond issue of NOK 600 million in February 2013.[193] Due to the low leverage, SIOFF may be in a good financial position to future growth.

SIOFF has been able to exploit different sources of funding, which explain the current strong financial position. However, these financial resources are neither rare nor inimitable among competitors.

The financial resources are valuable and characterized as a competitive parity.

3.3.2.4 Organizational and combined resources

The organizational resources of a company are an attribute of groups of individuals and includes among other culture and reputation, informal relationships within the firm and towards the environment, planning, controlling and coordinating systems.[194]

SIOFF is the youngest company among peers, but has already managed to be awarded Petrobras highest awards for quality operations.[195] This strengthens SIOFFs brand and reputation, which is a valuable source to obtaining new contracts, attract qualified labor and retain key executive management.

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[190] www.farstad.com – corporate management, www.dof.no – the management, Solstad Annual Report 2012 pg. 17, Havila Annual Report 2012 pg. 8
[191] Siem Offshore ASA – Annual Report (2012), pg. 24-25
[192] www.siemoffshore.com – Stock Exchange Notice
[193] Pareto Securities: Oil services research report (11.02.2013), pg.128
[194] Barney, Jay B. And Hesterly, William S. (2012). *Strategic Management and Competetive advantage.* 4th ed. pg. 67.
[195] Siem Offshore ASA – Prospectus: Private Placement (01.07.2009), pg. 31

As a result of SIOFFs combined resources, we believe that the organization is structured in a way that gives flexibility when it comes to planning, controlling and coordinating systems. Their experience in the Brazilian market will be valuable when increasing exposure to new regional areas e.g. West Africa. This can be a competitive advantage. In addition, a modern fleet together with strong financial resources enhances the flexibility to exploit market opportunities. This is highly valuable for OSV companies that operate in a cyclical industry.

All these organizational resources combined are a rare feature among OSV companies. This combination gives a favorable organizational capability, and gives SIOFF a competitive advantage.

The organizational resources are highly valuable to SIOFF and rare among the OSV companies. They therefore represent a sustainable competitive advantage.

3.3.3 Conclusion Internal analysis

Table 3.4

Resources	Valuable?	Rare?	Imitable?	Exploited?	Competetive implication
Fleet	Yes	Yes	Only in the long run	Yes	Temporary competetive advantage
Geographical location	Yes	No	Yes	Yes	Parity
Brazilian market	Yes	Yes	Only in the long run	Yes	Temporary competetive advantage
Siem Offshore Contractors	Yes	Yes	Only in the long run	Yes	Temporary competetive advantage
Crew	Yes	No	Yes	Yes	Parity
Management	Yes	No	Yes	Yes	Parity
Financial	Yes	No	Yes	Yes	Parity
Organizational	Yes	Yes	Unlikely	Yes	Sustainable competetive advantage

Source: Compiled by authors / Barney

4.0 Financial Statement Analysis

In order to forecast SIOFFs future cash flow, it is essential to get an understanding of the historical performance. By thoroughly analyzing financial statements, we can document how the company has created value, and how it compares with the peer group. Understanding how the most important value drivers have developed in the past will help us make more reliable estimates of future cash flow.[196] The customers such as Petrobras and Statoil have often long term relationship with the company. The financial performance and profitability is therefore not only of importance for the shareholders but also many of the stakeholders.[197]

SIOFFs performance will be benchmarked against a selected peer group based on operational criteria. The following financial analysis is based on annual reports from SIOFF and the peers between 2006 and 2012. As described in part 2.11, a typical business cycle for the OSV industry is 8-10 years. This would be a desirable number of years to analyze, but since SIOFF was established in July 2005, we have only used annual reports from 2006. We do not use figures from 2005 since we do not have the aggregated number for the entire year, and therefore cannot compute key financial ratios. However we consider a 7 year historical analysis adequate in order to understand SIOFFs historical performance in context with the OSV industry.

First we will reorganize the company´s financial statements by separating operating items from non-operating items, interest bearing assets and interest bearing liabilities. Next we will analyze the company´s historical performance by different key ratios. Together with the strategic analysis, this will be important input to the forecasting. The reformulated statements for SIOFF and peers can be seen in appendix 4.1.

[196] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 107.
[197] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 93.

4.1 Rebalancing financial statements for analytical purpose

4.1.2 The analytical income statement

Operating earnings is a key performance measure, as it shows a firm´s profit from its core business regardless of how it is financed.[198] We have therefore classified items according to their relation with the core business. We have calculated the operating result as NOPAT (Net Operating Profit After Tax). The following reclassifications have been conducted in the income statement:

- In accordance with the delimitation, we have deducted the results from the associated company *Overseas Drilling Ltd* and added the result to *results from non-core operations.*
- Since the financial statement does not distinguish between tax on operations and tax on financial items, we need to estimate them separately.[199] This is done by calculating the tax shield from net financial expenses. Since SIOFF operates in several countries with different tax rates, we have chosen to use the effective tax rate each year.
- Results from associated companies are classified as core operations, as this is results from the vessel Big Orange and subordinated activity in the Brazilian subsidiary.
- The item *gains/loss from sales of asset* is characterized as core operations, as historical years have shown that they continuously aim to have the optimal fleet composition by purchase and sale of vessels. It is important to highlight that SIOFF does not speculate in asset play[200], and these gains and losses are a result of the core business.
- It can be discussed whether to classify interest rate derivatives and currency exchange forward contracts as operational or financial items. However, the income statement does not separate in this way, which makes it difficult to divide the item in practice. As a result, all operating and finance hedges are regarded as being financial decision.[201] Even though different hedging strategies are part of the business, this is not where the management of SIOFF has it core competence and create value for the shareholders. These items are therefore characterized as being part of the non-core business.[202]

[198] Plenborg & Petersen (2012) – Financial Statement Analysis pg 73
[199] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 76.
[200] Asset Play: Sell newbuilding orders in the second hand market before the vessel is delivered.
[201] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 78
[202] Plenborg & Petersen (2012) – Financial Statement Analysis pg 77

4.1.3 The analytical balance sheet

In the balance sheet we have calculated the invested capital, as the sum of all operating assets less operating liabilities. These assets are funded by shareholders and lenders, and are thus equal to equity capital plus net interest bearing debt (NIBD).[203] Shareholders and lenders required return is expressed as WACC, which we will determine in part 7.0. To obtain these figures, the following items are classified as core, non-core or financial asset.

- The item *taxes payable* is a result of core activities and thus characterized as operational and included in working capital.
- The item *other short-term receivables* include a short-term loan to a shipyard in 2008 and 2009. We consider this item as part of operations, and thus part of the total assets as *loan to shipyard*.
- It is difficult to separate cash reserves into operating and excess cash.[204] The cash reserves have been volatile as a result of funding needed for new vessels. For the last three years reserves has been rather stable. As some of this cash will be used for payment of new vessels, we have therefore classified 50% as operational, and the remaining 50% as interest bearing assets.
- SIOFF has made an announcement in January that they will explore strategic alternatives for Siem WIS. The book value of Siem WIS is therefore deducted from the accounting item *intangible assets*, and added as interest bearing asset under *investments in non-core operations*.
- The investment in Overseas Drilling Ltd is deducted from the accounting item *investments in associated companies*, and added to *investments in non-core operations.*
- The item *long-term receivables* include loan to employees, where the latter is characterized as interest bearing. We therefore separate these two items.
- *Forward currency contracts* and *Derivative financial instruments* are classified as financial, due to the fact that this is only used as a hedging strategy and it is difficult to segregate the post.

[203] NIBD = Interest bearing liabilities – Interest bearing assets
[204] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 77.

4.2 Analysis of historical profitability and performance

To analyze the historical performance we will first look at the operational result, and then look at the result through the owner's perspective. For this purpose we will use an approach based on the DuPont model, which is further explained in appendix 4.2. All balance sheet ratios are based on average numbers.

The operational result is created through the core business of the company and is best analyzed through the measure Return On Invested Capital (ROIC).[205] ROIC does not explain whether profitability is driven by an improved revenue/cost relation or better utilization of capital.[206] Therefore we will analyze the sources of value creation from operational activities by decomposing this measure into profit margin (PM) and turnover rate on invested capital. The level of ROIC will be analyzed by comparing ROIC with the company´s WACC calculated in part 7.0.

For the company´s shareholders the ultimate measurement for profitability is Return On Equity (ROE). Shareholders are left with the profit on the bottom line, and are thus affected by all the company´s financial positions. This way ROE capture the result from both operational and financial transactions. By decomposing ROE into Spread and F-Gear, we will analyze the impact of financial leverage on the shareholder value.

In order to analyze trends in the financial data we will use index analysis for both the income statement and balance sheet. However, index numbers does not reveal the relative size of each item. For this purpose, common size analysis is more useful. These analysis will help us explain the development in different operational items and will enable us to identify potential for e.g. better cost or inventory management.[207]

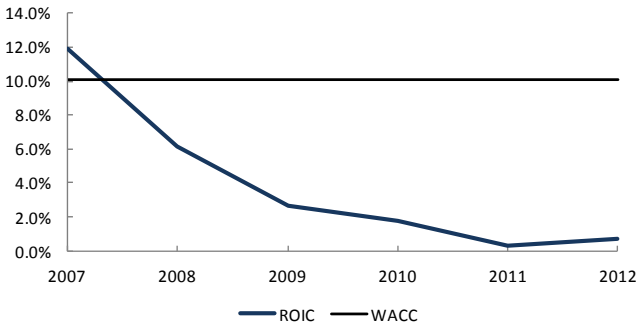
Throughout the analysis we will compare SIOFFs results with the peer group and thus look at the relative development of key ratios. This will give a better image of the company´s historical performance. Analysis of margins, growth rate and return across peer group will be valuable input to the subsequent forecast, as it will help us position SIOFF in the OSV industry.

[205] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 163
[206] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 107
[207] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 112

4.2.1 Operational result – Decomposition of ROIC

Figure 4.1 illustrates the development of ROIC for the period analyzed. As can be seen, SIOFFs ROIC has declined from 2007 until 2011. From 2011 – 2012 there has only been a marginal improvement. This is a result of the negative development of the OSV market and the company´s growth strategy, as we saw in the strategic analysis. Over the last five years SIOFF has expanded the fleet by more than 17 vessels, delivered in a weak market. Compared to WACC from part 7.0, returns are all but satisfying. This will later help to explain why SIOFF is destroying value for shareholders.

Figure 4.1 ROIC vs. WACC

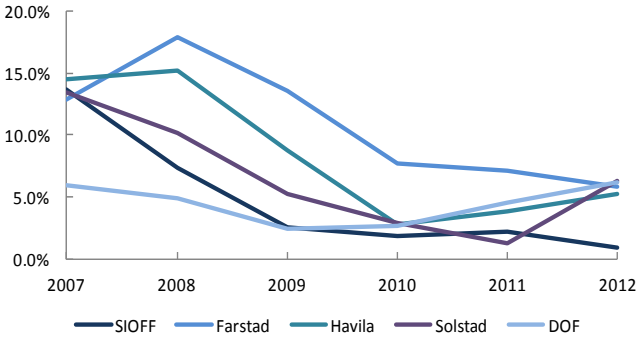


Source: Compiled by authors/SIOFF Annual Reports

For the peer group comparison, ROIC is calculated excluding goodwill to compare the underlying operating result without the effect from acquisitions.[208] ROIC is also calculated before tax, due to some major tax issues for the Norwegian OSV industry.[209]

Development of peer group is much in line with that of SIOFF, and all companies are negatively affected by the weak market conditions. While peer group showed signs of improvement in 2012, SIOFF and Farstad continued the downward spiral. To explain why SIOFF has underperformed we will break down ROIC into profit margin and turnover rate on invested capital.

FIgure 4.2 ROIC before tax



Source: Compiled by authors/Annual Reports

[208] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 141

[209] Norwegian government imposed a new tax reform for the OSV industry in 2007, resulting in major tax expenses for the Norwegian based companies. After a lawsuit, this reform was reversed in 2010. SIOFF was not affected, as the company was based in the Cayman Island.

4.2.2 Profit margin

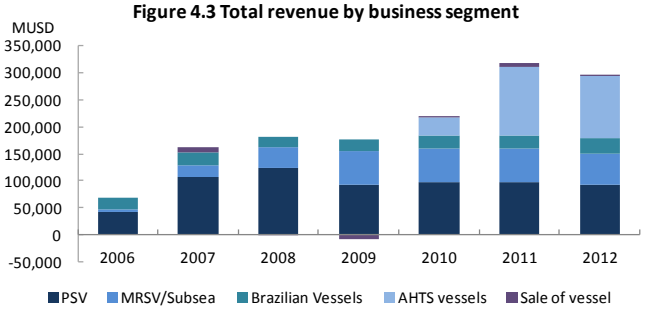
Historical development of revenue

Since SIOFFs first fiscal year as a standalone company, the revenue has been quadrupled. The compounded annual growth rate (CAGR) has been 26.3%. Number of vessels has increased by an average of three per year, and revenues have been volatile. Figure 4.2 illustrates this development and shows the revenue contribution from each segment. Compared to peer group SIOFFs growth has been considerably higher. Average CAGR of peers was 13.5% over the same period.

Revenue from business segments

Revenues can be broken down further to see revenues pr. vessel in each segment. This is illustrated in figure 4.4. The AHTS vessels was delivered in 2010 and 2011, thus 2011 was the first year of full operations. In general the AHTS market is more volatile than the other segmnets, due to high spot exposure and stronger correlation with exploration.[210] Four of the vessels have been on contract with Petrobras since 2011, reducing volatility of earnings. The remaining four vessels have operated in the spot market in the North Sea, struggling with low utilization and dayrates. In 2011 there was somewhat higher dayrates and utilization for the high-end segment compared to 2012. This explains the negative development in revenues from 2011 – 2012.

Figure 4.3 Total revenue by business segment

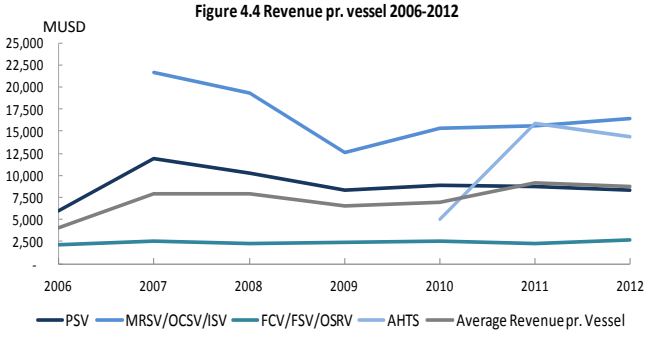


Source: Compiled by authors/SIOFF Annual Reports

The PSV fleet has been the ground pillar of the company since 2006 and accounted for ~30% of revenues in 2012. The segment was hit hard by decline in dayrates in 2008-2009, which explains the negative revenue growth. Since 2009 revenue per vessel has remained low even though demand and utilization has been above 90%. This can be explained by the high number of vessel orders which has deteriorated the supply/demand balance

From 2007 until 2009, the subsea segment experienced declining revenues per vessel. However, since the end of the downturn in 2009, revenues from subsea have grown more than 15 % annually, making it the best performing segment within the OSV industry.

Figure 4.4 Revenue pr. vessel 2006-2012



Source: Compiled by authors/SIOFF Annual Reports

[210] Pareto Securities: Oil services research report (11.02.2013) pg. 62

The spot exposure has historically been low, and utilization has been close to 100%. As the subsea newbuilds will be delivered, we expect revenue to increase significantly over the next 2-3 years.

Revenues from FCV/FSVs have been unchanged, as the vessels are on long term contracts with Petrobras.

Historical development of operating expenses
SIOFFS operating expenses (OPEX) have increased significantly over the last six years, which can be seen in figure 4.5. Crew expenses as percent of revenue have increased by ~14% and general/admin expenses is up ~8 %. Over the same period, revenue per vessel is relatively unchanged, and it is therefore beneficial to analyze expenses in relation to the number of vessels and crew.

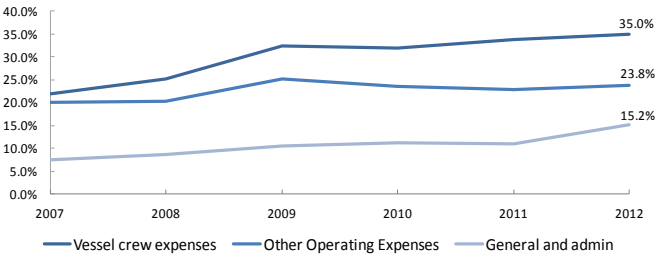
Table 4.1

Profitability analysis per vessel	2007	2008	2009	2010	2011	2012	2007-2012
Crew per vessel		23.7	21.7	30.4	25.2	24.7	4%
Crew cost per vessel USD	1,858	2,121	2,210	2,378	3,204	3,238	74%
Other expenses per vessel USD	1,703	1,721	1,716	1,740	2,163	2,199	29%
Admin per vessel USD	625	725	727	839	1,036	1,405	125%
EBITDA per vessel (USD)	4,280	3,879	2,197	2,473	3,069	2,400	-44%
Source: Compiled by Authors/SIOFF Annual Reports							

As can be seen from table 4.1, *crew cost per vessel* has increased by 74% since 2007. Focus on new segments can to some degree explain this increase, as large, sophisticated vessels demand more skilled labor. These vessels are on the other hand less labor intensive relative to size, and the increase in number of crew in 2010 is due to initiation of new AHTS. From 2010 to 2012 number of crew has *decreased*, but crew cost per vessel has *increased*. In 2012 ~100 Norwegian sailors was replaced by ~100 Brazilian sailors, which have a higher total cost level. From the common size analysis in appendix 4.3 we see the same development for peer group. This is a result of inflation in labor costs, and reflects the already described cost increase in Brazil.[211]

Administration expenses per vessel has also increased, especially from 2010-2012. Compared to peer-group SIOFF has the highest level, but both Havila and Farstad have experienced a similar increase.[212] This can be explained by the increased international focus with local presence in Brazil. When operating in multiple geographical locations, maintaining the cost level is challenging.

Figure 4.5 OPEX in % of revenue, segmented



Source: Compiled by authors/SIOFF Annual Reports

[211] Appendix 4.3, "common-size analysis – OPEX"
[212] Appendix 4.3, "common-size analysis – OPEX"

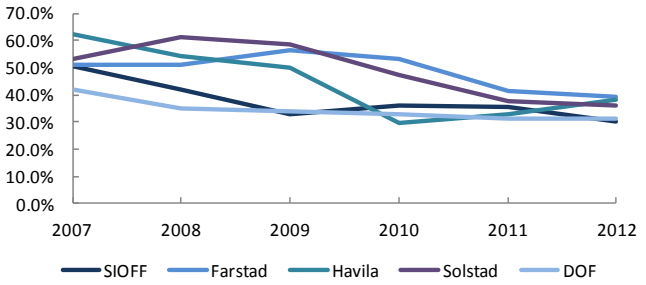
The implementation of SOC can also explain some of the growth, as the total administration has increased. Based on these figures, it seems like SIOFF suffer from inconsistent cost management.

Development in OPEX indicates that SIOFF has a high portion of fixed costs, as they have not managed to reduce costs in response to declining revenues. The effect of identical fleet of AHTS has created economies of scale but has not been enough for the fleet to contribute positively to the result. The results from the OPEX analysis indicates that SIOFF has struggled with maintaining cost control during the extraordinary growth phase.

EBIT and EBITDA

Even though revenue has increased, SIOFFs EBITDA margin has been declining since 2007. Fleet expansion, cost inflation and increased geographical focus have increased OPEX per vessel by 63%.

Figure 4.6 EBITDA-Margin Peer Group

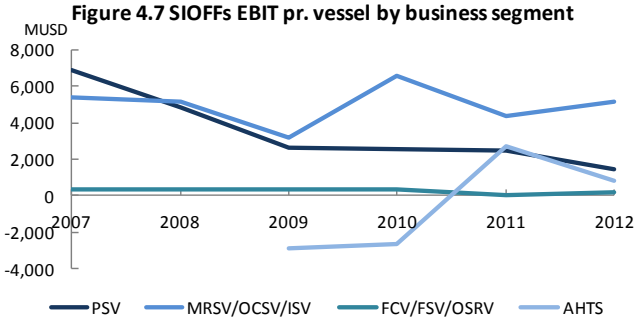


Source: Compiled by authors/Annual Reports

As figure 4.6 illustrates, peer group have also experienced declining EBITDA margin, but managed to turn the negative development in 2010/11. Only Farstad and SIOFF had a negative growth in the last historical year. The Brazilian presence has proven costly and the high-end vessels have not been able to earn the premium sufficient to cover higher costs.[213]

EBIT-margin has followed development of EBITDA closely. As can be seen from figure 4.7, the negative development can to a large extent be explained by the weak contribution from PSV and AHTS. AHTS had negative EBIT contribution in the first year of operation, due to spot exposure and low utilization. The Subsea segment is the only segment showing improvement.

Figure 4.7 SIOFFs EBIT pr. vessel by business segment



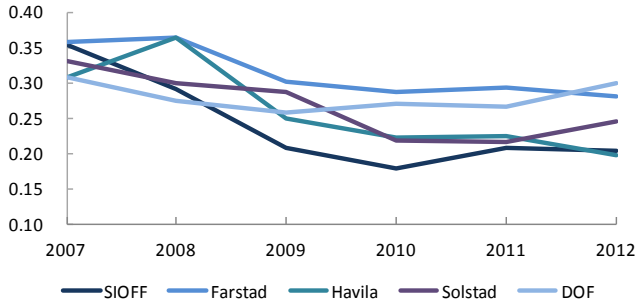
Source: Compiled by authors/Annual Reports

[213] Ref section 3.1.3.1, supply demand, figure of historical dayrates.

4.2.3 Turnover rate invested capital

The turnover rate expresses SIOFFs ability to utilize invested capital. All things being equal, it is attractive to have a high turnover rate of invested capital.[214] OSV companies have a high degree of fixed assets (vessels) and are thus characterized by relatively low turnover rates.

Figure 4.8 Turnover rate, invested capital Peer Group



Source: Compiled by authors/Annual Reports

The turnover rate for SIOFF declined from 2007 to 2010. This is a result of growing asset based in a weak market. Turnover rate declined until 2011 when all AHTS vessels started contributing to revenue. From 2011 to 2012, where both the level of invested capital and revenue declined, the turnover rate decreased slightly.

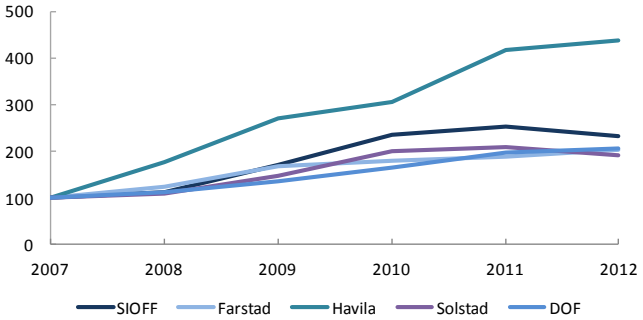
SIOFF have together with DOF and Havila the lowest turnover rate of invested capital. We know from earlier that revenues have increased heavily over the same period. Declining turnover rate must thus be explained by higher invested capital. To analyze this further we will perform an index and common size analysis of the invested capital.

4.2.4.1 Indexing and common-size analysis of invested capital

In the common size analysis in appendix 4.4, we can see that invested capital primarily comprise of vessels and newbuilds. As a result of good market conditions leading up to early 2008, peer group invested heavily in new vessels. Havila is the company with the highest growth, increasing invested capital by 336%. In comparison, SIOFF has nearly doubled invested capital, slightly above that of other peers.

In absolute numbers, Havila is the smallest company in terms of invested capital, followed by SIOFF. DOF is the largest company by far, with an invested capital of approximately USD 4.8 billion. Only Solstad and DOF has been able to increase turnover rate from 2011 – 2012, which can be explained by DOFs subsea exposure and Solstad´s modest capital increase.

Figure 4.9 Index Invested Capital Peer Group



Source: Compiled by authors/Annual Reports

[214] Plenborg & Petersen (2012) – Financial Statement Analysis pg 108.

Net working capital is fairly equal across peer group, and none of the companies have other significant assets. Increased invested capital is therefore only explained by newbuilds.

It looks like all the OSV companies have been too optimistic in their ordering of new vessels, and as a result of weak market conditions new vessels have not been able to utilize their higher earnings capacity. This has led to declining turnover rate. Going forward we expect the rate to increase as the last vessels in the newbuilding program are delivered and the AHTS and subsea market is expected to tighten.

4.2.5 FGEAR

The financial gearing (FGEAR) explains how a company´s asset is funded through equity and debt.[215]

Net interest bearing debt (NIBD) is measured as the difference between interest-bearing debt and interest-bearing assets. As seen from table 4.2, SIOFF has increased leverage from 2007 – 2012. But in the same period, equity has also been raised through share issues. This has been done to finance the newbuilding program, as retained earnings have not been high enough to cover CAPEX.[216]

Table 4.2

FGEAR	2007	2008	2009	2010	2011	2012	CAGR
SIOFF	50%	50%	58%	75%	101%	97%	14.3%

Source: Compiled by Authors/SIOFF Annual Reports

SIOFF and Farstad have the lowest financial gearing compared to the rest of the peers, ref. table 4.3. Havila and DOF have had the most aggressive newbuilding program, which have been funded mostly through debt. Their financial gearing is today at an unhealthy level, and analysts expect that the high level of debt will be brought down in near future.[217] Farstad has followed a less aggressive strategy and has funded newbuildings by a combination of retained earnings, new equity and debt.[218] Solstad has also increased their leverage, but not to the same extent as SIOFF and Havila.

Table 4.3

FGEAR	2007	2008	2009	2010	2011	2012	CAGR
Farstad	0.89	0.85	0.77	0.74	0.78	0.87	-0.6%
Havila	0.84	1.23	1.56	1.75	2.34	2.62	25.6%
Solstad	0.85	0.94	1.12	1.49	2.00	2.03	18.9%
DOF	1.79	1.91	1.74	2.00	2.65	3.05	11.2%

Source: Compiled by Authors/Annual Reports

[215] Plenborg & Petersen (2012) – Financial Statement Analysis pg 117, *FGEAR = NIBD / Equity*
[216] Siem Offshore ASA – Annual report (2009), pg. 7.
[217] ABG Sundal Collier: Offshore Supply – Sector initiation (10.04.2013), pg. 24 & 35
[218] Appendix 4.1 , reorganized statement, Farstad.

4.2.6 Spread

The spread is analyzed to determine whether or not financial leverage is beneficial for SIOFFs shareholders.[219] Borrowing contributes positively to a company's shareholders as long as spread is positive. A negative spread will on the other hand destroy value.

Table 4.4

Spread, SIOFF	2007	2008	2009	2010	2011	2012
Net Borrowing Cost	-6.7%	-3.0%	-1.7%	-3.6%	-5.0%	-5.1%
SPREAD	5.2%	3.2%	1.0%	-1.9%	-4.7%	-4.3%

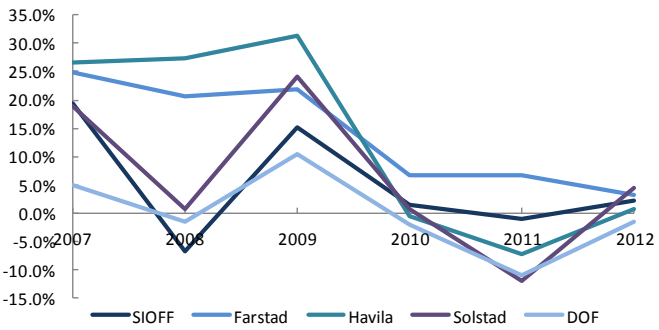
Source: Compiled by Authors/SIOFF Annual Reports

As can be seen from table 4.4, spread has not been positive since 2009.

4.2.7 Owners perspective – ROE

The analyzed key ratios can be summarized in return on equity (ROE).[220] As can be seen from figure 4.10, ROE has been everything from satisfying for SIOFFs shareholder since 2009. In WACC we calculated required return on equity to be 14.9%, which is far from the current level. ROE can be seen in relation with the SIOFFs shareprice development at page 18. Weak ROE in 2008 was followed by a sharp decline in the shareprice. In 2009 the situation improved, and this was reflected by the stockmarket. In the following years, ROE has been weak and the shareprice has been volatile.

Figure 4.10 Return on Equity



Source: Compiled by authors/Annual Reports

SIOFFs profit margin has weakened at the same time as turnover rate on invested capital has decreased. Except of Farstad, all peers have increased financial gearing. As a result of this, all OSV companies have destroyed values for shareholders since 2009. In 2012 we saw a slightly improvement in ROE, where Solstad had the strongest increase. Higher utilization of newbuildings and better market conditions (AHTS and Subsea) can explain this development. Farstad, which has only modest Subsea exposure, experienced a decline in ROE.

[219] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 118; Spread = ROIC – NBC. NBC is calculated as the sum of financial expenses and financial income.
[220] ROE = ROIC + spread * FGEAR

4.3 Liquidity Risk Analysis

4.3.1 Short-term liquidity risk

Liquidity is a crucial subject for any business, as lack of liquidity might be a barrier to exploit profitable business opportunities. A firm's liquidity risk is influenced by its ability to generate positive net cash flows in both short and long term.[221] The short term analysis will uncover SIOFFs ability to meet all short-term obligations as they fall due. The long-term liquidity risk/solvency risk will measure SIOFFs long-term financial health and ability to cover long-term obligations. All liquidity ratios are based on ending year balances, as these are considered the most updated.[222] These ratios will be used as input to determine SIOFFs WACC in part 7.0.

Liquidity cycle

An indicator of the short-term liquidity risk is the number of days it takes to convert working capital to cash.[223] The fewer days it takes, the better the cash flow. The liquidity cycle can be seen in table 4.5.

Table 4.5

Liquidity cycle	2007	2008	2009	2010	2011	2012
SIOFF	63.4	35.5	36.8	41.4	35.3	29.9
Farstad	25.2	33.6	41.3	8.7	7.7	20.7
Havila	(180.2)	(84.0)	(37.5)	(117.0)	(42.9)	(155.2)
Solstad	63.5	32.1	37.5	11.0	30.4	10.2
DOF	41.4	36.5	89.2	43.3	28.1	30.9
Average	**48.4**	**34.4**	**51.2**	**26.1**	**25.4**	**22.9**

Source: Compiled by Authors/Annual Reports

SIOFFs liquidity cycle has improved in recent years, which is a result of increased revenue and tight management of working capital. Even while revenue has increased strongly, SIOFF has managed to maintain working capital at almost the same level, as can be seen in common size analysis. Compared to peers SIOFFs ratio is slightly higher, indicating a higher working capital and higher liquidity risk. However we do not believe that the ratio indicates liquidity problems, as it has improved steadily since 2007. In comparison, we believe there is a greater potential for liquidity problems for Havila, as current liabilities exceeds current assets.

[221] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 150
[222] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 155
[223] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 153, liquidity cycle = 365 / (revenue / net working capital))

Current ratio

The current ratio is an alternative measure for the short term liquidity. The basic idea is to see how much of the current assets that cover current liabilities in the event of liquidation.[224]

Table 4.6

Current ratio	2007	2008	2009	2010	2011	2012
SIOFF	2.6	1.6	1.5	1.3	1.5	1.6
Farstad	1.4	1.5	1.6	1.9	1.1	1.1
Havila	1.6	0.3	0.6	0.8	0.6	0.7
Solstad	1.9	2.0	1.4	1.5	1.1	1.4
DOF	1.3	1.6	1.4	2.7	1.5	1.3
Average	**1.8**	**1.4**	**1.3**	**1.6**	**1.2**	**1.2**

Source: Compiled by Authors/Annual Reports

Some argue that a ratio above 2 is an indication of low liquidity risk, but this is difficult to generalize across different industries.[225] Therefore we have benchmarked SIOFFs ratio towards the peer-group. As can be seen from table 4.6, SIOFF has a ratio above average. The ratio has also been very stable, and there is no signal of liquidity problems.

4.3.2 Long term liquidity risk

Solvency ratio

One indicator of long-term liquidity risk is the solvency ratio.[226] We have calculated the ratios based on market values, as these are closer to realizable values. The historical development can be seen in table 4.7, and the calculation can be seen in appendix 4.5.

Table 4.7

Solvency ratio, market values	2007	2008	2009	2010	2011	2012
SIOFF	84%	56%	59%	51%	40%	44%
Farstad	65%	42%	52%	58%	52%	45%
Havila	72%	24%	26%	23%	13%	12%
Solstad	65%	37%	42%	33%	25%	31%
DOF	36%	22%	23%	22%	11%	13%
Average	**64%**	**36%**	**41%**	**37%**	**28%**	**29%**

Source: Compiled by Authors/Annual Reports

Over the last three years SIOFF had the second highest solvency ratio, only exceed by Farstad. The ratio has declined since 2007, as a result of poor share price performance. However, SIOFF have a higher ratio compared to peers, which gives them freedom to make new fleet investments.

[224] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 155, Current ratio = current assets / current liabilities
[225] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 156.
[226] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 158, *Solvency ratio = Equity / (NIBD + Equity)*

Interest coverage ratio

The interest coverage ratio measures SIOFFs ability to meet its net financial expenses. The ratio shows how many times operating profit covers net financial expenses.[227] However, there are very different rules of thumbs in different industries, thus we need to compare the ratio with the peer group.

Table 4.8

EBITDA interest coverage ratio	2007	2008	2009	2010	2011	2012
SIOFF	7.3	8.0	12.1	11.0	4.2	2.9
Farstad	5.8	6.6	7.5	7.7	4.3	4.0
Havila	7.8	3.8	1.7	(9.8)	1.2	1.2
Solstad	(5.3)	(14.9)	1.8	(7.4)	4.1	2.1
DOF	6.6	3.0	2.0	4.4	2.1	1.8
Average	**4.4**	**1.3**	**5.0**	**1.2**	**3.2**	**2.4**

Source: Compiled by Authors/Annual Reports

When looking at EBITDA Interest coverage ratio we exclude the effect of depreciation, as this does not represent an actual cash flow. As seen from table 4.8, SIOFF has been well above average, for the whole period. From 2009 and until today, there has been a declining ratio, indicating an increase in the long-term liquidity risk. This is applicable for all the peers.

A more conservative measure is the EBIT-interest coverage ratio. By using this measure we include depreciations, which is an expression of the investment needed to maintain the size of the asset base.

Table 4.9

EBIT interest coverage ratio	2007	2008	2009	2010	2011	2012
SIOFF	5.0	6.2	7.3	4.2	1.2	0.8
Farstad	4.1	4.7	5.9	5.7	2.7	2.5
Havila	6.1	2.9	1.3	(6.9)	0.5	0.6
Solstad	(3.5)	(9.8)	1.0	(2.9)	1.4	0.3
DOF	4.3	1.7	1.0	1.3	0.7	1.0
Average	**3.2**	**1.1**	**3.3**	**0.3**	**1.3**	**1.1**

Source: Compiled by Authors/Annual Reports

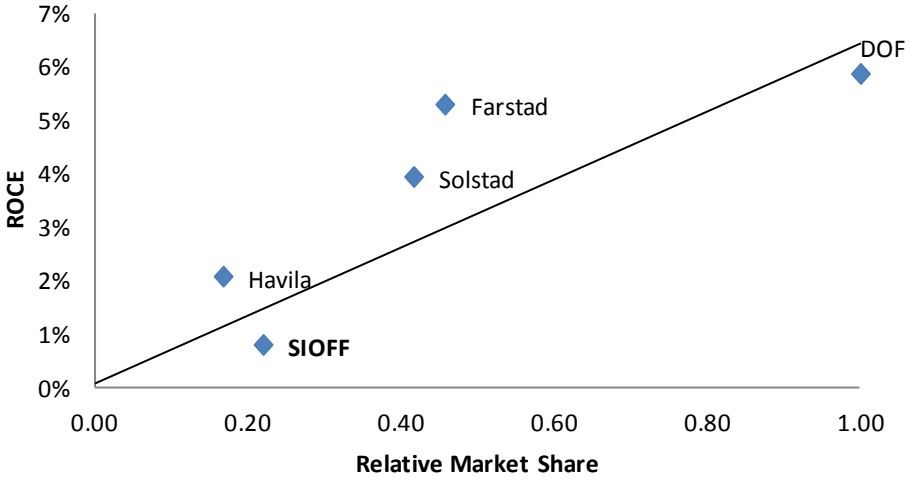
In table 4.9 we can see that SIOFFs ratio is below average in 2011 and 2012, indicating higher long term liquidity risk compared to peers. If the ratio stays below one it can affect SIOFFs ability to meet long term financial obligations.

[227] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 161; Interest coverage ratio = EBIT / Net financial expenses

4.4 Relative market share and Return on Capital Employed (ROCE)

As a partial conclusion to the financial analysis of SIOFF and its peers, it is informative to look at Return on Capital Employed vs. each company´s relative market share. This comparison illustrates each company´s financial and strategic position relative to others at the end of 2012. Everything held equal, the higher the ROCE and market share, the better return for shareholders.[228] As of today, SIOFF has together with Havila the weakest position, as both ROCE and market share is well below the rest of peers. DOF is currently the company best positioned, which can be explained by higher subsea focus with a currently stronger market balance.

Figure 4.11 ROCE and Relative Market Share 2012



Source: Compiled by authors/Annual Reports

[228] ROCE = NOPAT/Average(Fixed assets + NWC + investments in associated operation companies)

5.0 SWOT

Figure 5.1

SWOT	Opportunities	Threats	Strengths	Weaknesses
E&P spending	High oil price indicate increased E&P spending High activity increase demand after OSVs	Fluctuating oilprice might reduce spending New UDW rigs are equipped with DP2, which might reduce AHTS demand		
Newbuildings		High PSV orderbook Available PSV capacity at Asian yards		
OPEX inflation		OPEX expected to increase Can only control the cost inflation to some extent, making it a threat to SIOFF		
Financial		High CAPEX requirements over the next two years	Low leverage compared to peers, SIOFF can maintain their modern fleet and grow further Low long term liquidity risk	Poor return on invested capital and equity
Geographical location/ globalization	Increasing global demand after OSVs due to exploration in new regional areas	Local regulations	Good relationship with charterers Strong presence in Brazil	
SIOFFs fleet and fleet composition	High entry barriers in the high-end segment. SIOFF has assets in place.		Diversified fleet reduces market risk Modern fleet is positioned for high-end demand Achieve economies of scale due to order of similar vessels	Risk of delay for Newbuildings at Brazilian yards
Siem Offshore Contractors / Organization			Enables SIOFF to achieve higher utilization through inhouse resources Financial investor as owner give flexibility , and access to funds	
Labour		Tight labour market , scarcity of skilled labour		

Source: Compiled by authors

6.0 Forecasting

6.1 Forecasting of dayrates

As SIOFFs revenue is largely affected by developments in dayrates, it is important to have a reliable forecast of these. Our estimates of future dayrates is based on the findings in the strategic analysis combined with the historical development of the market. For the AHTS segment we have applied a regression analysis, and constructed a mathematic model to forecast dayrates. This model is based on a statistical relationship between variables identified in the shipping market model. It has not been possible to construct a similar model for the PSV segment, as we could not find any significant relationship. This might be a result of lack of historical data. Dayrates for the PSV segment is therefore estimated through a fundamental analysis focusing on the expected supply/demand balance. As the subsea segment is highly diversified, there are limited historical data available. We have therefore used an IRR calculation for SIOFFs newbuildings, adjusted for all relevant supply/demand factors from the strategic analysis. Due to limited demand and supply data beyond a four year horizon, we have only estimated the individual segment to 2016. We expect the market to be in balance by this point.

6.1.1 Forecasting of dayrates – AHTS segment

6.1.1.1 Regression analysis

The regression analysis for the AHTS dayrates can be seen in appendix 6.1. The analysis is based on historical data from 2001-2013, where AHTS dayrates is the dependent variable and the explanatory variables are the oil price, number of rigs and number of AHTS vessels.

In table 6.1, we have plotted the input figures derived from the strategic analysis, which will be used in our equation model derived from the regression analysis. The estimated AHTS fleet growth is based on current orderbook of high-end vessels counting 44 vessels, found in the shipping market model. However, we need to adjust these numbers as delays and cancelations are common as discussed in the strategic analysis. We must also consider additional fleet growth from placement of new orders. We have therefore estimated a yearly fleet growth of 16 vessels. The estimated oil price and rig numbers are based on findings in the strategic analysis.

Table 6.1

Year	Number of rigs	Number of AHTS	Oilprice
2012	597	237	111.6
E2013	669	253	119
E2014	717	269	125
E2015	738	285	133
E2016	747	301	140

Source: Fearnley / ISI Sector update

6.1.1.2 Output Results and Discussion

Table 6.2 summarizes the output from the regression analysis. These figures will be used as input in the equation model. The entire output can be seen in appendix 6.2.

Table 6.2

R square	0.7834	
	Parameter estimat	Pr > |t|
Intercept	0.12383	0.6464
Ln Growth Oilprice	1.74896	0.027
LN Growth AHTS	-3.43081	0.0945
LN growth Rigs	1.73673	0.4956

Source: Compiled by authors/SAS Output

From table 6.2 we can see our three explanatory variables with different p-values. For the growth in AHTS and oil price, the p-value is below 0.1, and we accept that there is a linear relationship between these explanatory variables and the day rate. When it comes to growth in rigs, the p-value is much higher, and we cannot reject the null hypothesis. We should therefore be aware of the interpretation of the equation. Another reason is that we have a short period of sample data. It would be preferable to have as long time series as possible. However, there are several reasons to why we still want to use the output from the regression model to forecast our dayrates:

- R square was a good indicator, telling us that 78% of dayrates is jointly explained by changes in oil price, rig growth, and AHTS fleet growth.
- A larger sample size probably would have increased the validity of our regression. It has not been possible to obtain a longer time sample, except for the oil price. Weekly or monthly observation could also have increased accuracy, but has not been available.
- The dayrates we achieve seems to be in line with analyst consensus.
- The parameters are in line with our findings from the strategic analysis, with positive parameters for oil and rig growth, and negative parameter to the AHTS fleet growth.

The parameters in table 6.2 explain the relationship between dayrates and the relevant variables. A positive parameter indicates that an increase in the explanatory variable will increase dayrates, and vice versa. As expected from the findings in the shipping market model, growth in both rigs and oil price have a positive relationship with dayrates. Their parameters are respectively 1.73673 and 1.74896. Growth in number of AHTS vessels is a negative parameter, indicating that an increase in vessel fleet will have a negative impact on dayrates. The interception of 0.12383 is the constant in our equation. This leads us to the following equation to forecast dayrates:

$$\boldsymbol{dayrates = -0.12383 + 1.74896 \times oilprice + 1.73673 \times rigs - 3.43081 \times AHTS\ growth}$$

6.1.1.3 The forecast of dayrates

In this section we will use the output from the regression model to forecast dayrates. To calculate the forecasted dayrates we will apply the data from table 6.1. Since the input data in our regression model are measured in Ln growth, we need to transform our forecast into Ln growth as well. We then have the forecast of dayrates in Ln growth, and need to translate them back to get dayrates in USD:

$$Dayrates_t = Dayrates_{t-1} \times EXP\ (Ln\ growth\ dayrate)$$

Before we derive at the final result, we include a 20% premium to the calculated dayrates. Our historical data is based on all AHTS above 16.000 bhp. As SIOFFs AHTS have 28.000bhp they will have a premium in the rates compared to the overall average.[229]

By applying this equation, we get the estimated dayrates illustrated in table 6.3.

Table 6.3

Estimated dayrates and growth	2013E	2014E	2015E	2016E
High-end AHTS dayrates (USD)	53,243	60,021	65,296	68,452
Growth y/y	24.4%	12.7%	8.8%	4.8%

Source: Compiled by authors/SAS Output

In 2013, we forecast dayrates to increase by 24.4%. Based on the strategic analysis, we expect a higher demand for high-end AHTS due to harsher environments and increased focus on deepwater areas. We have also seen that the number of rig moves will increase by more than 1500, which implies further increase in dayrates. In the analysis of demand we discovered that new UDW rigs might have reduced demand for AHTS services, due to DP2 system. The impact for the AHTS segment is uncertain but is reflected in a more conservative outlook. Due to limitations in number of shipyards capable of building high-end AHTS vessels and long lead time, there will not be an immediate oversupply within the segment. However, the increased dayrates will attract more vessel owners eager to exploit profits. This is reflected in our model in terms of more vessel deliveries in the last forecast year, than what implied by the current orderbook.

Based on a comparison between the regression output and our findings from the strategic analysis, our forecasted dayrates seems plausible. We have found evidence of a tightening market, and increasing dayrates in 2013 seems plausible. The positive development will continue the following two years, but with a more moderate tempo. As already mentioned, our estimates are in line with analysts' estimates, but lower in 2015 which can be seen in appendix 6.3

[229] Pareto Securities: Oil services research report (11.02.2013), pg. 56

6.1.2 Forecast of dayrates – PSV segment

We have estimated dayrates for the PSV segment through a fundamental approach based on the expected supply/demand balance. This can be seen in table 6.4.

Table 6.4

Implied supply and demand balance	E2013	E2014	E2015	E2016
UDW rig growth	22	22	12	9
Other rigs/drill growth	64	38	29	23
Implied PSV demand growth	108	82	53	41
PSV fleet growth	135	58	35	45
Supply/Demand balance	-27	-3	15	11

Source: Compiled by authors

As found in the shipping market model, number of rigs is one of the most important drivers for PSV demand. The implied demand is therefore calculated based on growth in UDW- and other rigs. As described in section 3.1.1.3, UDW rigs demand ~2 PSVs pr. rig, compared to ~1 for other assets. In 2013, the implied demand growth for PSV is therefore 108 units.

According to the supply section in the shipping market model, the current orderbook of PSVs counts 214 vessels. Many of these vessels are under construction at Asian yards, and we therefore expect 30% slippery in delivery, as described in Porters five forces.[230] We also expect a 10% cancellation rate, as the market outlook is weak. The delayed vessels are expected to be delivered in 2014. The implied supply/demand balance will therefore be negative in 2013, indicating a further decrease in dayrates. This assumption is also confirmed by figure 3.15 in section 3.1.3. We expect the weak balance to stabilize in 2014, thus indicating unchanged dayrate estimates. As the orderbook is high and the market outlook is negative, we believe there will be fewer new vessel orders in the next 2-3 years compared to 2013. As entry barriers is low we believe the fear of Asian yards building vessels on speculation is well founded. We therefore estimate 35 vessels being delivered in 2015 and 45 vessels in 2016.

To have a baseline for our estimates, we have used observed spot fixtures for 2012/2013 from Fearnley Offshore. The spread in dayrates can be explained by the difference between high-end and medium/low-end as previously described. Based on comparable fixtures our base line for dayrates for medium-end PSV (< 900 m^2) is USD 25.000.[231] For high-end PSVs (>900 m^2) the latest fixture is USD 28.947. Seen in a historical view, this is at an exceptional low level.[232] Based on the analyzed supply/demand balance, we forecast the following development in dayrates:

[230] ABG Sundal Collier: Offshore Supply – Sector initiation (10.04.2013), pg. 14
[231] Fearnley Offshore Supply: The offshore report No.3 (27.03.2013) List of vessels
[232] Ref section 3.1.3.1 Supply/demand, historical North Sea rates.

Table 6.5

Current and estimated dayrates, USD	Primo 2013	E2013	E2014	E2015	E2016
PSV >900m2	28,947	-3%	0%	5%	10%
PSV <900m2	25,000	-5%	0%	3%	5%

Source: Compiled by authors

As a sanity check, we have compared our forecast with that of investment banks. Appendix 6.3 summarize analysts estimates, compared to our findings.

6.1.3 Forecast of dayrates – Subsea

As the Subsea segment is more diversified, there is no historical information available for estimating dayrates. Our dayrate estimates are therefore based on calculation of IRR for the OSCV newbuilds, where growth in dayrates and OPEX is based on our findings in the strategic and financial analysis.

As the overall subsea CAPEX is expected to triple over the next five years, demand for subsea vessels is expected to increase. If figure 3.15 at page 46 is used as a guide for future vessel demand, the ratio implies an increase in number of wells pr. vessel of 30% over the next four years. Demand is therefore set to increase by 20-30 % over the next four years, as illustrated by figure 3.15.

As the subsea segment is the most capital intensive segment, the orderbook of newbuilds is modest compared to other segments. Currently we see an increase in the medium- and high-end segment of 22 % (55 vessels). The lead time is long, and we expect ~1/3 to be delivered per year in the next three years. Few yards are capable of constructing these vessels, and capacity is restricted. Together with the high leverage of many ship owners, we therefore do not expect to see a rush of new vessel orders.

SIOFF operates two classes of subsea vessels, where four are larger than 120 LOA (Length Over All). These vessels are classified as high-end, and are capable of operating in more harsh and deepwater environment. The larger vessels are more sophisticated with more equipment, and the segment is thus given a premium in dayrates of 30 % compared to the smaller vessels. This is in line with the current market spread according to Fearnley Offshore.[233] We expect the two segments to grow with the same pace as they are exposed to the same demand factors.

The construction price of SIOFFs OSCV was USD 105m. Life expectancy of the vessels is 25 years and OPEX is estimated to be 30% higher compared to the existing fleet of MRSV. OPEX for MRSVs is calculated from the annual report 2012. This will be described further in the OPEX forecast.

[233] Fearnley Offshore Supply: The offshore report No.2 (25.02.2013) pg. 8 – 12 List of vessels

New Subsea vessels are expected to generate an IRR of 10-12% based on practitioners expectations.[234] The calculation of IRR can be seen in appendix 6.4. Based on the assumptions mentioned, and the expected market balance going forward we estimate the following dayrates:

Table 6.6

Estimated dayrates Subsea	2013	2014	2015	2016
Crane <250, LOA <120	53,550	56,228	59,039	61,991
Crane >250, LOA >120	69,825	73,316	76,982	80,831
Growth, YoY	5%	5%	5%	5%

Source: Compiled by authors

6.2 Forecasting long term contracts, utilization and newbuilds

6.2.1 Vessels on long term contracts

SIOFF has a number of vessels on long term contracts, and the overall contract coverage is 66% for 2013, and 41% for 2014. In the following years most vessels are free for hire, except from the FSV/FCV/OSRVs and 2-3 PSVs. As we described in section 2.8, vessels on long term contracts have a fixed dayrate and charter period, and they are not available in the spot market in this period. Vessels on contract will therefore not be affected by changes in spot rates until the contract expires. According to delimitation, value of options is not included, as they are renegotiated at new terms when the initial contract expires.

To calculate the revenue contribution from vessels on contract, we have estimated a dayrate based on the reported contract value.[235] Some contracts have not been made public, and for these vessels we have estimated a rate based on public contracts for similar vessels.[236] These calculations can be seen in appendix 6.5.[237] When the contract expires it is assumed that vessel will trade in the spot market in the same region as today. We have not forecasted future contract values, but if vessels enter contracts in the future, these contract values will be based on our estimated dayrates. The effect of future contracts is thus reflected in our forecast. Vessels on contract have a fixed utilization of 100%.

The fleet of FSV/FCV and OSRV are on long term contract for the entire forecasting period.

6.2.2 Utilization

As described in section 2.8, utilization is a measure of fleet efficiency. SIOFF has historically managed to utilize the fleet better than the average market, with an average utilization of 89% in 2012. Utilization of AHTS has historically been the most volatile, which can be explained by the initiation phase and subsequent low contract coverage in a weak market. The remaining fleet has had an average contract backlog for the following year of 70-100%, which in part explains the high utilization.

[234] Øyvind Hagen, Analyst, ABG Sundal Collier 24.04.2013 in appendix 10.4
[235] Value of contracts is reported in Annual Reports, Company Presentations and Stock Exchange Notices
[236] Fearnley Offshore Supply: The offshore report No.3 (27.03.2013) List of vessels
[237] Estimated dayrate = Contract value/(Contract end – Contract start)

SIOFFs ability to obtain above average utilization can be explained by our findings in the internal analysis. The management has a good track record when it comes to optimization of fleet composition and geographical location. By managing the fleet in this way, SIOFF has taken advantage of new growth areas such as Brazil and West Africa. Through the Brazilian subsidiary, SIOFF has been able to create relations with the region´s most important petroleum client. In the Porter analysis we concluded that bargaining power for buyers to be moderate. SIOFFs good reputation and collaboration with buyers has therefore secured contracts and vessel employment. In addition, SIOFFs strategy of increased exposure towards high-end vessels has made SIOFF able to earn a utilization premium compared to low-end tonnage. We believe SIOFF have an attractive fleet of modern vessels and a management team capable of meeting new demand trends. The combined resources represent a competitive advantage which is supportive for a utilization premium going forward.

SIOFFs forecast of utilization is positively affected by the subsidiary Siem Offshore Contractors. As previously described, SOC has a contract backlog of approximately USD 180m over the next 24 months. To execute these contracts, SOC utilize in-house resources in terms of vessels and equipment. SIOFF can therefore utilize unemployed vessels to their in-house operations. We therefore expect the fleet to obtain an additional utilization premium compared to the general market. The value of SOC is therefore reflected through this higher utilization. Due to the nature of the work, we expect a utilization premium of 3 % for the subsea fleet and 2 % for the high-end AHTS and PSV fleet.

Utilization for SIOFFs PSVs has fluctuated between 91 and 96% the last four years, despite weak market conditions. This is significantly higher than the average market utilization, as we saw in the Shipping Market Model. The market is expected to remain oversupplied in the next two years, as the entry barriers are low and Asian yards are building on speculation. We are therefore somewhat conservative in our estimate for utilization in 2013. We believe the high-end fleet will be able to obtain a utilization in line with historical average, of 95 % from 2014 and onwards. We see the utilization spread between high- and low-end widen in the future, as demand for sophisticated vessels for deepwater/harsh environment will continue. We therefore forecast a utilization of 85% for the medium-end segment, which is below SIOFFs historical average.

For the AHTS segment we expect that a tighter market will increase overall utilization. As the case for PSV, we expect high-end tonnage to earn a utilization premium. Demand for SIOFFs vessels will therefore be strong. We expect utilization to increase to 85% in the first year of forecasting, and then increase to 92% in the following period, including the premium from SOC.

The subsea segment has had a historical utilization close to 100%, and we expect this ratio to remain steady going forward. With the utilization premium from SOC, the utilization is forecasted to 98% for the entire forecasting period.

6.2.3 Newbuildings and demolition

The current newbuilding program counts ten vessels with delivery in 2013 and 2014. This will increase SIOFFs revenue potential significantly and is an important driver of revenue growth. In the forecasting, revenues are calculated based on the time of delivery of these vessels, as can be seen in appendix 6.6. Four of the vessels are under construction at Brazilian yards, as part of management's strategy of increased Brazilian presence. Two PSVs have estimated delivery Q2 2013 and Q1 2014, and two OSRVs in Q2 2013. As discovered in the Porters analysis almost all deliveries from these yards are delayed. We therefore estimate these vessels to be delayed by one quarter, which is reflected in our revenue forecast. Delay of vessels can be seen as a direct cost of management´s strategy, analyzed in VRIO.

The four OSCV, the ISV and one PSV are built at Norwegian yards. As discovered in the Porters analysis, these yards are known for high quality and delivery on time. We therefore expect these vessels to be delivered according to schedule.

After the newbuilding program is concluded, we still expect SIOFF to grow by ordering new vessels. Because of growth barriers such as financial resources, operational management and yard capacity, we do not expect the future growth to be as aggressive as we have seen the last 6 years. We therefore expect the fleet to grow by net one vessel pr. year from 2015. There is no guiding from management indicating witch type of vessels they will order in the future. Forecast of newbuildings is therefore based on average dayrates across high-end PSV, AHTS and Subsea, which is our best estimate.

Scrapping has historically been insignificant. But as five of the small Brazilian vessels are above 30-35 years old, we expect these to be scrapped when the contract expires, in Q2 2014. Two Brazilian OSRVs are also more than 35 years old, and currently unemployed. We therefore expect these vessels to be scrapped Q1 2013.

6.3 Forecasting of future revenues, expenses and cash flow

6.3.1 Forecast period

To estimate the future cash flow of SIOFF through a two-stage DCF and EVA model, we need to choose an appropriate budget period. As the present value approaches assumes a constant growth rate in the terminal period, the forecast period must be long enough for the company to reach steady state growth.[238] To ensure this relationship, we must consider management expectations and projected fleet growth.

The forecast period must thus reflect SIOFFs newbuilding program, which will have significant impact on revenues going forward. Currently many vessels are employed on long term contracts, and this effect must also be considered. Finally, the forecast period must be long enough to reflect a state of constant supply/demand balance in the OSV market. Based on these arguments we have chosen a forecast period of 6 years, as we believe SIOFF to have reached steady state growth by 2018. The OSV industry is a cyclical market with large deviation from peak to trough. Based on our findings in the strategic and financial analysis we believe the market to be in balance by 2016, and our estimated dayrates in the last forecast year is in line with the historical average. By 2018 all vessels have finished their long term contracts.

6.3.2 Terminal growth

Growth in terminal period shall reflect the expected average growth rate of the economy where the company operates. SIOFF has operations in different geographical areas and are thus subject to different inflation and growth rates. As the company is located in Norway and the shareprice is quoted in NOK, we base our estimate on the growth prospect for the Norwegian economy. According to Norges Bank and the average expectation of industry professionals, the expected long term nominal earnings growth is 2.5%.[239] We see this as a reasonable growth estimate for the economy and the OSV industry, and it is thus applicable for SIOFF.

6.3.3 Pro forma income statement

In the following section we forecast the items in the income statement. The forecast model is based on a sales-driven approach, with the exception of specified items. This will ensure higher forecast quality, as it provides a better link between the level of activity and related expenses.[240] This reflects that the items forecasted are based on the expected level of SIOFFs activity. The historical period is used as a guideline in our forecasts as it provides valuable insights about trends and levels of value drivers. The complete historical development can be seen in appendix 6.7.

[238] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 214
[239] www.norges-bank.no/inflasjon, PwC (2012): "The Norwegian market risk premium 2012-2013" pg. 16
[240] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 177

In the following section each income statement item will be discussed, and table 6.7 presents the YoY-growth for the forecasted items. Forecast of revenue is based on the previous estimation of dayrates and utilization. In the financial analysis we discovered that OPEX is one of the most important value drivers, and is therefore analyzed in detail. The complete pro-forma income statement can be seen in appendix 6.8

Table 6.7

Pro forma income statement: Forecast	Hist Avrg.	2013E	2014E	2015E	2016E	2017E	2018E	Terminal period
Operating Income, growth	33%	5.5%	38.7%	23.0%	9.5%	6.4%	6.7%	2.5%
Other Income	5%	5%	5%	5%	5%	5%	5%	5%
Results from associated companies	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
OPEX in % of operating income	55%	56%	54%	50%	49%	48%	48%	48%
General/Admin expences in	11%	14%	12%	11%	11%	11%	11%	11%
Gain/losses from sale of assets	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
Depreciation and amortization	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
Effective tax rate	-19%	14%	14%	14%	14%	14%	14%	14%
Interest rate	3.8%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
Minority interests	-0.1%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%

Source: Compiled by authors

Revenue forecast, 2013-2016

Revenues in the forecasting horizon have been calculated based on the dayrates and utilization estimates from section 6.1 and 6.2. We have estimated revenues on a per vessel basis, and the line item "Operating Income" is the sum of these estimates. The complete calculations can be seen in appendix 6.6.

In the first year of forecasting revenue is expected to grow by 5.5%. SIOFF will take delivery of four vessels in Q2-Q4, which can explain some of the growth. Increased dayrates will also contribute, as we expect AHTS and Subsea rates to increase. In 2014 the six remaining vessels will be delivered, and vessels delivered during 2013 will now be in full operation. Subsea and AHTS dayrates is expected to increase further, and this will lead to a revenue growth of ~39%. In 2015 all vessels from the newbuilding program will be in full operation. Four AHTS vessels will end contracts with Petrobras and enter the more attractive spot market. As a result revenue will grow by ~23%. In 2016 revenue is expected to grow by a more modest level of ~9.5% as a result of delivery of one new vessel and diminishing growth of dayrates.

Table 6.7 illustrates the revenue composition in the forecasting period. The table illustrates how the Subsea segment contributes to the revenue increase, together with the additional fleet growth.

Table 6.8

Segments share of revenue	2013	2014	2015	2016	2017	2018
AHTS	44%	35%	33%	32%	32%	30%
PSV	31%	25%	23%	23%	22%	22%
Subsea	18%	32%	33%	32%	30%	29%
FCV/FSV	7%	9%	6%	6%	6%	5%
Additional fleet growth	0%	0%	4%	7%	11%	13%
Total Revenue	309,087	428,849	527,501	577,804	615,011	656,011

Source: Compiled by authors

Long term revenue forecast, 2016→

From 2017 and onwards we expect dayrates to increase with the general inflation as we expect the supply/demand balance in the OSV market to be more in line. Growth in revenue is therefore explained by the additional fleet growth of net one vessel per year, as described in section 6.2. Three vessels will also end long-term contracts in 2018, and spot exposure of these vessels will contribute to higher revenues. From 2018 we believe revenues to increase with the general economy, as described under the terminal period.

Other income and associated companies

Other income has made up ~5% of total income over the historical period, and has been fairly stable. This is related to subordinate income in the subsidiary in Brazil and the vessel Big Orange. We expect the development to be in line with operating income in the future, and forecast the value driver to 5%. Income from associated companies has on average been 0.5% of revenue, and this ratio is expected to remain in the future.

Operating expenses

OPEX cover crewing expenses and other operating expenses related to vessels. Crewing expenses is the most important factor as it accounts for 60% - 80% of the expenses. Over the last four years, OPEX pr. vessel has increased by 5-10% for the different segments, which is significantly more than the average inflation. The increase can be explained by the cost inflation covered in the strategic analysis.

Our base for OPEX primo 2013 is estimated from SIOFFs annual report 2012 and the Norwegian brokerage firm Fondsfinans. The base for AHTS expenses is lower compared to the average market rate, as SIOFF has achieved some economies of scale. OPEX is calculated separately for each segment, as different vessels have different costs of operation. OPEX for the new subsea vessels is estimated to be 30% higher than the current MRSVs, as high-end tonnage in general have higher operating expenses.[241] Findings in the strategic analysis reveal continuing OPEX increase above inflation in the next two to three years, as we see further tightening of the labor market. We believe West Africa and Brazil to be the regions driving inflation, as local content regulations have come to stay, leading to a general undersupply of crew.

[241] Øyvind Hagen, Analyst, ABG Sundal Collier interview 24.04.2013

Vessels in other regions will also be affected by tightened market as offshore activity is expected to increase. In 2013 we expect OPEX inflation to be between 5-7 % for the different segments in addition to the general inflation of 2.5%. This will gradually decline to 2-5% in 2014 as we see number of offshore deliveries to slowly decline. We also believe SIOFF to have a good position in attracting crew with overweight of modern high-end tonnage. We also believe that their Brazilian presence through subsidiary will be a strength to attract labor. From 2015 we therefore believe the situation to be more stable, forecasting OPEX to increase with the general inflation of 2.5%. This is the inflation target used by industry professionals.[242] OPEX for the FSV/FCV segment is expected decrease by 5 % in 2013 and 10% in 2015, as new vessels are more efficient compared to older tonnage. The complete OPEX forecast and the forecasted inflation can be seen in appendix 6.9.

In the forecasting period, OPEX in percent of revenue will decrease from 56% in 2013 to 48% in the terminal period. Combined with the expected increase in revenue this will lead to margin expansion, bringing EBITDA and EBIT-margin back to a more stable long term level.

Administration expenses

Administration expenses has accounted for 11% of revenues historically. Over the last three years, expenses have increased more than revenue and were 16% in 2012. The increase is a result of fleet expansion combined with lower revenues. As the newbuilding program comes to an end, the organization is likely to operate more efficiently. Going forward we believe administration expenses to increase at a decreasing pace, in line with historical development. We expect the rate to be 14% in 2013, and decline to 11% by 2015.

Gain and losses from sale of fixed assets

Gain/loss from sale of vessels has historically been below 5% of revenues, and has on average only accounted for 0.6%. As SIOFF does not follow an asset play strategy, our best estimate is to forecast gain and losses in line with the average historical development at 0.6%.[243]

Depreciation

The historical average depreciation rate has been 4.7%, which is equal to linear depreciation over ~21 years. Vessels have an expected useful life of 25 years, while equipment/machinery has an average life of 7-15 years. We therefore believe the historical depreciation is a good guide for the forecast period, setting it to 4.7% per year.

Tax rate

We have applied the effective tax rate of 14% adjusted for deviation in 2011, as described in WACC at pg. 105.

[242] PwC (2012): "The Norwegian market risk premium 2012-2013" pg. 15
[243] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 203

Minority interest

Minority interests are a result of shared ownership of some assets. Historically, these interests have been insignificant and has on average accounted for -0.1% of revenue. We believe this level to be to low compared to trends in other years, and the fact that SIOFF has shared ownership in four PSVs. Our best estimate is the level from 2012 at 0.6% of revenues. In section 8.1 we will show how we have estimated the value of minority interests.

Net financial expenses

We have estimated net financial expenses to 6.89%, based on the calculations in WACC at page 107. This is our best estimate as the implied credit rating and thus credit risk has increased over the last five years making the average NBC a bad proxy. The last bond issue in January 2013 had a credit spread of 4.75%, which we believe is representative going forward.[244] Net financial expenses are calculated based on prior years NIBD to eliminate circularity in the forecasting.[245]

6.3.4 Pro forma Balance sheet

Items in the balance sheet are often directly linked to the development in revenues. In the forecasting of the pro-forma balance sheet, items are therefore linked to this development. This is the preferred method of forecasting, as the relationship between balance sheet accounts and revenue is more stable than between balance sheet changes and changes in revenues.[246] Table 6.8 summarizes our assumption for the forecasting of the pro-forma balance sheet. The complete pro-forma balance sheet can be seen in appendix 6.8.

Table 6.8

Pro formabalance sheet Forecast	Hist Avrg.	2013E	2014E	2015E	2016E	2017E	2018E	Terminal period
Net Working Capital in	12%	12%	12%	12%	12%	12%	12%	12%
Vessels, contracts, project costs etc.	468%	274,000	338,000	65,000	66,625	68,291	69,998	71,748
Intangible assets	2%	21,258	21,258	21,258	21,258	21,258	21,258	21,789
Deferred tax asset	2%	2%	2%	2%	2%	2%	2%	2%
Investments in associated companies	5%	4,222	4,222	4,222	4,222	4,222	4,222	4,328
Long term receviables	1%	1%	1%	1%	1%	1%	1%	1%
Other non-current liabilities	3%	3%	3%	3%	3%	3%	3%	3%
Cash	29%	53,534	53,534	53,534	53,534	53,534	53,534	54,872
Tax liabilities	3%	3%	3%	3%	3%	3%	3%	3%
Other Non Current Liabilities	3%	3%	3%	3%	3%	3%	3%	3%
Net interesting debt	42%	55%	55%	55%	55%	55%	55%	55%

Source: Compiled by authors

[244] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 203 and Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 197
[245] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 196
[246] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 195

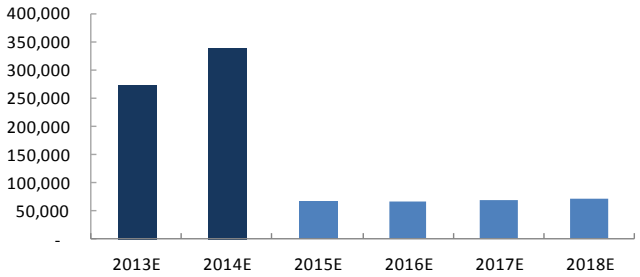
Net working capital

Net working capital is forecasted at an aggregated level as we have too little information available to determine how the individual item is likely to develop. We are therefore confident that higher aggregation will increase quality.[247] NWC is closely tied to the operations of the company as the item consists of payment from customers, liabilities to suppliers and other operating items. It is therefore satisfying to forecast the development based on operating revenue. NWC has historically accounted for 11% of revenues, but increased to 16% in 2012. We do however believe that as the market strengthens, we will see NWC back at the historical average. We therefore expect the level to be 14 % in 2013, 12 % in 2014 and 11 % for the remaining period.

Tangible assets: Vessels, contracts and project costs – Future investments

Investments in vessels, contracts and project costs have on average accounted for 90-95 % of tangible assets. Investment in vessels is therefore the main driver of growth in total assets, and is a function of CAPEX. A company can`t grow without making investments, and the level of CAPEX depends on the capital intensity of the industry as analyzed through Porters. SIOFFs vessels are highly expensive and future growth therefore require major investments. According to Plenborg (2011) there are three ways to estimate future CAPEX and thus tangible assets. We have chosen to use management projections for short-term and expected annual investments for long-term.

FIgure 6.1 Tangible Investments 2013 - 2018



Source: Compiled by authors

Short term investments

The current newbuilding program will be completed up on delivery of the last OSCV vessel in 2014. As these investments are already agreed upon, tangible assets can be projected based on management's expectations. SIOFFs short term investments will amount to USD 274m in 2013 and 338m in 2014.

Long term investments

SIOFF has not guided any future investments beyond the existing newbuilding program. But as demand is expected to increase, we expect SIOFF to make additional investments. Without further investments, revenue growth is limited. The historical fleet growth has been tremendous, averaging close to 3 vessels per year. SIOFF has been in a growth face, and a development like this is not unusual. But as we see the company maturing we expect the future investments to be somewhat more modest. We therefore expect SIOFFs fleet to grow by net one high-end vessel each year from 2015.

[247] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 186

As we have little information regarding the kind of vessel likely to be ordered, we expect investments reflecting the average construction price across segments, estimated to USD 65m in 2015. Norwegian yards have currently some bargaining power in the high-end segment, but Asian yards are likely to improve their skills. The construction price of high-end vessels will therefore not increase significantly. We expect CAPEX to increase with inflation, as illustrated in figure 6.1.

Other tangible assets and operating liabilities

Various balance sheet items have been estimated as percentage of revenue based on historical average, as this is our best estimate for future development. Deferred tax asset has been forecasted at 2% of revenue. "Other long term receivables" is based on the historical average of 2 %, and other "non-current liabilities" is based on the average of 3%.

When it comes to investments in associated companies we do not expect SIOFF do make additional investments, and base our forecast on the ultimo balance from 2012 of USD 4.2m. Operational stock of cash has fluctuated historically, but we do not believe the future development will follow the revenue. Our forecast is therefore identical to the current level at USD 53.5m.

Intangible assets

The item "intangible assets" is a result of the acquisition of Siem Offshore Contractors in 2011. There is no information indicating that SIOFF will perform additional M&A activity, or that there is a need for impairment. We assume that SIOFF only will grow organically, thus intangible assets will be constant at 21.3m through the forecast period.[248]

Net Interest Bearing Debt

Net interest bearing debt is measured as a percentage of invested capital. The capital structure in the pro-forma balance sheet should equal the capital structure implied by WACC.[249] This is the long term capital structure as a result of the iteration process in WACC. Therefore the expected level of net interest bearing debt is 54% of invested capital, equal to WACC at pg. 106.

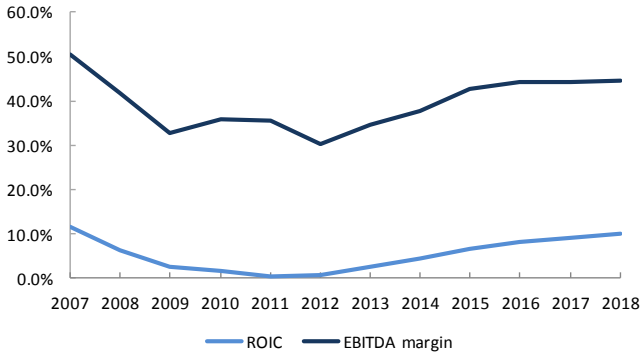
[248] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 203
[249] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 205

6.3.5 Quality of the estimates supporting the pro forma statements

To evaluate the validity of the pro forma statements it is important to look at the historical return and margins against the forecasted performance. If the future performance deviates from the historical development, the analyst needs strong arguments to support this view.[250] The forecasted development is illustrated in figure 6.2.

SIOFFs ROIC has been declining since 2007 due to the weak market condition, as previously seen. This has also affected the EBITDA-margin negatively. We believe the worst downturn to be behind us, and see strong support for a positive development within the AHTS and Subsea segment going forward. Our forecasted EBITDA-margin will therefore increase, but not to the same high level as seen in 2007. Consequently ROIC will increase as well, reaching 10.1% in 2018, compared to 11.7% in 2007. Based on this development we believe there is a strong validity in our forecast.

Fiugre 6.2 Historical vs. forecasted ROIC and EBITDA



Source: Compiled by authors

[250] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 195

7.0 Estimating cost of capital

To estimate the equity value of SIOFF using cash flow models, we must estimate a proper discount rate, known as WACC. Equity- and debt holders demand a return of investment reflecting the risk of future cash flows. Debt holders are normally entitled to a quarterly cash flow for a fixed period of time, and have priority in case of default. The required rate of return must therefore be calculated separately for the two asset classes. The general formula for WACC is illustrated below;[251]

$$WACC = r_d * (1 - T) * \frac{NIBD}{EV} + r_e * \frac{E}{EV}$$

7.1 Return on Equity, r_e

To estimate the required rate of return of equity, there are several theoretical frameworks available. Most financial literature (Plenborg, Koller mfl.) recommends using the general CAPM model, and we have therefore chosen this model.[252] This framework relies upon several theoretical assumptions, but an evaluation of these is outside the scope of this thesis.[253] SIOFF has only one equity class and we have thus estimated only one equity return.

7.1.1 Risk free rate, r_f

The first element to estimate is the risk free interest rate. This rate is defined as an asset´s expected return with certainty. To meet this condition the asset must have no default or reinvestment risk.[254] The most widely used proxy for the risk free rate is therefore a default free government bond with maturity matching the forecasting horizon.[255] To handle the issue of inflation it is important that the government bond is denominated in the same currency as the underlying cash flow.[256]

SIOFFs cash flow is nominal and reported in USD, but the share price is quoted in NOK. To capture the effect of inflation we therefore use the Norwegian risk free interest rate. Norway is recognized as one of the most solvent nation in the world, and holds an AAA rating. There is thus zero default risk. As the forecasting horizon is infinite, long term government bonds are preferred as proxy. To eliminate reinvestment risk, we therefore look at 10 - 30 year zero coupon bonds. Bonds with 30 year to maturity will best match the cash flow, but suffer from a liquidity premium.[257] Therefore it is not the preferred benchmark for the risk free rate. Based on 10 year zero coupon bonds, we estimate the risk free rate to 2.14 % at the date of the analysis.[258]

[251] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 246
[252] $r_e = r_f + \beta*(r_m - r_f)$
[253] Pratt, P. Shannon (2002). Cost of Capital: Estimation and Applications 2th ed. pg. 77-78
[254] Damodaran, Aswhat (2008), "What is the risk free rate? A search for the basic building block", Pg. 6
[255] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 249
[256] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 251
[257] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 251
[258] http://www.norges-bank.no/no/prisstabilitet/rentestatistikk/statsobligasjoner-rente-daglige-noteringer/

7.1.2 Systematic risk – beta, β

The second element of CAPM is the measure of systematic risk, a modifier to the equity risk premium. Beta is a function of the relationship between the return on an individual security and the return on the market as measured by a broad market index.[259] The factor is a measure of risk added on to a well diversified portfolio, rather than total risk.[260] There are multiple ways to determine the specific beta value, and we will go through the implications of the most widely used methods among practitioners. At the end of this section we will estimate SIOFFs beta by taking the average of the different estimates. This way we will eliminate some of the sourcing error which will provide us with the best estimate.[261]

Regression beta

Beta can be calculated by looking at historical returns. The common method is to compute the slope of the best fit line between the excess return of the shareprice and the excess return on the market. Even though this is one of the most common ways to derive beta, it suffer from the choice of the following four variables;[262]

1. The length of time period over which returns are measured
2. The periodicity of measurements within that time period
3. The choice of an index to use as a market proxy
4. The risk-free rate above which the excess returns should be measured

In our calculation we have chosen a time period of 5 years with monthly frequency, as being the most common choice among practitioners. For an index, we first chose Oslo Stock Exchange as this is where SIOFF is listed. Oslo Stock Exchange is dominated by petroleum- and petroleum related companies, which have high exposure towards the oil price. This is an important factor affecting the demand for SIOFFs services, as we saw in the supply section. The beta value might therefore be understated, as both SIOFF and OSE will tend to move in the same direction following changes in the oil price. We have therefore used a regression model and estimated beta based on OSE, MSCI Europe and MSCI World index.

Table 7.1

Raw beta, past 5 year	Leveraged	Unleveraged
Beta OSE	0.69	0.43
Beta MSCI World	0.85	0.53
Beta MSCI Europe	0.64	0.40
Average		0.45
Source: Oslo Stock Exchange/Compiled by authors		

[259] Pratt, P. Shannon (2002). Cost of Capital:Estimation and Applications 2th ed. pg. 80
[260] Damodaran, Aswhat (2009), "Estimating Risk Parameters", pg. 5
[261] Damodaran, Aswhat (2009), "Estimating Risk Parameters" pg. 30 and Plenborg & Petersen (2012) – Financial Statement Analysis pg. 254
[262] Pratt, P. Shannon (2002). Cost of Capital:Estimation and Applications 2th ed. pg. 81

The first estimate is the leveraged beta, which is affected by the company`s capital structure over the historical period. In the calculation of WACC we will use a beta value reflecting the future capital structure. We therefore calculate the unleveraged beta by adjusting for the average NIBD/EV for the last five years.[263] As can be seen from table 7.1, the estimated betas based on historical return are low, indicating low systematic risk. This can be plausible but might also be a result of low share liquidity.[264] More than 50% of trading days have had a volume below NOK 1 million, thus further analysis is necessary.

We have also computed beta values based on a seven year period, which can be seen in appendix 7.1. The beta estimates are almost identical, and the deviation is insignificant.

Beta from comparable companies

One way to get beyond the problem of low liquidity is to use beta estimates from comparable companies.[265] A requirement of this method is that companies have the same risk profile. We have used beta estimates from Reuters Financials for our peer group presented in section 2.10 These values have then been unleveraged to eliminate the effect of capital structure.[266] As appendix 7.2 illustrates, the average unleveraged beta is 0.38, which is even lower than the regression estimates. Again liquidity is a major concern, as all these companies are quite illiquid. Beta is also distorted by the financial gearing in Havila and DOF.

Industry beta

As the regression beta and betas from comparable firms have disadvantages, we look at a third way to estimate the equity beta. This method is based on average beta for different industries, which is computed of researchers such as Damodaran. In his 2012 beta-book he estimates an average industry beta of 1.09 based on 82 companies in "Oil service/Equipment". Compared to the regression and comparable firms, this method is based on a larger dataset and has thus fewer sourcing errors.[267]

Beta from fundamental factors

The last approach suggested by theorists (Damodaran, Plenborg) is to estimate beta based on fundamental factors. Through the strategic and financial analysis we have gained unique insights to the company´s operating and financial position. By using this data, we have structured a risk assessment of the operating and financial risk. Based on this analysis we have classified SIOFFs operating risk as High and the financial risk as Neutral.

[263] Pratt, P. Shannon (2002). Cost of Capital:Estimation and Applications 2th ed. pg. 84
[264] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 252
[265] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 254
[266] Pratt, P. Shannon (2002). Cost of Capital:Estimation and Applications 2th ed. pg. 275
[267] Damodaran, Aswhat (2012), Dataset – Industry beta values

The overall risk is therefore classified as high, which implies an unleveraged beta between 1.15-1.4.[268] We have therefore applied a fundamental beta of 1.25. The analysis can be seen in appendix 7.3

Unleveraged beta estimate

Based on the different theoretical approaches we have estimated an unleveraged beta value in the range from 0.38 to 1.25. This is a wide span reflecting possible estimation errors. To reduce the impact of errors we have calculated the average of all the observations. The unleveraged beta value applicable for SIOFF is thus 0.79. This is a more plausible estimate compared to the output from the regression, as the OSV industry is a cyclical business with perceived risk higher than what a beta value of 0.38 can explain.

In the long run, beta has a tendency to converge towards the market average of one. Bloomberg has developed a method to adjust for this tendency, and the adjusted beta is 0.86.[269]

7.1.3 Equity risk premium

The equity risk premium is calculated ex-post based on the historical excess return on the stock market over the risk free rate, and varies over time. The most common way to estimate this measure is with references to books and articles.[270] Brealey and Meyers (2008) suggest an equity risk premium of 7.6%.[271] Koller et. Al. estimates the premium to be in the range from 4.5 – 5.5%.[272] In addition, professor Damodaran estimates the premium to be 5.7%. This is also supported by professor Fernandéz (2012), who estimate the premium to 5.8%.[273] We have chosen to use Damodaran as source, as his estimates are continuously updated and lies between the other estimates. The risk premium is set at 5.7 %.[274]

7.1.4 Liquidity premium

The last factor of the equity premium is a premium for illiquidity. This premium refers to the costs and problem of converting stocks or other assets to cash. SIOFFs trading volume is low, as previously mentioned, and there can be some problems associated with transaction of stocks. To solve for this problem, researchers (Plenborg, Petersen, and Pratt) finds that investors adjust their rate of return by 3-5 %.[275] This is supported by an annual survey from PwC for the Norwegian market, where 81% (of 178 respondents) apply a small stock premium.[276] We have therefore added a liquidity premium of 3 % to the final estimate of the equity return.

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[268] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 262
[269] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 253
[270] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 264
[271] Brealey, A., Myers, S., Allen, F., (2008). *Principles of corporate finance*. 9th ed. pg. 215
[272] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 236
[273] PwC (2012): "The Norwegian market risk premium 2012-2013", pg.11
[274] Damodaran (2012): Dataset: Risk premium for other markets
[275] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 265, Pratt, P. Shannon (2002). Cost of Capital: Estimation and Applications 2th ed. pg. 77
[276] PwC (2012): "The Norwegian market risk premium 2012-2013", pg.13

7.2 Return on debt

The cost of debt reflects creditors required return for lending funds to the company. This rate differs between companies depending on the operational and financial risk. The rate is calculated as a credit spread above the risk free rate and is based on the credit rating that the company receives.[277] To estimate the required return on debt we will first look at the current yield for the company`s outstanding bonds. Then, as an extension of the financial analysis, we will assign a credit rating to the company and determine the required rate of return. By using more than one approach it is likely to get a less biased estimate.

Normally, large corporations have more than one category of debt. Ideally, each category should be assigned its own required rate of return, depending on seniority and collateral.[278] As this information is not disclosed in the annual report, we will only estimate required return based on debt being unsecured.

The most updated market data available reflecting the company´s cost of debt is the latest bond issue made 30.01.2013. This bond has a nominal credit spread above the risk free rate of 4.75 %. The quoted market price is ~100, and the current credit spread is thus equal to the quoted spread.[279] To verify this result we will use a credit rating and look at the implied credit spread. SIOFF does not have a credit rating from any of the credit agencies, and we therefore construct a synthetic rating based on financial ratios for the last five years. This method is used by lending institutions and recommended by theorists.[280] The result from this analysis is summarized in table 7.2. A complete overview of the calculations can be seen in appendix 7.4.

Table 7.2

Year	2007	2008	2009	2010	2011	2012
Implied credit rating	A	A-	A	BBB	BB-	B

Source: Compiled by authors/Plenborg &Petersen - Financial statement analysis /S&P

Based on the results in this analysis we have assigned SIOFF a credit rating of B. This can be explained by Standard & Poor`s guide as being "more vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments." The rating is supportive of our findings in the fundamental beta analysis, as the operational risk is perceived as high and the financial risk as neutral. According to Plenborg this rating can be transformed to a credit spread from 3.2 – 13.1%.[281] Since SIOFFs assets are highly mobile, valuable and have a transparent second hand market, credit spread is likely to be in the low range.

The best estimate for the credit spread is thus 4.75%. Adjusted for the risk free rate, this gives a required return of debt equal to 6.89%.

[277] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 265
[278] Pratt et. Al – Cost of capital, Estimation and applications (2002) pg. 40
[279] Oslo Stock Exchange – www.oslobors.no – Bonds – Siem Offshore Inc. 13/18 FRN
[280] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 291
[281] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 291

Tax rate

Since free cash flow is calculated in after tax terms, we must adjust the cost of capital reflecting the fact that interest costs are deductible. SIOFF has operations across many geographical regions and are thus subject to different tax rate regimes. Applying the Norwegian corporate tax rate is therefore inconvenient. The best estimate for the corporate tax rate is therefore the effective tax rate from the financial statement. We base our estimate on the historical average tax rate, adjusted for the extreme deviation in 2011. It is important to notice that this method suffer from a drawback, since it assume that that borrowing costs are distributed in the same way as operating earnings.[282] The implication for SIOFF is less obvious as the company has borrowings in three different regions and currencies.

The corporate tax rate is therefore set to be 14%.

7.3 Capital structure

The last stage in estimation of WACC is the capital structure of debt and equity. To estimate these values it is important to rely on market values, as WACC represents the expected return on an alternative investment with identical risk. Book values therefore represent a historical cost.[283]

One approach is to estimate a target debt ratio for the firm, by subtracting current value of debt from enterprise value to get equity value. This method gives the correct equity value in situations where the debt ratio will move towards a determined target ratio. This is the appropriate method for corporate takeovers and capital budgeting. In this thesis we estimate the fundamental value of a marginal share in SIOFF. This is considered as a passive investment where the shareholder is unlikely to influence the level of debt. In practice, future cash flow of the company will affect the debt ratio and these cash flows are estimated with a degree of uncertainty. It is therefore meaningless to apply a target debt ratio, when this ratio is determined by the future cash flow. Estimating equity value in a passive investment should rather be based on the forecasted equity value as the target debt level is unknown. To correct for circularity we will therefore apply an iterative procedure.[284]

We start the procedure by estimating the current market value of debt. The market value of debt is not transparent, as there are few disclosures in the annual report. As SIOFF is in a healthy financial position with few fixed-rate borrowings, the market value of the listed bond described in section 7.2 can be used as guideline. As the market value is close to 100, book value of debt is a reasonable approximation.

[282] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 265
[283] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 262
[284] Patrick Larkin (2011): "To Iterate or not to iterate? Using the WACC in equity valuation" pg. 1-2

To maintain the capital structure the company has three possible ways of rebalancing. A rebalancing of the capital structure involves transaction costs and has signal value to the stock market.[285] Therefore there are practical limitations to how often the company can perform this task. The most realistic assumption is thus periodically rebalancing. Re-leveraged beta, and thus WACC, is therefore calculated based on Miles-Ezzels method.

The input parameters to WACC are estimated in the previous sections, and are applied in the iterative process. The first step in the iterative process is to calculate the current capital structure in WACC based on observed market value of equity and debt. Changes in the capital structure will affect the required return on equity and the WACC.

The next step is to apply the estimated equity value in a new calculation of WACC as the estimated value of equity implies a new debt ratio. By applying the new ratio, we get a new WACC and equity value. This process is repeated until the estimated equity value is equal to the value applied in WACC. The iteration process is summarized in table 7.3.

Table 7.3

Attempt Number	WACC	Beginning VE	FCFF Firm value	FCFF Equity value
1	10.109%	494,521	1,230,342	558,237
2	10.106%	558,237	1,230,980	558,875
3	10.106%	558,875	1,230,986	558,881
4	10.106%	558,881	1,230,986	558,881

Source: Compiled by authors/Patrik Larkin

Based on the CAPM model and the iterative process the capital structure is equal to 46% equity and 54% debt. The required return on equity is estimated to 15.1% based on a leverage beta of 1.75. With a return on debt at 6.89%, the WACC is estimated to 10.11%

This estimate is in line with research from investment banks, who apply a WACC between 10-11 %.[286]

[285] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 492
[286] SEB Enskilda – SIOFF 24.08.2012, WACC: 10 %, Øyvind Hagen, Analyst ABG Sundal Collier – Sell-side WACC: 10%-11%

8.0 Valuation

8.1 Valuation: Discounted Cash Flow approach

The discounted cash flow model is among the most popular valuation models, and the theoretical foundation is described in section 1.2 at pg 11. We have calculated SIOFFs FCFF through the pro-forma income statement and balance sheet. The key figures can be seen in table 8.1. The whole cash flow statement and pro-forma sheets can be seen in appendix 8.1.

Table 8.1

Cash flow statement	2013E	2014E	2015E	2016E	2017E	2018E	Terminal
Nopat	40,816	82,366	128,879	156,645	173,074	191,917	196,715
Depreciation	65,599	75,482	88,010	87,031	86,122	85,321	87,454
Change in NWC	-11,751	-12,982	-11,519	-5,873	-4,344	-4,787	-1,915
Change in non current liabilities	-4,172	6,404	5,275	2,690	1,990	2,193	877
CAPEX	-272,258	-342,504	-68,710	-68,517	-69,690	-71,540	-133,945
FCFF	**-181,767**	**-191,234**	**141,936**	**171,976**	**187,151**	**203,103**	**149,186**

Source: Compiled by authors

FCFF is negative in the first two years of the forecast period, which is explained by high CAPEX requirements from the newbuilding program. According to our assumptions, CAPEX will reflect a long term fleet growth of one vessel per year from 2015, in addition to other general investments represented by depreciation. CAPEX calculation can be seen in appendix 8.1. Change in "Net Working Capital" is negative, tying capital in operation as revenue increase. The growth is diminishing as share of revenue comes down at the historical level. Change in "non current liabilities" is separated as an individual item, as it is not included in "Net Working Capital" or CAPEX.

To find the present value of the FCFF we use the WACC from part 7.0, as this cash flow is available for holders of both stocks and debt in the company. The discount rate is equal to 10.1%

The complete DCF calculation can be seen in figure 8.1.

Figure 8.1

DCF Calculation	2013E	2014E	2015E	2016E	2017E	2018E	Terminal
FCFF	-181,767	-191,234	141,936	171,976	187,151	203,103	149,186
Discount factor	0.91	0.82	0.75	0.68	0.62	0.56	
PV of FCFF	-165,084	-157,741	106,331	117,011	115,649	113,987	
PV of FCFF in forcast horizon	130,153						
PV value of FCFF in terminal period	1,100,833						
Estimated EV	**1,230,986**						
NIDB	672,105						
Estimated market value of equity and minority interest	**558,881**						
Value of minority interests	42,796						
Estimated market value of equity	**516,085**						
Number of shares outstanding	**390,190**						
Share price USD	1.32						
Share price NOK, (NOK/USD 5.752)	**7.61**						

Source: Compiled by authors

Enterprise value is estimated to USD 1.231bn which reflects the total value of all future cash flow to shareholders and holders of debt.

To derive the equity value we subtract market value of debt primo 2013, which is equal to book value ref. previous discussion. As SIOFF has 51% ownership in a company owning four of the PSVs, these revenues are fully consolidated in the pro-forma financial statement, in accordance with IFRS. We must therefore deduct the value of this third party minority stake as a non-financial claim.[287] Based on the minorities expected share of future result, we have conducted a simplified DCF calculation. We have used the company´s overall WACC as we consider this the best available alternative for capital cost.[288] The minority interest is valued at USD 43m and deducted from enterprise value.

Estimated market value is USD 516.085m. SIOFF has ~390 million shares outstanding, and the equity value per share is therefore equal to USD 1.32, and NOK 7.61 based on NOK/USD 5.752.[289]

Close to 90% of the estimated value is represented by the terminal period. This is explained by the negative cashflow in the first years of forecasting and the high expected future growth rates. More mature companies will typically be less sensitive towards the terminal period, as they have lower growth prospects during the forecast period. This can also be seen in the multiple analyses. Due to the significant impact of the terminal period, we will perform different sensitivity analysis of the variables in part 9.0.

[287] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: 284
[288] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg. 271
[289] www.dnb.no – Exchange rates – Historical rates 16.04.2013

8.2 Valuation: Economic Value Added

To understand how SIOFF creates value for its shareholders we have supplemented the DCF analysis with the EVA model. The theoretical foundation is explained in section 1.2. Both models shall give the same result, as they rely on the same assumptions and present values.

The EVA model relies upon the same inputs as the DCF model, but derives the value of the company by looking at how the company creates value for shareholders. Instead of using cash flows, the model use NOPAT adjusted for capital costs directly.

Primo 2013 SIOFFs market value of invested capital was USD ~1.458m, and the complete EVA calculation can be seen in figure 8.2.

Figure 8.2

EVA Calculation	2013E	2014E	2015E	2016E	2017E	2018E	Terminal
NOPAT	40,816	82,366	128,879	156,645	173,074	191,917	196,715
Invested capital beginning of period	1,458,616	1,681,199	1,954,798	1,941,742	1,926,411	1,912,333	1,901,147
WACC	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%
Cost of capital	147,405	169,899	197,548	196,229	194,680	193,257	192,127
EVA	-106,590	-87,533	-68,669	-39,584	-21,606	-1,340	4,589
Discount factor	0.91	0.82	0.75	0.68	0.62	0.56	
Present value of EVA	-96,806	-72,202	-51,444	-26,933	-13,351	-752	
Invested capital beginning of period	1,458,616						
Present value of EVA terminal period	33,858						
PV value of EVA in forecast horizon	-261,488						
Estimated enterprise value	**1,230,986**						
Net interest bearing debt	672,105						
Value of minority interests	42,796						
Estimated market value of equity	**516,085**						
Number of shares outstanding	**390,190**						
Share price USD	1.32						
Share price NOK, (NOK/USD 5.752)	**7.61**						

Source: Compiled by authors

The EVA model tells a different story of SIOFFs results and value creation, compared to the DCF approach. In the DCF model, capital costs is not considered as a separate item and it is therefore not possible to see if the company creates value for shareholders. As figure 8.2 illustrates, EVA is negative in the first five years of forecasting thus SIOFF is actually destroying value for its shareholders. The terminal period only contributes to 3% of the enterprise value.

The EVA model shows explicitly why SIOFF is valued below book value of invested capital. The value of SIOFF lies in the capital already invested, and not in future operations. Our estimated equity value yields a price/book of ~0.7, and the pricing of the company will be further explained in the relative valuation.

By using the solver function in excel we have estimated how much the growth in terminal period must increase for the total EVA to be 0. Solver implies that the terminal growth must be 7% for the company to not destroy shareholder values long term. This is an unlikely growth estimate, and supports our subsequent conclusion.

8.3 Relative valuation: Multiples

Before we can give a recommendation for a potential investment in SIOFF, we will perform a relative valuation by applying forward looking multiples. As described in the methodology, a key requirement for a successful analysis is to use the right multiples. Empirical evidence shows that forward looking multiples are indeed more accurate predictors of value than historical multiples.[290] In table 8.2, we have summarized our choice of forward looking multiples and arguments hereby.

Table 8.2

Multiples	Strengths	Does not take into account:
EV/Sales	Useful when earnings are volatile and not representative for long-term operational potential	Tax rate Cost of capital EBITDA margin
EV/EBITDA	Tells more about a companys value than any other, as the key value driver is a cash-flow-based valuation formula OSV companies have different depreciation schemes, and the multiple adjust for this by eliminating depreciation	Tax rate Cost of capital
EV/EBIT	Subtracting depreciation from earnings is necessary as depreciation should equal capex in the long run Beneficial compared to P/E when peers have different solvency ratio	Tax rate Depreciations Cost of capital
P/B	Illustrates how the market value OSV companies assets, which mainly comprise of vessels. A comparison between market value and book value show the relative pricing differences.	Solvency ratio

Source: Compiled by authors/McKinsey/First Securities

These multiples are also widely used among analysts.[291] We have chosen not to use P/E multiples, as this is affected by a company´s capital structure, not just its operating performance. In addition, unlike EBITDA, net income is calculated after non-operating items such as amortization of intangible assets and one-time gains and losses. This can result in significantly lower earnings, causing the P/E to be artificially high.

Further, McKinsey suggest that the peer group should comprise of companies with similar outlook for growth and ROIC.[292] We see the outlook for growth among the companies as similar, even though we believe companies with higher subsea exposure to have better growth prospects.

[290] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: 311
[291] Arctic Securities, SEB Enskilda, Fondsfinans
[292] Koller,T. Goedhart,M. and Wessels,D. (2010) - Valuation: pg 305

Overall we believe the peer group to consist of the most comparable companies to SIOFF. This is confirmed by investment banks, as analyst use the same peer group in their relative valuation models.

An additional consideration that needs to be addressed is the measurement of averages. According to researchers, harmonic mean generates more accurate value estimates than multiples based on mean, median and a value-weighted average.[293] We have therefore chosen to use this method to calculate the average. In table 8.6, we have summarized forward-looking multiples for the peer group from Bloomberg.

Table 8.3

	EV/Sales		EV/EBITDA		EV/EBIT		P/B	
Company	E2013	E2014	E2013	E2014	E2013	E2014	E2013	E2014
Farstad Shipping	2.7	2.5	7.1	6.0	12.2	9.2	0.67	0.63
Solstad Offshore	3.5	3.4	7.6	7.2	11.5	9.8	0.77	0.63
Havila Shipping	4.6	4.2	9.5	8.5	11.1	9.8	0.35	0.32
DOF ASA	3.1	2.9	8.4	7.8	12.8	11.3	0.49	0.44
Harmonic mean	3.3	3.1	8.1	7.3	11.9	10.0	0.52	0.47
Siem Offshore	3.6	2.6	10.4	6.8	24.7	12.2	0.66	0.57

Source: Compiled by authors/Bloomberg

Based on our estimates for SIOFF, the 2013 EV/EBITDA multiple is 10.3. This is higher than the average of peers. The higher premium can be justified as the company is still growing considerably, and we forecast EBITDA to increase in the future as a result of delivery of new vessels. SIOFF is also the company with the highest spot exposure, which is beneficial as the AHTS market is expected to tighten. This is also supported by our estimated EV/EBIT multiple, which yields a significantly higher multiple than the average of peers. The P/B is also higher than the average of peers, but the picture is distorted by Havilas low level as a result of high leverage. It is interesting to notice that all peers are traded below book value of equity. Based on these multiples, SIOFF looks more expensive than the average of peers, but the premium is justified by the increased exposure towards the subsea segment.

In 2014 we estimate an EV/EBITDA of 6.8 and EV/Sales of 2.6, which is below the average of peers. The EV/EBIT and P/B is on the other hand above that of peers. During 2014, all of SIOFFs newbuildings will be delivered, and we expect a significant increase in revenue and EBITDA. Beyond this point, growth is expected to slow down. Compared to peers, SIOFF trades at a discount based on the EBITDA and Sales multiple, but at a premium for the EBIT and book value multiple. Based on our estimations for 2014, there is no clear evidence of a potential up or downside in the valuation. SIOFF therefore look fairly priced compared to peers.

[293] Plenborg & Petersen (2012) – Financial Statement Analysis pg. 234.

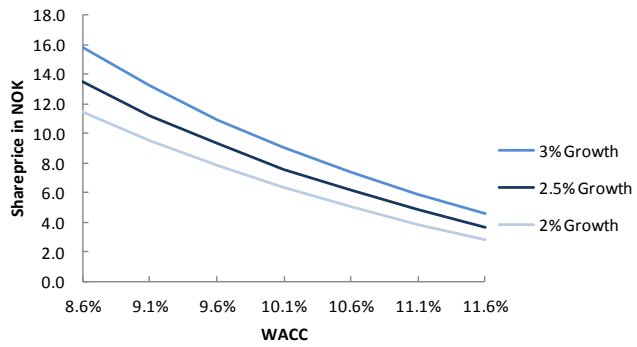
We have also compared our estimated multiples with consensus estimates for SIOFF from Bloomberg. Compared to consensus seen in appendix 8.2, all our forecasted values are below average. The difference can be explained by our lower estimates of revenue and EBITDA, and we consider the company to be more expensive than the opinions of analysts. This can possibly indicate that our estimates are conservative, and be a sign of a potential upside of the valuation. However, compared to the historical EBITDA-margin and ROIC illustrated at page 99, we believe our forecast is more reliable. In our forecast we project an increasing demand for OSV services, in line with analysts' opinion. However, we see the supply side increasing as well, limiting the potential upside of dayrates. In the following section, we will discuss our underlying assumptions.

9.0 Sensitivity analysis

For an investor it is important to understand how the estimated shareprice is sensitive towards changes in key value drivers, revealing which input to monitor more closely. The estimated shareprice rely upon several assumptions, where growth rate in terminal period is one of the key factors. As the terminal period accounts for ~90% of the DCF value, changes in the assumed growth rate of 2.5% will have significant impact on the shareprice. The estimated discount rate is also a key factors, as it is used to calculate present value of all future cash flow. Sensitivity towards these factors is illustrated in figure 9.1. The complete calculations for all sensitivity analysis can be seen in appendix 9.1.

Our assumed growth rate of 2.5% is based on the average expectations for long term nominal earning growth, among practitioners. According to PwC, ~70% of industry professionals expect the growth rate to be in the range from 2 – 3 %.[294] Today, many developed countries struggle with low nominal growth rate and it is difficult to predict at which level the growth will be this far into the future. As we see from figure 9.1, the shareprice changes significantly if we apply the estimates of different professionals. Only a slight decrease in growth of 0.5% will reduce shareprice by NOK ~1.

Figure 9.1 Terminal period vs. change in WACC

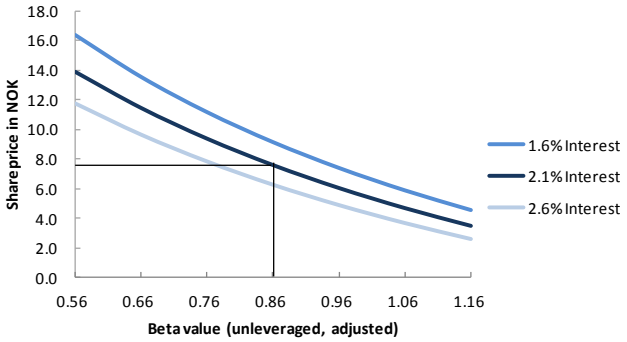


Source: Compiled by authors

Our estimated share price is also highly sensitive towards change in WACC. We have calculated the discount rate based on recognized theoretical models, but acknowledge that there can be estimation errors. Our WACC lies in the range of analysts estimates, but if we apply a WACC in the upper range, of 11% the estimated shareprice will be close to NOK 5. It is therefore valuable to segregate the components of WACC and see how the shareprice responds to changes in beta and risk free rate.

[294] PwC (2012): "The Norwegian market risk premium 2012-2013", pg.16

Figure 9.2 Unleveraged beta vs. Risk free rate

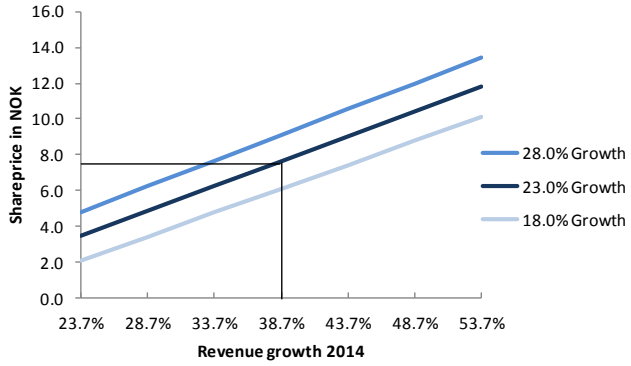


Source: Compiled by authors

There are several different ways to calculate stock beta, and the choice of historical period or number of observations can have great influence for the value. To eliminate the possible sources of error, we have combined different approaches and adjusted the final estimate in accordance with Bloomberg. However, over time it is possible that the implied systematic risk of the company changes. Based on the pro-forma income statement and balance sheet we believe the current risk measure is valid. Figure 9.2 also illustrates that only a small change in the risk free rate will have huge impact for the shareprice. The current interest level is extremely low seen in a historical perspective, and it is therefore interesting to see how an increase will impact the estimated shareprice. We believe that a higher interest rate is plausible in the future, but we believe this will take time. Increased interest rate will mirror improvement in the general economy and is therefore likely to be seen in relation with higher growth. We acknowledge that there is a risk on the downside to our estimate, but believe an improved economy will increase oil demand, E&P spending and thus SIOFFs revenue and cashflow.

Another key value driver is the revenue, which is a result of the development in dayrates. Our estimated shareprice is based on a revenue growth of ~39% in 2014 and ~23% in 2015. The sensitivity analysis illustrates how sensitive the shareprice is towards only small changes in revenue growth. SIOFF will take delivery of four OSCVs during these years, which can explain more than 50% of the revenue increase. We have assumed 98% utilization after delivery as the market is expected to be strong. On the downside there is a risk of either delays or weakening market conditions, which will have major impact on revenues. The shareprice is therefore sensitive towards changes in the subsea segment.

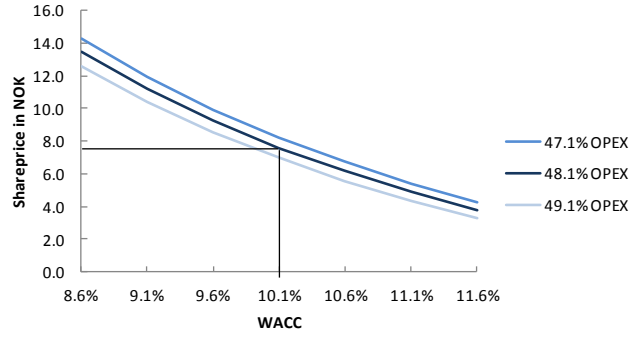
Figure 9.3 Revenue growth in 2014 vs. 2015



Source: Compiled by authors

In the years up to 2012 there has been a significant cost inflation affecting the whole OSV industry. In our forecast we have assumed a further increase in OPEX above inflation of 3-5% in 2013 and 2014. This will reduce operating margin and is a major concern for the industry. There is uncertainty regarding the future development of these costs, and figure 9.4 illustrates how different long term OPEX will influence the shareprice.

Figure 9.4 OPEX vs. WACC



Source: Compiled by authors

9.1 Partial conclusion

The 16th of April 2013 SIOFFs shares were traded at NOK 7.29. Compared to our DCF estimate of NOK 7.6, this represents a potential upside of 4%. However, the estimated price must be seen in context to the EVA model, multiple valuations and the sensitivity analysis.

The result from the EVA model showed that the company is destroying value for shareholders during the first years of the forecast horizon, and that the value of SIOFF is reflected in the current fleet of vessels. This is further confirmed by the multiple analyses, where P/B is well below 1. For 2013 multiples, SIOFF looks somewhat higher priced compared to peers. This is explained by the newbuilding program and the expected improvement in dayrates. In 2014, SIOFF looks fairly priced. This indicates a limited upside potential. Through the sensitivity analysis it can be seen that the estimated value is sensitive towards changes in the underlying assumptions. Only a small change in dayrates for OSCVs will have significant impact on revenues. The same is true for growth in terminal period. Over time it is also possible that the systematic risk of the company might change, which will affect WACC. Only a small change in WACC will have major impact for the shareprice. Based on these findings we see the upside potential as limited.

10.0 Discussion

The average consensus estimated shareprice is NOK 11.75, which is ~50% higher than the shareprice from our DCF model. It is therefore interesting to look at how analysts have derived at this number, and compare it to our analysis. A complete overview of consensus estimates can be seen in appendix 9.2.

The first possible explanation is the valuation of Siem WIS, the venture company started in 2006. We consider the business to be far from SIOFFs core operations. The company has been in the startup face for seven years, and has delivered negative results for the entire period. Over the years, the company has seeked partnership with different petroleum companies, but has failed to accomplish this strategy. It is therefore questionable how successful the venture has been. This is further confirmed by the recent stock exchange notice saying that "SIOFF explore strategic alternatives for WIS" indicating a potential sale of the business.[295] Arctic Securities value the business to NOK 0.8 and Fondsfinans NOK 1 per share. We believe these estimates to be too optimistic and value the business to NOK 0, as there is too much uncertainty going forward.

The second explanation is the valuation of Siem Offshore Contractors, the fully owned subsidiary within the renewable energy installation business. The company has currently an order backlog of USD ~180m over the next two years, but as it is a fairly new business it has not previously earned a positive EBITDA. Arctic Securities estimates a fair market value of the business of NOK ~3.15 per share, based on an estimated EBITDA of USD 36m in 2014, times a multiple of 6. Fondsfinans on the other hand estimate a fair market value of NOK ~1.15 per share, based on an EBITDA of USD 15m in 2014. They use a multiple of 7 adjusted for in-house utilization of 25%. We have estimated the value of SOC through a higher utilization of SIOFFs fleet, as in-house resources will be utilized. This high utilization has a value of NOK 1.15 per share, which is our implied value of SOC. We believe this is a more reliable result as we are somewhat conservative towards the offshore renewable energy sector. The company has not previously delivered profits, and the EBITDA contribution is therefore uncertain. In the future, if the company manages to create results, a higher valuation might be justified.

The third and final explanation for the deviation of estimated shareprice is the assumed dayrates in the forecasting period. Analysts in investment banks are considerably more optimistic for revenue growth from 2012 - 2015, compared to our estimates. It looks like our estimated dayrates for the AHTS fleet is lower than consensus. However we believe that our estimates are more in line with the future supply/demand balance in the AHTS segment, as we see increase in both demand as well as supply. As the market outlook improves, we believe more high-end vessels to be ordered, which will limit the upside potential. Our estimated dayrates are more closely related with the historical average, and thus somewhat more conservative.

[295] Øyvind Hagen, Analyst at ABG Sundal Collier appendix 10.1 and www.siemoffshore.com – Stock Exchange Notices

11.0 Conclusion

Our main objective of the thesis was to determine the intrinsic value of a marginal investment in Siem Offshore per 16.04.2013. Based on our company and market analysis we recommend a HOLD with a target price of NOK 7.6.

Siem Offshore is the youngest player among peers with annual revenue of USD ~300m in 2012. Over the last eight years the company has grown by an average of three vessels per year, and today has a fleet of 33 vessels and 10 newbuilds. The newbuilding program will be completed in 2014 when the last of the four OSCV is delivered. Since the IPO in 2005 SIOFF has provided an annual average return of ~9 %, but after 2009, shareholder returns have been all but satisfying.

The most important demand factors affecting SIOFF and the OSV industry is the petroleum companies E&P spending. These investments are driven by the level of the oil price, with a lag of 6-18 months. The average oil price have remained above USD 100/bbl. in the last three years, and we expect the price to increase steadily towards USD 140/bbl. in 2015. This will bode well for increased offshore E&P spending, which is expected to grow by 13% in 2013, and 12% in 2014. Half of this increase is expected to come from increased activity and increased technical complexity. The number of offshore drilling rigs will grow by 25% over the next four years driving demand for PSVs and AHTS vessels. As petroleum companies struggle to explore new oil reservoirs, exploration and production activity is moving towards deeper water, far from existing infrastructure. Some of these areas have very harsh environment which require more sophisticated vessels. Fixed platforms sitting at the seabed can only be used for water depths down to 300m. As production moves into deep water areas, the demand for subsea installations will increase, driving demand for OSCV/MRSV vessels. In deepwater and harsh environment areas, there are strong regulations for QHSE and high-end vessels enjoy higher dayrates and utilization. We expect to see a demand growth of 20-30% for PSVs, AHTS and OSCV/MRSV over the next four years.

Even though demand is set to increase, we see a high orderbook and a strong supply growth going forward. The AHTS and OSCV/MRSV segment is less threatened of oversupply as a result of higher entry barriers. The PSV segment is less capital intensive and easier to operate, and Asian yards with excess capacity are building vessels on speculation of a better market. This has distorted the market balance, and we expect the supply to be greater than demand for the next two years. Overall we expect the AHTS and OSCV/MRSV fleet to grow by 10-22% and the PSV fleet by ~30%.

As the demand is expected to increase more than supply of AHTS and OSCV/MRSV we expect OSCV/MRSV dayrates to improve by 5% and AHTS dayrates by 5-12% annually over the next four years. As the supply of PSV vessels will increase more than demand, we expect to see decreasing dayrates until 2015, when the market will be more balanced.

SIOFFs combined resources is somewhat unique in the OSV market, in terms of a modern fleet composition, relationship with clients, geographical allocation, management and financial resources. Compared to the average market we therefore expect SIOFF to obtain above average utilization going forward.

In the last years, SIOFF has not been able to create satisfying shareholder returns. ROIC has decreased and the EBITDA-margin has contracted. In the forecasting period we expect revenues to grow as new vessels are delivered and the market is expected to improve. On the other hand we expect OPEX to increase with the activity growth, as the supply of skilled labour is limited. This will therefore limit the upside, preventing EBITDA-margin and ROIC to reach the record high level seen in 2007.

Based on a risk assessment of the company, we estimate a WACC of 10.1%. The output from the DCF model indicate an upside potential of 4% and the EVA model shows that the company is actually destroying value for shareholders through the forecast period. SIOFF is therefore priced below book value of equity. Compared to peers, SIOFF is priced relatively high on 2013 multiples which might indicate a limited upside.

Through sensitivity analysis it is evident that the estimated value is highly dependent on the underlying assumptions. An additional 5% revenue growth in 2014 and 2015 will yield a shareprice of NOK 10-11. On the other hand, only a slight decrease in the long term growth rate of 0.5% will yield a shareprice of NOK ~6.

Our estimated shareprice is below the average of consensus, which might indicate that our estimates are conservative. We believe analysts are too optimistic concerning the value of SOC and WIS.

SIOFF does not provide the preferred exposure given our market outlook, and our recommendation is HOLD. We recommend investors seeking exposure towards the OSV market, to look for players with higher degree of subsea operations.

12.0 Thesis in perspective

There are numerous ways to value the equity of a company, other than those approaches we have chosen. One alternative could be to use a Net Asset Value (NAV) model to calculate a fair shareprice for SIOFF. This could either be done by calculating returns on a per vessel basis or estimate the fleet value based on second hand values.

We have estimated the value of Siem WIS to NOK 0, but could alternatively have conducted a more in-depth analysis. This could have been done through interview with industry experts, and valued the asset by Real Option Pricing. This would have required input data relying on highly subjective assumptions.

In the EVA model we discovered that SIOFF destroy shareholder value through the whole forecasting period. An interesting approach could therefore have been to look at alternative industrial owners for SIOFFs fleet, and thus valued potential synergies in an M&A perspective. This would have required a profound analysis of potential buyers, and lies outside the scope of the original problem statement. An alternative could also be to look at the value of SIOFFs assets through a liquidation approach where vessels are sold in the second hand market.

Our forecast of OPEX is based on average cost per vessel segment, which might be too superficial. An alternative could have been to look at the specific cost level of each vessel, and summarized this as OPEX. We have not been able to obtain this information, but could possibly have been found through interview with industry professionals.

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- PwC	www.pwc.no
- Norges Bank	www.norges-bank.no
- Aswhat Damodaran	www.people.stern.nyu.edu/adamodar/
- Oslo Stock Exchange	www.oslobors.no
- DnB	www.dnb.no
- E-Campus/investex	www.e-campus.dk/bibliotek
- Feder Reserve Database	www.research.stlouisfed.org/
- Marine Money	www.marinemoney.com
- Trade Winds	www.tradewindsnews.com
- Yahoo Finance	www.finance.yahoo.com
- Reuters	www.reuters.com
- DNV Exchange	www.exchange.dnv.com
- Marine Traffic	www.marinetraffic.com
- Marine Link	www.marinelink.com
- Offshore Magazine	www.offshore-mag.com

14.0 Appendix

Part 1

Appendix 1.1: Dictionary and abbreviations

AHTS: Anchor Handling Tug Support Vessel

BBL: Barrel of oil

BHP: Break horse power, measure of engine power

Charterer: Company paying for the OSV services

CSV: Construction Support vessel

DP: Dynamic Positioning. Used to maintain a vessel / unit´s position. Different DP systems, ranging from 1-3, with different specifications.

DWT: Dead-weight Tonnage

E&P: Exploration & Production

FCV: Fast Crew Vessel

FSV: Fast Supply Vessel

IMR: Inspection, Maintenance and Repair

ISV: Installation Support Vessel

Jack-up rig: Drilling vessel with three or more extendable legs which are jacked down to the seabed when a drilling location I sreached.

LOA: Length overall, measured in meters

MRSV: Multipurpose field & Remotely Operating Vehicle (ROV) support vessel

OCV: Offshore Construction Vessel

OSCV: Offshore Subsea Construction Vessel

OSRV: Oil Spill Recovery

OSV: Offshort Supply Vessel

PSV: Platform Supply Vessel

ROV: Remotely Operating Vehicle

UDW: Ultra-Deep Waters

CDA: Cargo Deck Area, measured in m^2.

QHSE: Quality, Health, Safety and Environment

Appendix 1.2 – Peer group comparison

Source: Compiled by authors / annual reports and homepages.

The choice of peer group is based on operational and strategic factors, and this table identifies those companies most applicable for the peer group analysis. The Norwegian OSV companies are similar in operation and management, and they dominate the world fleet of high-end vessels. It is therefore natural to start the analysis by looking at all the OSV companies listed at Oslo Stock Exchange. Based on the comparison, the following companies are identified as peers; Farstad Shipping ASA (www.farstad.no), DOF ASA (www.dof.no), Havila Shipping ASA (www.havila.no) and Solstad Offshore ASA (www.solstad.no).

Comparison factor	SIOFF	Farstad	DOF	Havila	Solstad	Eidesvik	REM	DESSC
Medium and high end PSV	✓	✓	✓	✓	✓	✓	✓	✓
High-End AHTS	✓	✓	✓	✓	✓		✓	
OSCV/Subsea vessels	✓	✓	✓	✓	✓	✓		
Other vessels	✓			✓		✓		
Newbuilding Program	✓	✓	✓	✓		✓	✓	✓
Historical CAGR of revenues above 10%	✓	✓	✓	✓	✓			
North Sea Vessels	✓	✓	✓	✓	✓	✓	✓	✓
Brazil Vessels	✓	✓	✓	✓	✓	✓		✓
Asian Vessels		✓	✓	✓	✓		✓	✓
West African Vessels	✓	✓	✓		✓			✓
Gulf of Mexico Vessels	✓		✓		✓	✓	✓	
Stock Exchange listed	✓	✓	✓	✓	✓	✓	✓	✓

Part 2

Appendix 2.1 - Major historical events

Source: Compiled by authors / Arctic Securities / Oslo Stock Exchange / SIOFF reports

2005 Siem offshore Inc. is spun off from Subsea 7 Inc. and all shareholders in Subsea 7 receives shares in Siem Offshore on a 1:1 basis. The established company received ownership of six PSVs newbuild contracts and 10 small vessels in Brazil. Later the same year Rovde Shipping AS was acquired, expanding the fleet with 4 additional PSVs.[1]

2006 One PSV was delivered in Q1, another two in Q4. One PSV contract was sold.

The company placed orders with Kleven Maritime for six AHTS vessel plus six options in addition to four CSVs. Four of the options wore later exercise. One PSV was bought in the secondhand market. This marked a start for a significant growth strategy with the aim of expanding both the fleet and the scope of business. Siem also placed orders for two PSVs. Siem also acquired 60% of the company Well Intervention Solutions for 40 m, later renamed Siem WIS.[2]

2007 Siem orders one large PSV newbuild and acquires another PSV in the second hand market. The PSV newbuild was later cancelled due to the fact that the yard went bankrupt in 2008. Siem also exercise the last two AHTS options, and transferred the ownership to a pool with the Singapore based Singa Star.[3] The two ATHS was later cancelled, but the pool was expanded to include all 10 of Siems AHTS.

2008 Another newbuild contract is signed for delivery of a large PSV with a cost of NOK 313m for Eidesvik yard.

2009 Siem orders two large PSVs at STX Brazil for USD 80m. per vessel, increasing the exposure to the Brazilian market.

2010 Four of the large ATHS vessels are tendered to Petrobras in Brazil on 4Y + 4Y contracts, strengthening the Brazilian presence further. Later the same year Siem sold one of the PSVs, replacing it with a newbuilding contract for a larger PSV.

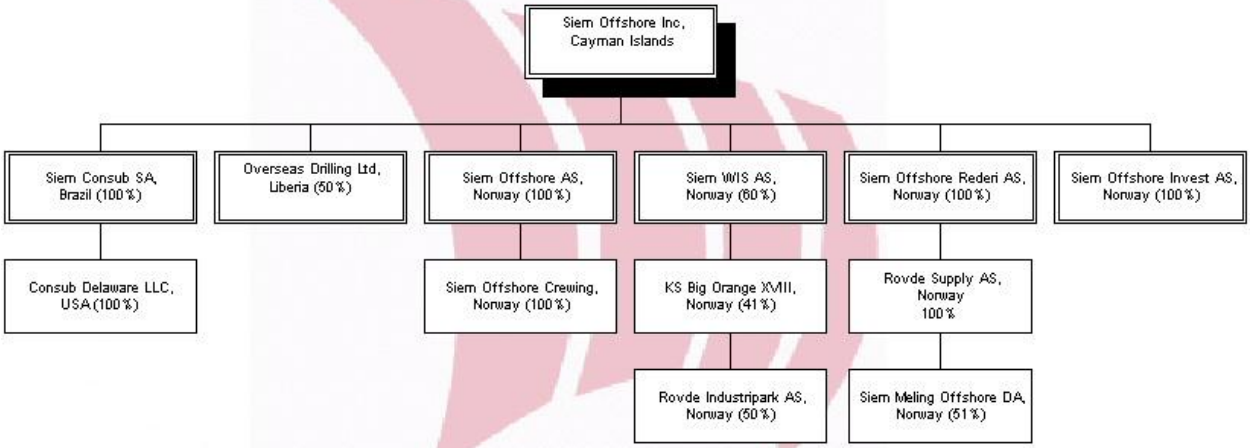
2011 In 2011 Siem acquired Five Ocean Services, a submarine cable installation, repair and maintenance company for USD 8m. Siem had worked with the company over several years, using the converted PSV Siem Carrier. In the same year Siem also announced that the ownership in the scientific drillship Joides Resolution was increased from 50% to 100% for a USD 22.5m consideration.[4]

[1] Siem Offshore presentation (Pareto, 2005) and Rovde Shipping AS
[2] Arctic Securities – Initiation of coverage Siem Offshore Inc. pg. 4
[3] Arctic Securities – Initiation of coverage Siem Offshore Inc. pg. 5
[4] Siem Offshore Annual report (2011) pg. 10

2012 In 2012 Siem Offshore Contractor, former Five Ocean Services, was awarded the first contract for operations within the offshore wind construction business. Through the year there were several adjustments to the fleet. The mid size PSV "Siem Danis" and the MRSV "Siem Swordfish" were sold to new owners. The MSRV "Seven sisters" was sold to Subsea 7. At the same time new orders wore placed at a Norwegian yard for a total of four CSVs.

Appendix 2.2 – Siem Offshore organizational Structure

Source: www.siemconsub.com - management

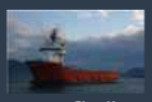


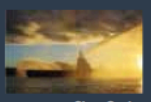
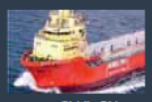
Appendix 2.3 – Siem Offshore fleet list 16th of April 2013

Source: Siem Offshore Annual Report 2012

Platform Support Vessels (PSV)

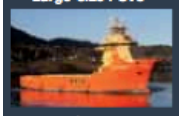
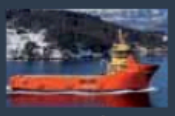
Mid-size PSVs

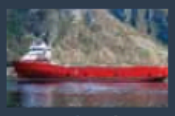


	Siem Hanne	Siem Louisa	Sophie Siem	Siem Sasha	Siddis Skipper
Built:	2007	2006	2006	2005	2004
Design:	VS 470 MK II	VS 470 MK II	VS 470 MK II	VS 470 MK II	VS 470 MK II
Dp Class:	2	2	2	1	2
LOA:	73,40 m	73,40 m	73,40 m	73,40 m	73,40 m
Breadth:	16,60 m	16,60 m	16,60 m	16,60 m	16,60 m
Draught:	6,42 m	6,42 m	6,42 m	6,42 m	6,42 m
Dwt:	3570 T	3570 T	3570 T	3570 T	3500 T
Accommodation:	34	34	34	34	36
Cargo Deck Area:	680 m^2 usable	680 m^2 usable	680 m^2 usable	680 m^2 usable	680 m^2 usable
Ownership:	100%	100%	100%	100%	51%

Large-size PSVs


Siddis Mariner	Siem Pilot	Siem Sailor	Hugin Explorer	Siem Supplier	Siem Carrier
2011	2010	2007	2006	1999	1996
VS 485	VS 485	VS 485 CD	MT 6000 MK II	MT 6000	VS 483
2	2	2	2	2	2
88.3 m	88.3 m	85,00 m	86,20 m	83,70 m	82,85 m
20 m	20 m	20,00 m	19,70 m	17,70 m	19,00 m
approx 7.0 m	approx 7.0 m	7,00 m	6,18 m	6,10 m	6,30 m
4500 T	4500 T	5000 T	3236 T	4250 T	4679 T
64	64	50	56	20	23
970 m^2	970 m^2	1005 m^2	935 m^2	912 m^2	840 m^2
51%	51%	51%	100%	100%	100%

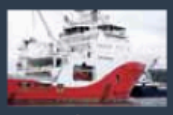
Anchor Handling Tug Supply Vessels (AHTS)




	Siem Amethyst	Siem Opal	Siem Garnet	Siem Sapphire
Built:	2011	2011	2010	2010
Design:	VS 491 CD	VS 491 CD	VS 491 CD	VS 491 CD
Dp Class:	2	2	2	2
LOA:	91,00 m	91,00 m	91,00 m	91,00 m
Breadth:	22,00 m	22,00 m	22,00 m	22,00 m
Draught:	7,95 m	7,95 m	7,95 m	7,95 m
Dwt:	3800 T	3800 T	3800 T	3800 T
Accommodation:	60	60	60	60
Cargo Deck Area:	800 m^2	800 m^2	800 m^2	800 m^2
BHP:	28000	28000	28000	28000
Bollard Pull:	297 Te	297 Te	282 Te	301 Te
Ownership:	100%	0%	0%	100%

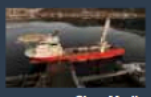
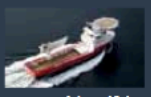




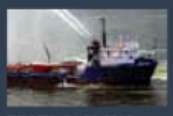
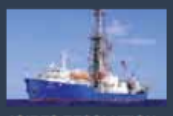
Siem Aquamarine	Siem Topaz	Siem Ruby	Siem Diamond	Siem Pearl	Siem Emerald
2010	2010	2010	2010	2009	2009
VS 491 CD	VS 491 CD	VS 490 CD	VS 491 CD	VS 491 CD	VS 491 CD
2	2	2	2	2	2
91,00 m	91,00 m	91,00 m	91,00 m	91,00 m	91,00 m
22,00 m	22,00 m	22,00 m	22,00 m	22,00 m	22,00 m
7,95 m	7,95 m	7,95 m	7,95 m	7,95 m	7,95 m
3800 T	3800 T	3800 T	3800 T	3800 T	3800 T
60	60	60	60	60	60
800 m^2	800 m^2	800 m^2	800 m^2	800 m^2	800 m^2
28000	28000	28000	28000	28000	28000
284 Te	306 Te	310 Te	284 Te	285 Te	281 Te
100%	100%	100%	100%	100%	100%

Multi Role Support Vessels (MRSV)

	Siem Marlin	Adams Vision
Built:	2009	2009
Design:	MT 6017 MK II	MT 6017 MK II
Dp Class:	2	2
LOA:	93,60 m	93,60 m
Breadth:	19,70 m	19,70 m
Draught:	6,30 m	6,30 m
Dwt:	4500 T	4500 T
Accommodation:	68	68
Cargo Deck Area:	1046 m^2	1046 m^2
Crane:	100 ts Offshore/Subsea crane	100 ts Offshore/Subsea crane
Ownership:	100%	100%

Other


BRAZIL 31.03.2012
– Fleet of 11 vessels
- 4 Vessels under construction

JOIDES RESOLUTION

BIG ORANGE XVIII

EERV / PSV / CREW	Scientific Core Drilling Vessel (SCDV)	Well Stimulation Vessel (WSV)
100% owned	100% owned	41.3% owned

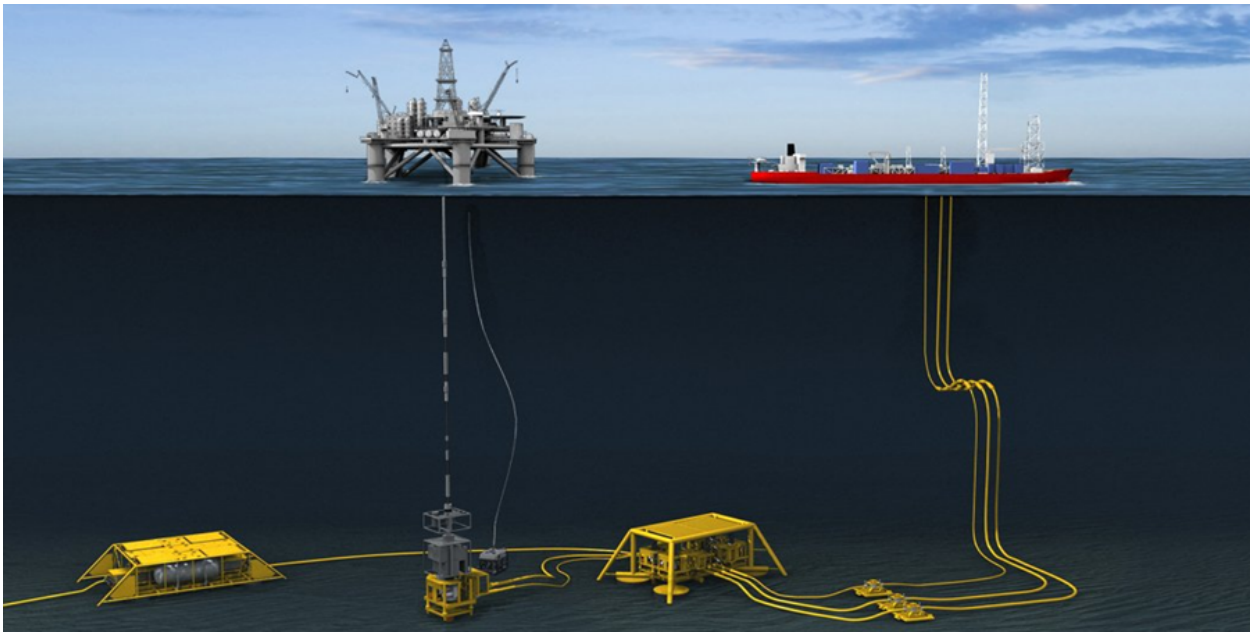
Vessels under construction:

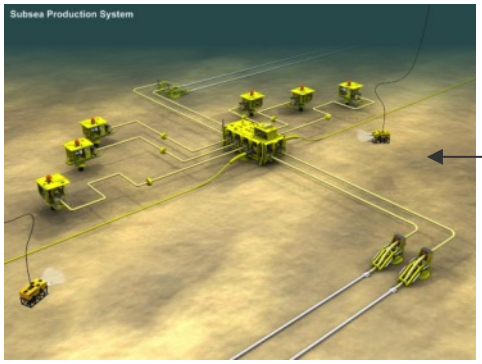
Vessel	Delivery	Ownership
Two OSCVs	2013	100%
Two OSCVs	2014	100%
One PSV	2013	100%
Two PSVs	2014	100%
Two OSRVs	2013	100%
One ISV	2014	100%

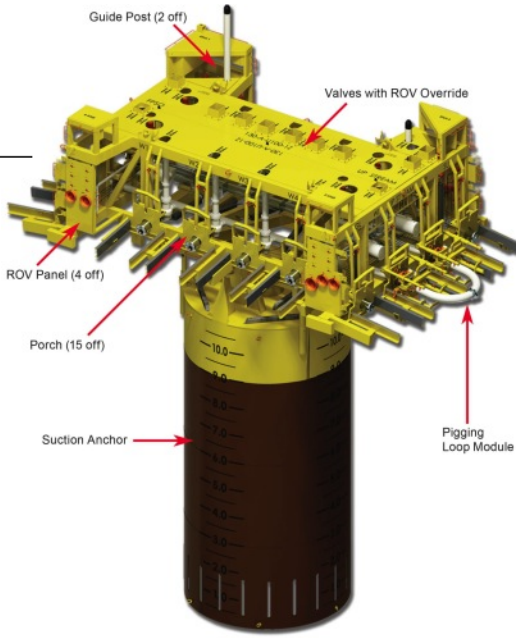
Appendix 2.4 – Subsea systems

Source: Det Norske Veritas (DNV)

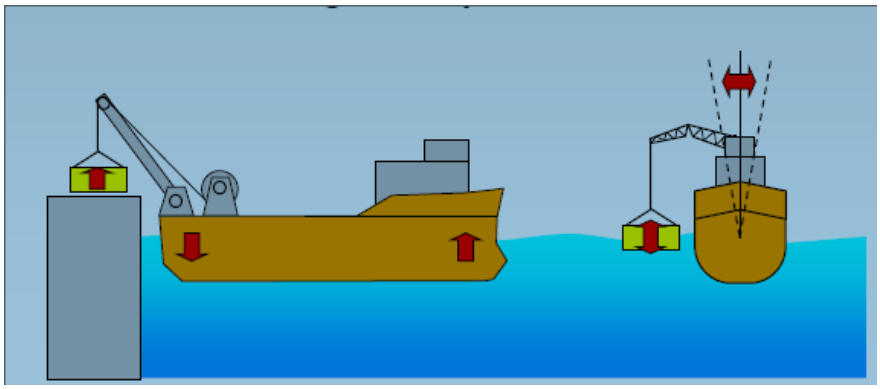
In the following, there is some pictures illustarting how the subsea system works.

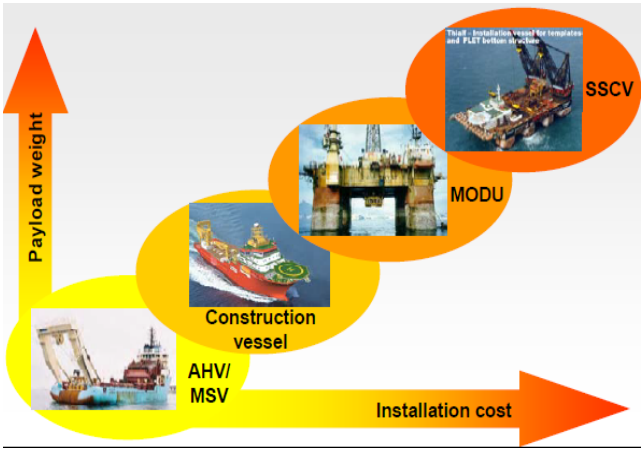






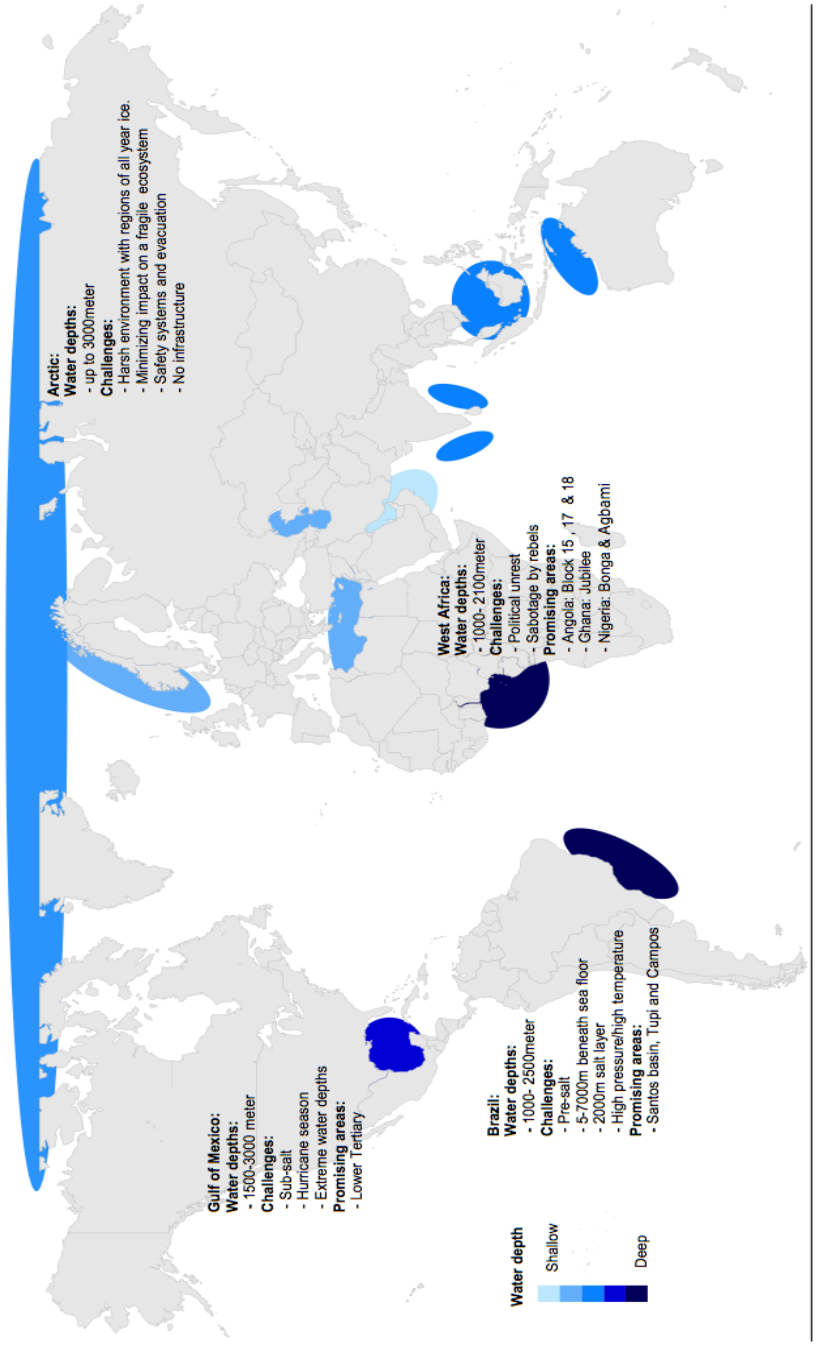
Installation cost is dependent on weight and choice of vessel. Limit for normal vessel is approx. 200 tonnes. The picture below also illustrates the relative size of one of the components.





Appendix 2.5 – Characteristics of global offshore regions

Source: Pareto Securities 2013 / DnB Markets

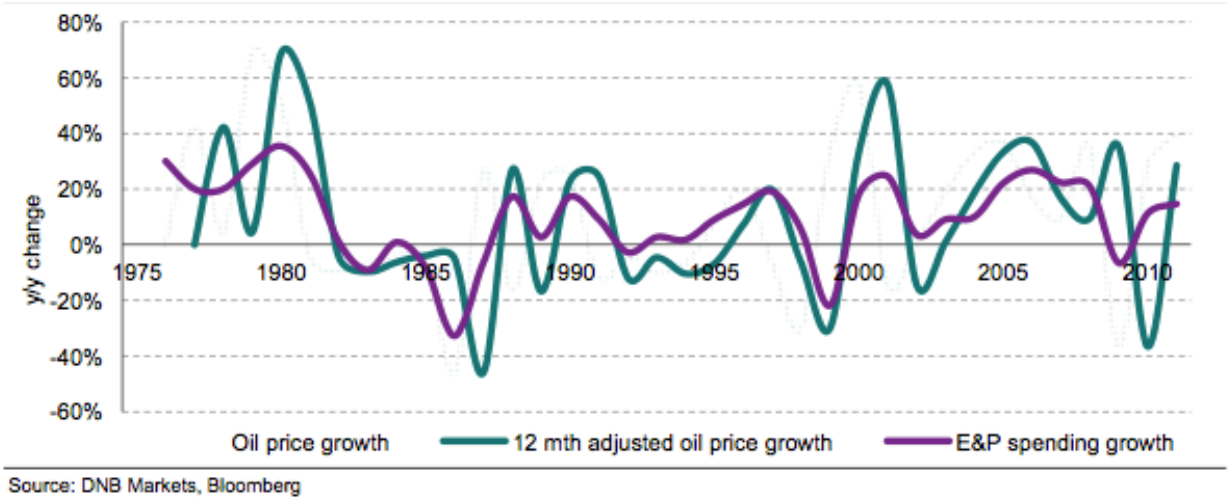


Fleet overview	Northsea	Brazil	West Africa	Gulf of Mexico
Current total PSV fleet (high end)	233 (92)	204 (36)	173 (12)	346 (39)
Current total AHTS fleet (high end)	100 (49)	170 (68)	384 (43)	70 (9)

3.0 Strategic Analysis

Appendix 3.1 – Correlation between oil price and E&P spending

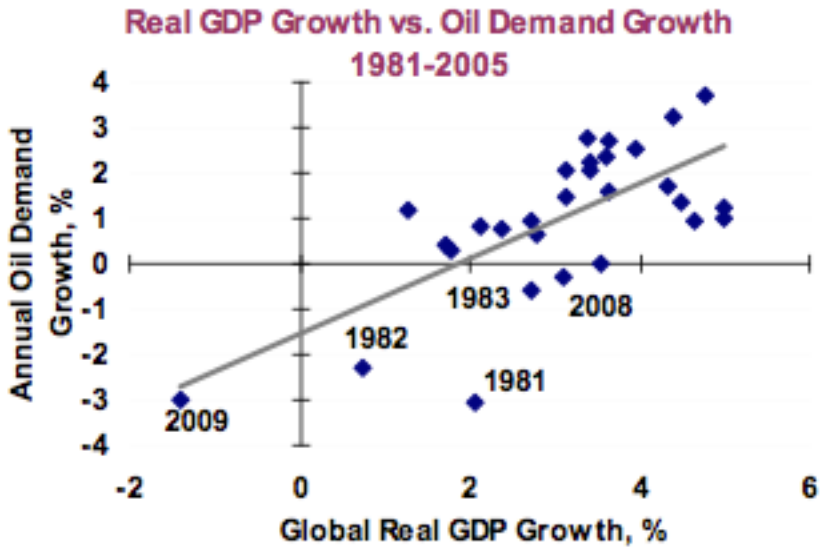
Source: DnB Markets (E&P Spending report 2012)



Appendix 3.2 – Real GDP growth and growth in Oil Demand

Source: IEA Oil market report May 2009 pg. 5 and ABG Sundal Collier – Oil Service Report 10/1/2013 pg. 15

This graph explains the relationship between growth in GDP and the growth in oil demand. Based on this graph there is evidence of high correlation between the two factors.



Appendix 3.3 – Oil price expectations from multiple brokerage firms

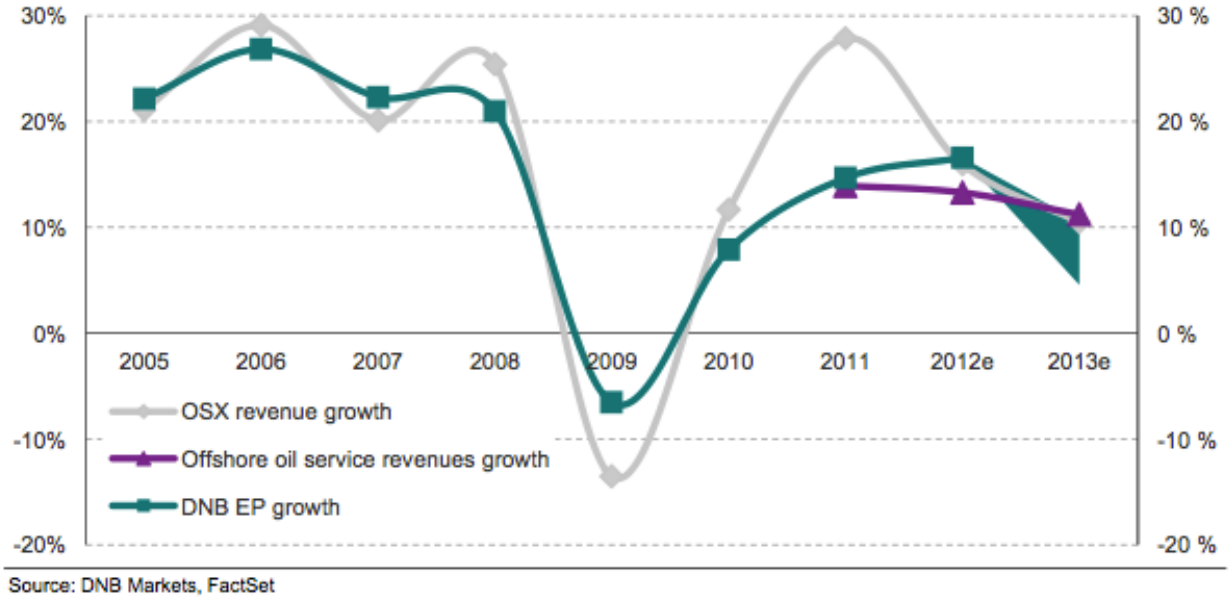
Source: Brokerage firms market reports in table

Oil price outlook, real terms	2013	2014	2015	2015-->
Nordea Markets	108	111		
ABG Sundal Collier	120	125	125	
Pareto Securities	120	120	120	120
Barclays Research	125	130	135	135
OECD	120	140	150	190
IEA (Long term projections only)				127
EIA (Long term projections only)				130
Average	**119**	**125**	**133**	**140**

Appendix 3.4 – Correlation between E&P spending and oil service revenue

Source: DnB Markets (E&P Spending report 2012)

Oil service revenues follow the E&P spending development, and the historical correlation is high.

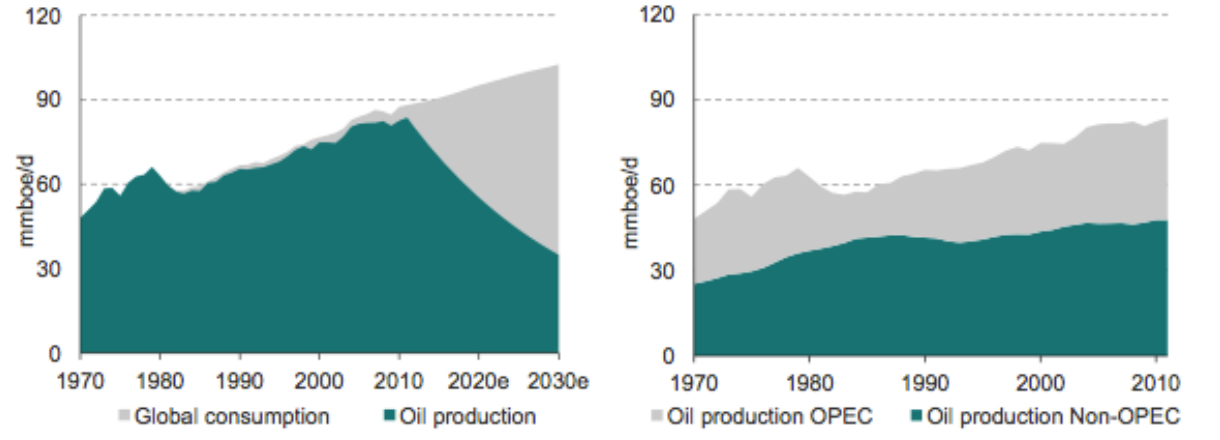


Source: DNB Markets, FactSet

Appendix 3.5 – Current vs. future oil production and OPEC vs. non-OPEC production

Source: DnB Markets (E&P Spending report 2012)

Production from existing fields is declining with an average yearly rate of 4.5%.

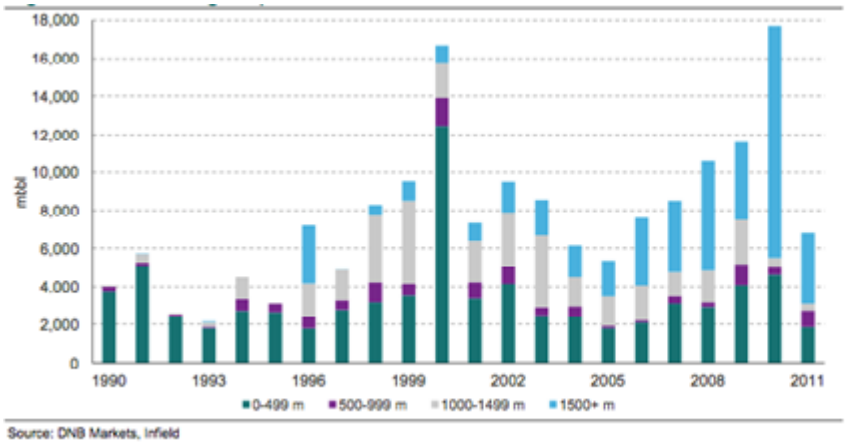


Source: DNB Markets, BP Statistical Review of World Energy 2012

Appendix 3.6 – Deepwater discoveries and average water depth

Source: DnB Markets (E&P Spending report 2012)

As can be seen from this figure, the number of deepwater barrels has increased significantly over the last 10 years. As a result of this, the average discovery water depth has more than doubled.



Appendix 3.7 – Orderbook PSV and AHTS

Source: Compiled by Authors / Fearnley Offshore

AHTS World wide fleet and orderbook					
BHP	3,000-7,999	8,000- 11,999	12,000- 15,999	16,000 +	Sum
Existing vessels	1359	371	189	183	2102
Under construction	83	36	25	44	188
Orderbook	6%	10%	13%	24%	9%
Average age	20	16	15	8	

PSV World wide fleet and orderbook						
DWT	1000- 1499	1,500- 1,999	2,000- 3,499	3,500-4,999	5,000 +	Sum
Existing vessels	260	120	426	270	62	1138
Under construction	5	20	73	135	79	312
Orderbook	2%	17%	17%	50%	127%	27%
Average age	29	13	11	7	4	

Appendix 3.8 –Rig and wells vs. OSV vessels ratio

Source: Compiled by Authors / Fearnley Offshore 2013/ Pareto Securities 2013 / Morgan Stanley 2013

Type	Existing fleet	Existing fleet + newbuildings
PSV	1138	1450
AHTS	2102	2290
Subsea	225	280
UDW and Jackups	597	747
FPSO	150	176
Wells	920	1500

Ratio	Current	Future (2013-17)
PSV/(All rigs)	1.5	1.6
AHTS/(UDW and Jackups)	3.5	3.1
Wells/Subsea	4.1	5.4

4.0 Financial Statement Analysis

Appendix 4.1 – Reformulated income statement and balance sheet for SIOFF and peers.

Source: Annual Reports 2006-2012; Siem Offshore, Havila Shipping, Farstad Shipping, Solstad Offshore, DOF asa.

The income statement and balance sheet are reformulated based on the template and theories in Petersen & Plenborg (2012). Reformulations conducted for SIOFF is mentioned in section XX in the thesis, while reformulations for the peer group are commented in the following sections.

Siem Offshore Reformulated Income Statement

Core Operations	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Operating Income	67,965	151,316	182,395	176,521	217,508	311,702	293,071
Other Income	5,589	8,026	10,378	7,037	10,794	12,034	16072
Results from associated companies, core	2,474	1,529	1,489	1,397	2,024	-1,722	463
Gross income	**76,028**	**160,871**	**194,262**	**184,955**	**230,326**	**322,014**	**309,606**
-Crewing expenses	-12,958	-36,098	-48,773	-59,671	-73,707	-103,991	-108,462
-Other operating expenses vessels	-31,860	-31,561	-40,692	-46,333	-53,929	-68,598	-73,670
-General/Admin expenses	-8,256	-11,884	-15,570	-19,620	-26,024	-35,215	-47,066
Total Expenses	**-53,074**	**-79,543**	**-105,035**	**-125,624**	**-153,660**	**-207,803**	**-229,198**
Gains/(losses) from sale of assets	11,160	-251	-8,011	1,047	6,281	75	13,692
Earnings before interest, taxes, depreciation and amorization (EBITDA)	**34,114**	**81,077**	**81,216**	**60,378**	**82,947**	**114,286**	**94,100**
-Depreciation and amortization	-10,895	-18,961	-32,080	-37,191	-59,286	-81,348	-79,663
Earnings before interest and taxes (EBIT)	**23,219**	**62,116**	**49,136**	**23,187**	**23,661**	**32,938**	**14,437**
- Tax on core operations	-619	-7,919	-7,923	416	-1,427	-28,139	-2,992
NOPAT (Net Operating Profit after tax))	**22,600**	**54,197**	**41,213**	**23,603**	**22,234**	**4,799**	**11,445**

Non Operating Items & Non-Recurring Items (USD 1.000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Result from non core operations	5,677	-1,564	-1,006	6,263	8,012	11,108	27,318
Gain/(losses) on sale of interest rate derivatives (CIRR)	0	54	342	6,097	368	368	368
Gain/(losses) on currency exchange forward contracts	20,789	39,618	-47,308	52,805	-4,789	1,450	12,479
Net currency items	718	8,836	-18,283	19,124	2,962	-10,624	2,916
Financial Income	805	3,667	10,588	7,760	8,130	5,719	4,161
Financial Expenses	-5,460	-13,756	-17,283	-13,238	-28,027	-44,785	-42,302
Net Financial expenses and other	**22,529**	**36,855**	**-72,950**	**78,811**	**-13,344**	**-36,764**	**4,940**
Tax on non operating items (tax shield)	-600	-4,698	5,973	1,415	805	25,486	-1,024
Result for the financial year	**44,529**	**86,354**	**-25,764**	**103,829**	**9,695**	**-6,479**	**15,361**
Attributable to minorities	-485	-1,333	1,801	1,439	-468	811	-1,900
Attributable to equity holders	**45,014**	**87,687**	**-27,565**	**102,390**	**10,163**	**-7,290**	**17,261**

Tax adjustments	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Reported Tax	-1,219	-12,617	-1,950	1,831	-622	-2,653	-4,016
Reported result	45,747	98,972	-23,816	101,997	10,315	-3,827	19,376
Effective tax rate	3%	13%	8%	-2%	6%	-69%	21%
Tax on non-operating items	-600	-4,698	5,973	1,415	805	25,486	-1,024
Tax on core operations	-619	-7,919	-7,923	416	-1,427	-28,139	-2,992

Corrections - Income Statement	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Joides Revenue	5,677	-1,564	-1,006	6,263	8,012	16,892	59,070
Joides OPEX						-9,873	28,666

Siem Offshore Reformulated balance sheet

Assets	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Accounts receivables	21,191	49,793	36,119	47,907	53,290	46,544	44,221
Other short term receivables	14,861	20,191	16,418	22,454	23,035	30,730	38,461
Inventories	1,518	2,102	1,215	1,943	4,399	9,249	7,772
Current Operating Assets	**37,570**	**72,086**	**53,752**	**72,304**	**80,724**	**86,523**	**90,454**
Accounts payable	4,291	9,478	5,292	8,148	7,119	7,311	5,377
Taxes payable	540	15,260	13,351	13,290	14,955	3,160	8,856
Other current liabilities	9,705	19,413	16,215	32,194	32,528	44,874	50,882
Current Operating Liabilities	**14,536**	**44,151**	**34,858**	**53,632**	**54,602**	**55,345**	**65,115**
Net Working Capital	**23,034**	**27,935**	**18,894**	**18,672**	**26,122**	**31,178**	**25,339**
Vessels and equipment	236,620	421,389	452,402	761,921	1,268,799	1,381,150	1,241,014
Vessels under construction	0	79,724	161,596	208,511	105,991	105,199	108,430
Capitalized project costs	4,107	2,910	1,206	546	19,102	13,570	12,153
Other tangible assets	34	0	0	0	0	0	0
intangible assets	0	0	0	0	0	20,538	21,258
Deferred tax asset	0	3,328	3,430	4,888	6,254	6,254	6,256
Investments in associated companies	11,325	9,884	10,604	14,260	9,487	4,218	4,222
Long term receviables	548	1,372	792	3,707	3,843	3,324	7,111
Loan to shipyard	0	0	22,861	27,697	0	0	0
Cash & Cash equivalents	17,192	94,154	36,686	45,544	57,593	68,318	53,534
Sum tangible and intagible assets	**269,826**	**612,761**	**689,577**	**1,067,074**	**1,471,069**	**1,602,571**	**1,453,978**
Tax liabilities		8,925	4,027	2,589	1,936	13,337	6,799
Deferred tax liability	7,907	0	0	0			
Other Non Current Liabilities	285	344	284	1,772	6,878	17,865	13,902
Provisions for other liabilities and charges	7,569	0	0	0			
Sum non current liabilities	**15,761**	**9,269**	**4,311**	**4,361**	**8,814**	**31,202**	**20,701**
Invested capital	**277,099**	**631,427**	**704,160**	**1,081,385**	**1,488,377**	**1,602,547**	**1,458,616**

Liabilities and net interest bearing debt	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Shareholders equity	132,008	451,284	407,813	679,855	745,320	734,713	749,535
Non controlling interest	10,106	13,895	18,131	22,872	23,750	35,038	36,976
Equity capital	**142,114**	**465,179**	**425,944**	**702,727**	**769,070**	**769,751**	**786,511**
Average total equity		303,647	445,562	564,336	735,899	769,411	778,131
Long term borrowings	172,384	244,704	250,410	403,134	739,095	839,031	714,699
Short term portion of long term borrowings	4,557	23,891	28,286	43,036	71,125	95,472	82,287
CIRR loan		93,467	66,482	73,225	65,006	56,469	53,194
Deferred CIRR loan		23,429	22,278	3,627	3,259	2,891	2,523
FOrward currency contracts	0	0	30,801	0			
Derivative financial instruments	343	0	0	0		10,171	12,339
Pension liabilities	290	840	480	235	512	199	1,090
Total interest bearing debt	**177,574**	**386,331**	**398,737**	**523,257**	**878,997**	**1,004,233**	**866,132**
Investment in non core operations (Joides Resolution) and WIS	15,337	15,066	14,060	20,324	28,007	42,301	27,866
CIRR loan deposits		93,467	66,482	73,225	65,006	56,469	53,194
Non-current assets held for sale	800	800	800	800	0	0	53,604
Derivative financial instruments	9,259	15,598	0	401	3,731	0	5,829
Loan employees		997	2,495	4,306	5,354	4,350	
Long term portion of cash	17,192	94,154	36,686	45,544	57,593	68,318	53,534
Total interest bearing assets	**42,588**	**220,082**	**120,523**	**144,600**	**159,691**	**171,438**	**194,027**
Net interest bearing debt	**134,986**	**166,249**	**278,215**	**378,657**	**719,307**	**832,796**	**672,105**
Average net-interest bearing debt		150,618	222,232	328,436	548,982	776,051	752,450
Invested Capital	**277,100**	**631,428**	**704,159**	**1,081,384**	**1,488,377**	**1,602,547**	**1,458,616**
Average invested capital		454,264	667,793	892,771	1,284,880	1,545,462	1,530,581

Corrections - Balance Sheet	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Book value of Joides	7,398	5,834	4,828	11,092	19,104	33,398	19,104
Book value of Siem WIS, From intangible asset to investment in non core	7,939	9,232	9,232	9,232	8,903	8,903	8,762
Employee Loans	0	997	2,495	4,306	5,354	4,350	0

Farstad Reformulated Income Statement

Core Operations (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Freight Income	1,932,110	2,292,736	2,943,241	3,237,111	3,323,899	3,578,870	3,709,941
Other Income	8,800	25,500	15,383	20,468	3,802	6,019	4,083
Gross Profit	**1,940,910**	**2,318,236**	**2,958,624**	**3,257,579**	**3,327,701**	**3,584,889**	**3,714,024**
- Crewing expenses vessels	-584,954	-702,938	-789,673	-926,878	-1,161,855	-1,389,567	-1,514,873
- Other operating expenses vessels	-256,101	-305,675	-350,428	-421,208	-582,968	-559,231	-593,965
-Administration	-112,748	-128,857	-150,443	-173,333	-197,830	-234,565	-288,736
Total Expenses	**-953,803**	**-1,137,470**	**-1,290,544**	**-1,521,419**	**-1,942,653**	**-2,183,363**	**-2,397,574**
Earnings before interests, taxes, depreciation & amortization (EBITDA)	**987,107**	**1,180,766**	**1,668,080**	**1,736,160**	**1,385,048**	**1,401,526**	**1,316,450**
-Depreciation	-286,359	-336,763	-365,438	-454,909	-516,237	-544,808	-575,928
Earnings before interest and taxes (EBIT)	**700,748**	**844,003**	**1,302,642**	**1,281,251**	**868,811**	**856,718**	**740,522**
- Tax on core operations	-49,224	-59,649	-47,365	-107,841	-113,460	-7,560	-71,082
NOPAT (Net Operating Profit after tax))	**651,524**	**784,354**	**1,255,277**	**1,173,410**	**755,351**	**849,158**	**669,441**

Non Operating Items & Non-Recurring Items (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Gain from gradual aquisition	0	0	0	0	0	70,431	0
Financial income	41,787	70,493	86,200	78,243	74,582	64,632	48,305
- Financial expenses	-213,016	-250,138	-307,942	-304,153	-395,155	-410,900	-435,844
Realised agio (disagio)	22,668	26,197	83,122	18,843	108,521	25,436	15,827
Unrealised agio (disagio)	22,674	38,584	-315,804	349,506	-165,324	-92,915	-33,861
= Net Other Non Operating Items	**-125,887**	**81,204**	**-393,374**	**142,439**	**-376,262**	**-326,407**	**-415,825**
- Tax non operating items (tax shield)	17,624	-11,369	55,072	-19,941	52,677	45,697	58,216
= Concern result	**543,261**	**854,189**	**916,975**	**1,295,908**	**431,766**	**568,448**	**311,831**
Total other comprehensive income	0	0	0	76,017	15,707	-118,522	-87,578
Comprehensive income	**543,261**	**854,189**	**916,975**	**1,371,925**	**447,473**	**449,926**	**224,253**

Tax adjustments	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Marginal tax rate	14%	14%	14%	14%	14%	14%	14%
Reported Tax	-31,600	-1,014,534	316,287	507,813	-60,783	38,137	-12,866
Reported tax (adjusted for tax regime)	-31,600	-71,018	7,707	-127,782	-60,783	38,137	-12,866
- tax on non-opreating items	17,624	-11,369	55,072	-19,941	52,677	45,697	58,216
Tax on core operations	-49,224	-59,649	-47,365	-107,841	-113,460	-7,560	-71,082

- Farstad reports according to IFRS, and no adjustments needed.
- Freight income is based on the same items as SIOFF.
- Operating expenses is based on the same items as SIOFF (crewing expenses, other operating expenses, administration expenses).
- The vessels are depreciated over a 20 year period. SIOFF depreciation is dependent upon the estimated economic life of the vessel, and we have calculated it to be ~21 years. In 2007, a new tax reform with retroactive effect was approved. This resulted in a much higher tax on core operations. Later on, this new law was dismissed, with a new reform, and these tax aspects are no longer an issue. We have adjusted for this in our tax calculations in order to make the income statement comparable.
- "Net other operating items" is in consistency with SIOFF.
- Hence, "comprehensive income" is comparable with SIOFF.

Farstad Shipping Reformulated balance sheet

Assets	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Account Recievables, freight income	315,716	341,200	533,327	473,130	471,567	555,669	624,114
Bunkers and other inventories	17,438	10,525	19,665	29,743	40,480	41,319	57,020
Other short-term receivables	101,080	156,963	144,245	296,126	210,853	181,273	229,635
Current Operating Assets	**434,234**	**508,688**	**697,237**	**798,999**	**722,900**	**778,261**	**910,769**
Accounts payable	112,482	165,574	204,593	177,019	231,161	234,242	224,170
Other current liabilities	189,187	183,192	220,041	253,193	412,534	468,783	475,595
Current Operating Liabilities	**301,669**	**348,766**	**424,634**	**430,212**	**643,695**	**703,025**	**699,765**
Net Working Capital	**132,565**	**159,922**	**272,603**	**368,787**	**79,205**	**75,236**	**211,004**
Vessels etc.	5,938,657	6,743,177	7,871,618	10,237,712	11,467,552	11,759,850	12,394,071
Contracts newbuilds	639,801	550,795	495,380	191,242	64,149	358,894	527,973
Deferred tax benefit	0	0	54,831	0	47,242	67,894	68,764
Sum tangible and intangible assets	**6,578,458**	**7,293,972**	**8,421,829**	**10,428,954**	**11,578,943**	**12,186,638**	**12,990,808**
Deferred tax liabilities	21,946	7,989	0	14,902	30,279	48,125	43,607
Tax liabilities and environmental fund	0	880,614	508,476	0	9,516	4,758	0
Taxes payable	18,180	122,073	99,514	22,325	46,487	38,046	27,158
Non-current liabilities	**40,126**	**1,010,676**	**607,990**	**37,227**	**86,282**	**90,929**	**70,765**
Invested Capital excluding goodwill	**6,670,897**	**6,443,218**	**8,086,442**	**10,760,514**	**11,571,866**	**12,170,945**	**13,131,047**
Goodwill	30,247	30,247	30,247	30,247	30,247	112,090	100,032
Invested capital incl. Goodwill	**6,701,144**	**6,473,465**	**8,116,689**	**10,790,761**	**11,602,113**	**12,283,035**	**13,231,079**

Liabilities and net interest bearing debt	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Total Equity	3,533,712	3,430,107	4,439,988	6,251,895	6,582,368	6,820,235	6,849,488
Average total equity		3,481,910	3,935,048	5,345,942	6,417,132	6,701,302	6,834,862
Pension liabilities	57,510	56,721	56,181	60,118	61,901	64,469	71,186
Interest-bearing mortage debt	2,957,141	3,805,923	4,719,722	5,466,499	6,287,220	5,855,651	6,595,642
Current portion of interest-bearing debt	559,319	695,322	510,681	771,771	991,818	1,012,058	1,295,915
Bonds	300,000	0	0	0	0	0	0
Leasing obligation	294,988	0	0	0	0	0	0
Forward currency and interest swap contract	0	0	153,134	0	24,900	45,791	54,970
Total interest-bearing debt	**4,168,958**	**4,557,966**	**5,439,718**	**6,298,388**	**7,365,839**	**6,977,969**	**8,017,713**
Other long-term receivables	7,184	9,927	14,517	24,977	27,824	35,967	37,509
Shares	4,456	4,444	5,123	5,170	5,204	5,209	5,078
Forward currency and interest swap contracts	17,600	38,812	0	15,671	43,364	25,076	26,456
Other current financial assets	30,777	29,134	198,998	188,291	133,338	106,661	71,932
Cash & cash equivalents	941,509	1,432,291	1,544,379	1,525,413	2,136,364	1,342,256	1,495,147
Total interest-bearing assets	**1,001,526**	**1,514,608**	**1,763,017**	**1,759,522**	**2,346,094**	**1,515,169**	**1,636,122**
Net interest-bearing debt	**3,167,432**	**3,043,358**	**3,676,701**	**4,538,866**	**5,019,745**	**5,462,800**	**6,381,591**
Average net interest-bearing debt		3,105,395	3,360,030	4,107,784	4,779,306	5,241,273	5,922,196
Invested Capital	**6,701,144**	**6,473,465**	**8,116,689**	**10,790,761**	**11,602,113**	**12,283,035**	**13,231,079**
Average invested capital		6,587,305	7,295,077	9,453,725	11,196,437	11,942,574	12,757,057

- Net working capital consists of the same items as SIOFF; except that we have not included taxes payable. This is due to the mentioned tax regime.
- We have separated goodwill as this is a larger post during the entire period, resulting in invested capital with and without goodwill.

Havila Shipping Reformulated Income Statement

Core Operations (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Freight Income	666,012	526,637	810,515	886,887	1,030,204	1,279,031	1,332,158
Other Income	2,426	1,230	123	14,320	8,416	30,595	23,723
Gross Profit	**668,438**	**527,867**	**810,638**	**901,207**	**1,038,620**	**1,309,626**	**1,355,881**
Income from associate companies	22,030	-322	9,426	757	-42,130	-2,913	-14,479
Gross Profit incl. Income from associate companies	**690,468**	**527,545**	**820,064**	**901,964**	**996,490**	**1,306,713**	**1,341,402**
- Crewing expenses vessels	-170,068	-122,299	-166,725	-220,220	-322,103	-430,515	-456,064
- Other operating expenses vessels	-65,471	-47,988	-176,521	-190,310	-298,690	-360,165	-278,701
-Administration	-28,042	-27,369	-39,241	-42,977	-66,821	-84,729	-85,355
Total Expenses	-263,581	-197,656	-382,487	-453,507	-687,614	-875,409	-820,120
Earnings before interests, taxes, depreciation & amortization (EBITDA)	**426,887**	**329,889**	**437,577**	**448,457**	**308,876**	**431,304**	**521,282**
-Depreciation	-93,550	-80,535	-98,420	-132,221	-180,288	-205,240	-161,063
Earnings before interest and taxes (EBIT)	**333,337**	**249,354**	**339,157**	**316,236**	**128,588**	**226,064**	**360,219**
- Tax on core operations	-50,387	-92,946	36,300	-27,275	-38,195	-79,676	-55,557
NOPAT (Net Operating Profit after tax))	**282,950**	**156,408**	**375,457**	**288,961**	**90,393**	**146,388**	**304,662**

Non Operating Items & Non-Recurring Items (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2011H
Financial income	25,600	46,018	56,645	200,088	11,302	17,075	26,335
- Financial expenses	-80,630	-133,488	-310,419	-154,171	-271,116	-385,642	-425,616
Net Realised and unrealised agio (disagio)	17,321	30,723	-137,840	242,811	-10,177	-2,730	55,095
= Net Other Non Operating Items	**14,444**	**90,650**	**-79,801**	**288,728**	**-115,589**	**-317,259**	**-342,448**
- Tax non operating items (tax shield)	-2,022	-12,691	11,172	-40,422	16,182	44,416	47,943
= Concern result	**295,372**	**234,367**	**306,828**	**537,267**	**-9,014**	**-126,455**	**10,157**
Total other comprehensive income	0	0	181	-3,430	1,276	-3,196	3,717
Comprehensive income	**295,372**	**234,367**	**307,009**	**533,837**	**-7,738**	**-129,651**	**13,874**

Tax adjustments	2006H	2007H	2008H	2009H	2010H	2011H	2011H
Effective tax rate (reported tax/concern result)	14%	14%	14%	14%	14%	14%	14%
Reported Tax	-52,409	-105,637	47,472	-67,697	-22,013	-35,260	-7,614
- tax on non-opreating items	-2,022	-12,691	11,172	-40,422	16,182	44,416	47,943
Tax on core operations	-50,387	-92,946	36,300	-27,275	-38,195	-79,676	-55,557

- Havila reports according to IFRS, and no adjustments needed.
- Freight income is based on the same items as SIOFF.
- We have accumulated “bunkers and lubricating oil”, “hire expenses ship” and “maintenance and other expenses” into “other operating expenses vessels”. In addition, we have accumulated “other operating expenses” and “other payroll expenses” into “administration expenses”. These adjustments are done in order to match SIOFFs income statement.
- The vessels are depreciated over a 15 year period. SIOFF depreciation is dependent upon the estimated economic life of the vessel, and we have calculated it to be ~21 years. DOF and Farstad depreciate over 20 year.
- In 2007, a new tax reform with retroactive effect was approved. This resulted in a much higher tax on core operations. Later on, this new law was dismissed, with a new reform, and these tax aspects are no longer an issue. We have adjusted for this in our tax calculations in order to make the income statement comparable.
- “Net other operating items” is in consistency with SIOFF.
- Hence, “comprehensive income” is comparable with SIOFF.

Havila Shipping Reformulated balance sheet

Assets	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Account Recievables, freight income	276,381	110,804	234,381	309,419	437,063	363,634	347,085
Bunkers and other inventories	5,680	5,029	5,595	9,965	13,878	15,852	17,610
Other short-term receivables	0	0	0	10,291	55,194	30,300	
Current Assets	**282,061**	**115,833**	**239,976**	**329,675**	**506,135**	**409,786**	**364,695**
Accounts payable	58,331	62,245	128,590	55,403	110,385	49,127	60,061
Other current liabilities	113,076	314,087	300,090	366,964	715,083	514,145	875,126
Current Liabilities	**171,407**	**376,332**	**428,680**	**422,367**	**825,468**	**563,272**	**935,187**
Net Working Capital	**110,654**	**-260,499**	**-188,704**	**-92,692**	**-319,333**	**-153,486**	**-570,492**
Investments in associated companies	28,288	1,246	12,118	9,624	0	22,927	57,392
Vessels etc.	1,426,696	1,320,802	2,362,690	4,124,935	4,779,231	6,947,585	7,659,842
Contracts newbuilds	325,385	729,234	923,571	570,012	612,787	0	
Deferred tax benefit		0	0	0	14,252	26,289	11,942
Long-term receivables	729	12,747	14,556	13,436	63,696	147,815	84,803
Loan to associated companies	0	0	0	0	0	0	0
Sum tangible and intangible assets	**1,781,098**	**2,064,029**	**3,312,935**	**4,718,007**	**5,469,966**	**7,144,616**	**7,813,979**
Deferred tax liabilities	74,133	95,981	81,515	140,691	2,669	20,493	1,173
Other non-current liabilities	0	84,122	183,029	47,975	112,642	110,279	85,900
Allocation liability in joint ventures	0	0	0	0	31,196	60,443	78,026
Taxes payable	628	7,753	5,849	45,293	59,747	45,305	32,619
Non-current liabilities	**74,761**	**187,856**	**270,393**	**233,959**	**206,254**	**236,520**	**197,718**
Invested Capital excluding goodwill	**1,816,991**	**1,615,674**	**2,853,838**	**4,391,356**	**4,944,379**	**6,754,610**	**7,045,769**
Goodwill	0	0	0	0	0	0	0
Invested capital including goodwill	**1,816,991**	**1,615,674**	**2,853,838**	**4,391,356**	**4,944,379**	**6,754,610**	**7,045,769**

Invested Capital	2006H	2007H	2008H	2009H	2010H	2011H	2011H
Total Equity	**989,430**	**879,478**	**1,125,794**	**1,702,777**	**1,695,038**	**1,809,323**	**2,008,165**
Average Equity		934,454	1,002,636	1,414,286	1,698,908	1,752,181	1,908,744
Pension liabilities	0	0	0	0	0	230	0
Borrowings	1,501,854	1,990,403	2,459,890	3,137,403	3,945,484	5,308,716	5,525,128
Other short-term loan							
Forward currency and interest swap contract	0	0	101,698	7,394	13,097	26,665	18,973
Total interest-bearing debt	**1,501,854**	**1,990,403**	**2,561,588**	**3,144,797**	**3,958,581**	**5,335,611**	**5,544,101**
Net pension assets	0	349	1,518	3,102	1,894	0	683
Assets held for sale	0	707,230	0	0	0	0	0
Shares	150	150	156	156	356	441	381
Forward currency and interest swap contracts	5,679	22,158	26,062	88,748	100,020	30,519	4,533
Other current financial assets	0	53,663	107,565	16,955	3,556	3,556	3,556
Cash & cash equivalents	668,464	471,006	698,243	347,257	603,414	355,808	497,341
Total interest-bearing assets	**674,293**	**1,254,556**	**833,544**	**456,218**	**709,240**	**390,324**	**506,494**
Net interest-bearing debt	**827,561**	**735,847**	**1,728,044**	**2,688,579**	**3,249,341**	**4,945,287**	**5,037,607**
Average net interest-bearing debt		781,704	1,231,946	2,208,312	2,968,960	4,097,314	4,991,447
Invested Capital	**1,816,991**	**1,615,325**	**2,853,838**	**4,391,356**	**4,944,379**	**6,754,610**	**7,045,772**
Average Invested capital		1716158	2234581.5	3622597	4667867.5	5849494.5	6900191

- We have not included taxes payable in the NWC. This is due to the mentioned tax regime.
- We have added “current liabilities of long term debt” into “other current liabilities”, to ensure that we match SIOFFs balance sheet.
- Contract newbuilds is no longer an item in 2012, as the newbuilding program is ended. We have accumulated “vessels” and “operating equipment” in one item.

Solstad Offshore Reformulated Income Statement

Core Operations (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Freight Income	1,786,957	2,107,544	2,134,860	2,518,532	2,613,557	3,044,104	3,307,849
Other Income	8,434	5,705	10,470	10,851	3,308	4,988	74,283
Gross Profit	**1,795,391**	**2,113,249**	**2,145,330**	**2,529,383**	**2,616,865**	**3,049,092**	**3,382,132**
Income from investments in associated companies	15,663	11,277	40,799	2,413	2,511	-2,229	3,132
Gross Profit incl. Income from associated companies	**1,811,054**	**2,124,526**	**2,186,129**	**2,531,796**	**2,619,376**	**3,046,863**	**3,385,264**
- Crewing expenses vessels	-397,123	-443,995	-545,770	-733,869	-882,369	-1,087,445	-1,228,999
- Other operating expenses vessels	-420,242	-341,848	-323,288	-532,988	-677,733	-763,390	-698,867
-Administration	-40,884	-46,738	-62,521	-70,383	-78,426	-92,332	
Total Expenses	**-858,249**	**-832,581**	**-931,579**	**-1,337,240**	**-1,638,528**	**-1,943,167**	**-1,927,866**
Earnings before interests, taxes, depreciation & amortization (EBITDA)	**952,805**	**1,291,945**	**1,254,550**	**1,194,556**	**980,848**	**1,103,696**	**1,457,398**
-Depreciation	-336,441	-437,284	-520,851	-728,948	-638,593	-932,253	-584,817
Earnings before interest and taxes (EBIT)	**616,364**	**854,661**	**733,699**	**465,608**	**342,255**	**171,443**	**872,581**
- Tax on core operations	16,554	-367,394	48,107	227,545	-143,430	-87,442	-50,087
NOPAT (Net Operating Profit after tax))	**632,918**	**487,267**	**781,806**	**693,153**	**198,825**	**84,001**	**822,494**

Non Operating Items & Non-Recurring Items (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Exit from financial leases	0	0	0	0	0	0	-86,758
Financial income	387,620	320,037	93,498	438,378	143,957	27,288	613,170
- Financial expenses	-209,196	-233,244	-796,757	-277,737	-383,516	-549,593	-524,362
Realised agio (disagio)	32,731	58,960	-238,056	240,102	30,476	-48,132	-512,134
Unrealised agio (disagio)	0	0	0	0	0	0	-91,273
= Net Other Non Operating Items	**298,802**	**251,554**	**-877,765**	**400,743**	**-209,083**	**-570,437**	**-601,357**
- Tax non operating items (tax shield)	-41,832	-35,218	122,887	-56,104	29,272	79,861	84,190
= Concern result	**889,888**	**703,603**	**26,928**	**1,037,792**	**19,014**	**-406,575**	**305,327**
Total other comprehensive income				76,017	15,707	-118,522	-91,235
Comprehensive income	**889,888**	**703,603**	**26,928**	**1,113,809**	**34,721**	**-525,097**	**214,092**

Tax adjustments	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Effective tax rate (reported tax/concern result)	14%	14%	14%	14%	14%	14%	14%
Reported Tax	-25,278	-402,612	170,994	171,441	-114,158	-7,581	34,103
- tax on non-opreating items (tax shield)	-41,832	-35,218	122,887	-56,104	29,272	79,861	84,190
Tax on core operations	16,554	-367,394	48,107	227,545	-143,430	-87,442	-50,087

- Solstad reports according to IFRS, and no adjustments needed.
- Freight income is based on regular freight income in addition to income from investments in assoiciated companies, as we characterize this item as core operations.
- Solstad has not classified administration cost as an individual item in 2012. This year they only have personnel cost and other operating assets. However, administration cost has only accounted for ~5% during the analyzed period, and we consider the operating expenses to be comparable.
- The vessels are depreciated over a 30 year period. We have accumulated regular depreciation and depreciation on capitalized periodic maintenance. SIOFF depreciation is dependent upon the estimated economic life of the vessel, and we have calculated it to be ~21 years.
- In 2007, a new tax reform with retroactive effect was approved. This resulted in a much higher tax on core operations. Later on, this new law was dismissed, with a new reform, and these tax aspects are no longer an issue. We have adjusted for this in our tax calculations in order to make the income statement comparable.
- Hence, “comprehensive income” is comparable with SIOFF

Solstad Offshore Reformulated balance sheet

Assets	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Account Recievables, freight income	356,711	509,840	497,218	466,456	521,736	715,209	518,040
Bunkers and other inventories	18,978	25,954	19,358	39,471	59,377	59,843	73,470
Other short-term receivables	139,737	202,257	141,091	264,653	215,586	163,442	199,640
Current Assets	**515,426**	**738,051**	**657,667**	**770,580**	**796,699**	**938,494**	**791,150**
Accounts payable	94,269	135,337	167,399	162,735	311,048	258,684	187,303
Other current liabilities	111,434	133,228	206,306	205,851	250,200	292,001	394,754
Accrued salaries and related taxes	34,874	43,275	40,855	49,756	50,650	58,468	46,388
Taxes payable	26,922	56,335	50,966	91,845	105,677	75,526	67,702
Current Liabilities	**267,499**	**368,175**	**465,526**	**510,187**	**717,575**	**684,679**	**696,147**
Net Working Capital	**247,927**	**369,876**	**192,141**	**260,393**	**79,124**	**253,815**	**95,003**
Investments in associated companies	158,055	220,567	4,135	18,789	21,300	19,648	222,072
Vessels etc. and newbuild contracts	5,517,323	6,660,257	7,525,124	9,884,944	13,770,850	14,138,903	12,664,918
Deferred tax benefit	0	0	24,244	0	17,362	43,061	95,463
Loan to associated companies	15,327	12,262	0	0	0	0	41,687
Sum tangible and intangible assets	**5,690,705**	**6,893,086**	**7,553,503**	**9,903,733**	**13,809,512**	**14,201,612**	**13,024,140**
Deferred tax liabilities	16,604	25,417	0	26,970	0	0	
Deferred income	23,657	20,100	0	8,596	0	0	
Taxes payable	0	356,733	214,817	0	77,543	39931	
Non-current liabilities	**40,261**	**402,250**	**214,817**	**35,566**	**77,543**	**39,931**	**0**
Invested Capital excluding goodwill	**5,898,371**	**6,860,712**	**7,530,827**	**10,128,560**	**13,811,093**	**14,415,496**	**13,119,143**
Goodwill	0	0	0	0	0	0	0
Invested capital incl. Goodwill	**5,898,371**	**6,860,712**	**7,530,827**	**10,128,560**	**13,811,093**	**14,415,496**	**13,119,143**

Invested Capital	2006H	2007H	2008H	2009H	2010H	2011H	2011H
Total Equity	**3,162,843**	**3,717,459**	**3,697,624**	**4,630,320**	**4,989,443**	**4,415,914**	**4,664,513**
Average Equity		3,440,151	3,707,542	4,163,972	4,809,882	4,702,679	4,540,214
Pension liabilities	12,813	3,573	0	0	0	0	11484
Other long-term loans	32,002	39,117	37,338	34,668	33,600	36,487	50,954
Debt to credit institutions/leasing obligations	3,885,791	3,987,948	4,793,870	6,379,214	7,470,527	9,472,153	7,165,074
Bank Overdraft	0	409,824	438,694	100,332	102,734	102,205	64,938
Current interest bearing liabilities	622,751	1,339,624	473,023	565,866	2,101,877	1,061,092	2,057,178
Forward currency and interest swap contract	269,761	46,699	92,466	10,392	73,103	70,426	
Total interest-bearing debt	**4,823,118**	**5,826,785**	**5,835,391**	**7,090,472**	**9,781,841**	**10,742,363**	**9,349,628**
Pension funds		0	9,954	17,074	9,350	2,682	
Other long-term receivables	19,202	45,432	15,072	5,971	9,589	27,060	2,462
Shares	129,616	1,019,736	1,100,368	3,099	4,873	5,418	5,425
Assets held for sale	0	0	0	0	12,790	4,644	
Forward currency and interest swap contracts	0	0	0	44,068	40,038	31,140	
Other current financial assets	0	0	46,857	77,348	11,834	14,569	80,006
Cash & cash equivalents	1,938,772	1,618,366	829,936	1,444,672	871,718	657,269	807,105
Total interest-bearing assets	**2,087,590**	**2,683,534**	**2,002,187**	**1,592,232**	**960,192**	**742,782**	**894,998**
Net interest-bearing debt	**2,735,528**	**3,143,251**	**3,833,204**	**5,498,240**	**8,821,649**	**9,999,581**	**8,454,630**
Average Net interest bearing debt		2,939,390	3,488,228	4,665,722	7,159,945	9,410,615	9,227,106
Invested Capital	**5,898,371**	**6,860,710**	**7,530,828**	**10,128,560**	**13,811,092**	**14,415,495**	**13,119,143**
Average Invested Capital		6379540.5	7195769	8829694	11969826	14113293.5	13767319

- Net working capital consists of the same items as SIOFF.
- Solstad do not separate vessels and newbuild contracts, like SIOFF does in their income statement. “Capitalized periodic maintenance” and “other tangible assets are added to the item “vessels etc and newbuild contracts”.

DOF Reformulated Income Statement

Core Operations (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Freight Income	2,796,410	3,285,576	3,969,672	4,258,507	5,403,016	6,503,000	8,136,000
Other Income	51,266	81,252	52,269	76,656	59,029	0	
Gross Profit	**2,847,676**	**3,366,828**	**4,021,941**	**4,335,163**	**5,462,045**	**6,503,000**	**8,136,000**
Investments in subsidiaries/affiliated companies	64,890	42,681	124,834	191,749	-4,666	0	5,000
Gross Profit incl. Income from associated companies	**2,912,566**	**3,409,509**	**4,146,775**	**4,526,912**	**5,457,379**	**6,503,000**	**8,141,000**
- Payroll expenses	-739,470	-1,282,683	-1,636,825	-1,960,483	-2,486,248	-3,121,000	-3,167,000
- Other operating expenses	-979,277	-942,472	-1,147,178	-1,133,137	-1,266,433	-1,367,000	-2,179,000
Total Expenses	**-1,718,747**	**-2,225,155**	**-2,784,003**	**-3,093,620**	**-3,752,681**	**-4,488,000**	**-5,346,000**
Earnings before interests, taxes, depreciation & amortization (EBITDA)	**1,193,819**	**1,184,354**	**1,362,772**	**1,433,292**	**1,704,698**	**2,015,000**	**2,795,000**
-Depreciation	-417,010	-529,791	-643,265	-1,015,715	-1,166,380	-897,000	-1,110,000
Earnings before interest and taxes (EBIT)	**776,809**	**654,563**	**719,507**	**417,577**	**538,318**	**1,118,000**	**1,685,000**
- Tax on core operations	-76,305	-439,650	78,643	-142,548	-118,094	-67,260	-113,800
NOPAT (Net Operating Profit after tax))	**700,505**	**214,913**	**798,150**	**275,029**	**420,224**	**1,050,740**	**1,571,200**

Non Operating Items & Non-Recurring Items (NOK 1000)	2006H	2007H	2008H	2009H	2010H	2011H	2011H
Profit on sale of fixed assets	163,202	87,553	317,781	-7,887	0	33,000	210,000
Financial income	340,807	379,707	291,350	319,110	178,342	69,000	71,000
- Financial expenses	-521,129	-773,745	-984,747	-647,904	-999,739	-1,189,000	-1,325,000
Realized agio (disagio)	0	0	188,369	166,012	0	-56,000	-81,000
Unrealised agio (disagio)	-33,255	314,602	-655,381	757,611	82,776	-445,000	-206,000
Net change in unrealized gain/loss on derivatives	0	0	0	0	0	-221,000	-89,000
= Net Other Non Operating Items	**-50,375**	**8,117**	**-1,030,997**	**420,930**	**-738,621**	**-1,809,000**	**-1,420,000**
- Tax non operating items (tax shield)	7,053	-1,136	144,340	-58,930	103,407	253,260	198,800
= Concern result	**657,182**	**221,894**	**-88,507**	**637,029**	**-214,990**	**-505,000**	**350,000**
Total other comprehensive income	**0**	**0**	**0**	70,366	89,000	-217,000	-452,000
Comprehensive income	**657,182**	**221,894**	**-88,507**	**707,395**	**-125,990**	**-722,000**	**-102,000**

Tax adjustments							
Effective tax rate (reported tax/concern result)	14%	14%	14%	14%	14%	14%	14%
Reported Tax	-69,252	-440,786	222,983	-201,478	-14,687	186,000	85,000
- tax on non-opreating items	7,053	-1,136	144,340	-58,930	103,407	253,260	198,800
Tax on core operations	-76,305	-439,650	78,643	-142,548	-118,094	-67,260	-113,800

- DOF reports according to IFRS standard, and DOF is therefore comparable.
- Freight income is based on the same accounts as SIOFF. DOF has not reported other income the last two years.
- DOF have not separated operational exp0enses in accordance with SIOFF. They have accumulated vessel crew expenses and general and administration expenses into one item (payroll expenses), and not segregated these two such as SIOFF. However, the total expenses consist of the same items overall, so the EBITDA will not be affected by this different classification
- DOF depreciates vessels over 20 year and other operating equipment over 5-15 years. SIOFF depreciation is dependent upon the estimated economic life of the vessel, and we have calculated it to be ~21 years. We consider the income statement to be comparable.
- In 2007, a new tax reform with retroactive effect was approved. This resulted in a much higher tax on core operations. Later on, this new law was dismissed, with a new reform, and these tax aspects are no longer an issue. We have adjusted for this in our tax calculations in order to make the income statement comparable.
- "Net Other non operating assets" is classified in consistency with SIOFF.
- Hence, "comprehensive income" is comparable with SIOFF.

DOF Reformulated balance sheet

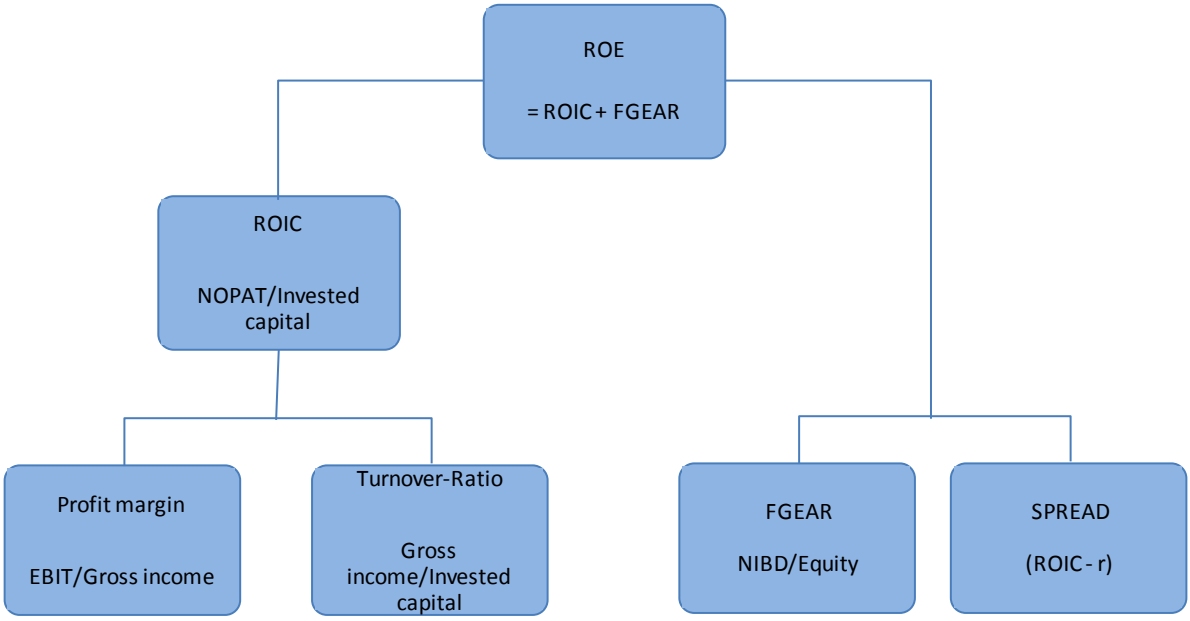
Assets	2006H	2007H	2008H	2009H	2010H	2011H	2012H
Accounts Recievables, freight income	541,080	719,886	1,151,004	1,235,287	1,051,224	1,534,000	1,393,000
Bunkers and other inventories	4,057	3,784	13,441	16,116	28,133	51,000	56,000
Other short-term receivables	208,784	328,875	272,025	492,128	904,858	562,000	466,000
Current Assets	**753,921**	**1,052,545**	**1,436,470**	**1,743,531**	**1,984,215**	**2,147,000**	**1,915,000**
Accounts payable	274,397	273,500	419,924	216,373	414,537	603,000	683,000
Other current liabilities	301,933	392,367	601,507	420,317	922,515	1,043,000	542,000
Current Liabilities	**576,330**	**665,867**	**1,021,431**	**636,690**	**1,337,052**	**1,646,000**	**1,225,000**
Net Working Capital	**177,591**	**386,678**	**415,039**	**1,106,841**	**647,163**	**501,000**	**690,000**
Investments in associated companies and joint-ventures	309,753	1,404,501	139,696	77,170	70,687	65,000	73,000
Vessels etc.	7,445,867	9,678,385	10,847,577	12,702,083	19,706,887	23,718,000	26,179,000
Contracts newbuilds	0	2,202,224	3,940,763	4,594,689	1,924,720	1,969,000	423,000
Deferred tax benefit	0	12,242	123,330	0	28,843	211,000	295,000
Sum tangible and intangible assets	**7,755,620**	**13,297,352**	**15,051,366**	**17,373,942**	**21,731,137**	**25,963,000**	**26,970,000**
Deferred tax liabilities	118,229	408,738	353,438	513,472	402,474	219,000	161,000
Taxes payable	28,877	61,224	86,841	164,914	100,240	141,000	122,000
Non-current liabilities	**147,106**	**469,962**	**440,279**	**678,386**	**502,714**	**360,000**	**283,000**
Invested Capital excluding goodwill	**7,786,105**	**13,214,068**	**15,026,126**	**17,802,397**	**21,875,586**	**26,104,000**	**27,377,000**
Goodwill	375,422	526,063	505,161	441,839	477,646	401,000	409,000
Invested capital incl. Goodwill	**8,161,527**	**13,740,131**	**15,531,287**	**18,244,236**	**22,353,232**	**26,505,000**	**27,786,000**

Invested Capital	2006H	2007H	2008H	2009H	2010H	2011H	2011H
Total Equity	3,290,860	4,554,786	5,498,819	6,809,077	6,727,969	6,669,000	6,749,000
Average total equity		3,922,823	5,026,803	6,153,948	6,768,523	6,698,485	6,709,000
Pension liabilities	113,086	14,809	20,141	11,955	13,245	13,245	6,000
Bond loan	695,303	1,473,870	1,470,654	2,149,321	2,753,572	2,804,000	4,164,000
Debt to credit institutions	3,526,640	826,292	1,795,407	2,128,284	1,876,160	2,251,000	2,000,000
Debt to credit institutions (Non-current)	813,564	6,994,293	8,920,720	8,724,597	13,085,211	16,391,000	16,592,000
Long-term liabilities	0	288,240	173,967	0	0		
Other non-current liabilities	1,424,296	1,171,055	162,357	496,856	599,624	328,000	271,000
Other provisions and derivatives		212,291	228,820	77,202	77,163	256,000	378,000
Public duties payable	53,578	70,267	98,170	72,319	79,793	108,000	86,000
Total interest-bearing debt	**6,626,467**	**11,051,117**	**12,870,236**	**13,660,534**	**18,484,768**	**22,151,245**	**23,497,000**
Other long-term receivables	3,630	5,005	269	2,721	205,452	268,245	309,000
Shares	13,117	792	5,999	8,910	9,202	7,000	5,000
Vessels held for sale	186,158	0	0	0	0	0	
Short term investments	715	1,277	0	0	0	0	
Cash & cash equivalents	1,552,180	1,858,697	2,831,502	2,213,742	2,644,851	2,040,000	2,145,000
Total interest-bearing assets	**1,755,800**	**1,865,771**	**2,837,770**	**2,225,373**	**2,859,505**	**2,315,245**	**2,459,000**
Net interest-bearing debt	**4,870,667**	**9,185,346**	**10,032,466**	**11,435,161**	**15,625,263**	**19,836,000**	**21,038,000**
Average net interest-bearing debt		7,028,007	9,608,906	10,733,814	13,530,212	17,730,632	20,437,000
Invested Capital	**8,161,527**	**13,740,132**	**15,531,285**	**18,244,238**	**22,353,232**	**26,505,000**	**27,787,000**
Average invested capital		10,950,830	14,635,709	16,887,762	20,298,735	24,429,116	27,146,000

- Net working capital consists of the same items as SIOFF; except that we have not included taxes payable. This is due to the mentioned tax regime.
- We have accumulated “vessels” and “operating equipment” in one item.
- We have separated goodwill as this is a larger post during the entire period.
- Investments in associated companies and joint ventures is seen as core operations, and thus included in intangible assets.

Appendix 4.2 – Key financial ratios peers and DuPont structure and formulas

Source: Compiled by authors, Annual reports (2006-2012) SIOFF and peers, Plenborg & Petersen (2012).



$$Return\ on\ Equity, ROE = \frac{NOPAT}{Average\ equity}$$

$$Return\ on\ Invested\ Capital, ROIC = \frac{NOPAT}{Average\ Invested\ capital}$$

$$FGEAR = \frac{NIBD}{Equity}$$

$$Net\ borrowing\ cost, NBC = \frac{Net\ financial\ expenses}{Average\ NIBD}$$

$$Profit\ Margin = \frac{EBIT}{Gross\ income}$$

$$Turnover\ rate = \frac{Gross\ income}{Average\ Invested\ capital}$$

SIOFF	2007H	2008H	2009H	2010H	2011H	2012H
ROE, Reported after minorities	19.4%	-6.8%	15.1%	1.4%	-1.0%	2.3%
ROE, Adjusted accounts	21.2%	10.8%	5.2%	5.7%	5.7%	6.4%
ROIC	11.9%	6.2%	2.6%	1.7%	0.3%	0.7%
ROIC before tax	13.7%	7.4%	2.6%	1.8%	2.1%	0.9%
F-Gear	50%	50%	58%	75%	101%	97%
NBC	-6.7%	-3.0%	-1.7%	-3.6%	-5.0%	-5.1%
Spread	5.2%	3.2%	1.0%	-1.9%	-4.7%	-4.3%
EBIT-Margin	38.6%	25.3%	12.5%	10.3%	10.2%	4.7%
Turnover rate Invested capital	0.35	0.29	0.21	0.18	0.21	0.20
ROCE	13.3%	7.4%	3.2%	2.0%	0.3%	0.8%

Farstad	2007H	2008H	2009H	2010H	2011H	2012H
ROE , reported after minorities	24.9%	20.7%	21.9%	6.8%	6.6%	3.3%
ROE	19.1%	27.5%	19.7%	8.5%	7.6%	5.2%
ROE (Before tax)	17.4%	26.3%	17.7%	6.8%	7.5%	4.1%
Fgear	0.89	0.85	0.77	0.74	0.78	0.87
NBC	-5.8%	-6.6%	-5.5%	-6.7%	-6.6%	-6.5%
SPREAD	7.0%	11.3%	8.1%	1.1%	0.6%	-0.7%
ROIC (Before tax)	12.8%	17.9%	13.6%	7.8%	7.2%	5.8%
ROIC	11.9%	17.2%	12.4%	6.7%	7.1%	5.2%
EBIT-Margin	36.4%	44.0%	39.3%	26.1%	23.9%	19.9%
Turnover rate Invested capital	0.36	0.36	0.30	0.29	0.29	0.28
ROCE	11.1%	15.6%	12.1%	6.7%	7.1%	5.3%

Havila	2007H	2008H	2009H	2010H	2011H	2011H
ROE , reported after minorities	26.6%	27.3%	31.4%	-0.5%	-7.2%	0.7%
ROE (Before Tax)	17.3%	8.5%	25.6%	-7.7%	-8.1%	-2.0%
Fgear	0.84	1.23	1.56	1.75	2.34	2.62
NBC	-11.2%	-20.6%	2.1%	-8.8%	-9.0%	-8.0%
SPREAD	3.3%	-5.4%	10.8%	-6.0%	-5.1%	-2.8%
ROIC	9.1%	16.8%	8.0%	1.9%	2.5%	4.4%
ROIC (Before Tax)	14.5%	15.2%	8.7%	2.8%	3.9%	5.2%
EBIT-Margin	47.2%	41.8%	35.1%	12.4%	17.3%	26.6%
Turnover rate Invested capital	0.31	0.36	0.25	0.22	0.22	0.20
ROCE	15.3%	6.3%	9.7%	5.9%	1.5%	2.1%

Solstad	2007H	2008H	2009H	2010H	2011H	2011H
ROE, reported after minorities	18.9%	0.7%	24.1%	0.7%	-11.9%	4.6%
ROE (Before Tax)	27.4%	0.8%	15.0%	2.1%	-7.5%	21.2%
Fgear	0.85	0.94	1.12	1.49	2.00	2.03
NBC	3.0%	-20.2%	3.4%	-3.3%	-5.6%	1.0%
SPREAD	16.3%	-10.0%	8.7%	-0.5%	-4.3%	7.3%
ROIC	7.6%	10.9%	7.9%	1.7%	0.6%	6.0%
ROIC (Before Tax)	13.4%	10.2%	5.3%	2.9%	1.2%	6.3%
EBIT-Margin	40.4%	34.2%	18.4%	13.1%	5.6%	25.8%
Turnover rate Invested capital	0.33	0.30	0.29	0.22	0.22	0.25
ROCE	5%	7%	5%	1%	0%	4%

DOF	2007H	2008H	2009H	2010H	2011H	2012H
ROE, reported after minorities	4.9%	-1.6%	10.4%	-1.9%	-10.8%	-1.5%
ROE (Before tax)	6.6%	0.5%	1.4%	-4.2%	0.0%	6.4%
Fgear	1.79	1.91	1.74	2.00	2.65	3.05
NBC	-5.6%	-7.2%	-3.1%	-6.1%	-6.3%	-6.1%
SPREAD	0.4%	-2.3%	-0.6%	-3.4%	-1.7%	0.1%
ROIC	2.0%	5.5%	1.6%	2.1%	4.3%	5.8%
ROIC (Before Tax)	6.0%	4.9%	2.5%	2.7%	4.6%	6.2%
EBIT-Margin	19.4%	17.9%	9.6%	9.9%	17.2%	20.7%
Turnover rate Invested capital	0.31	0.27	0.26	0.27	0.27	0.30
ROCE	2.0%	5.5%	1.6%	2.1%	4.3%	5.9%

Appendix 4.3 – Common size analysis, OPEX

Common size analysis - in percent of total revenue							
Vessel crew expenses	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2007-2012**
SIOFF	21.9%	25.1%	32.3%	32.0%	33.8%	35.0%	59.7%
Havila	23.2%	20.6%	24.4%	31.0%	32.9%	33.6%	45.2%
Farstad	30.3%	26.7%	28.5%	34.9%	38.8%	40.8%	34.5%
DOF	37.6%	39.5%	43.3%	45.6%	48.0%	38.9%	3.4%
Solstad	20.9%	25.0%	29.0%	33.7%	35.7%	36.3%	73.7%
Average	26.8%	27.4%	31.5%	35.4%	37.8%	36.9%	37.9%

Other Vessel expenses	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2007-2012**
SIOFF	20.1%	20.4%	25.1%	23.4%	22.8%	23.8%	18.3%
Havila	9.1%	21.8%	21.1%	28.8%	27.5%	20.6%	126.1%
Farstad	13.2%	11.8%	12.9%	17.5%	15.6%	16.0%	21.3%
DOF	27.6%	27.7%	25.0%	23.2%	21.0%	26.8%	-3.2%
Solstad	16.1%	14.8%	21.1%	25.9%	25.1%	20.6%	28.3%
Average	17.2%	19.3%	21.0%	23.8%	22.4%	21.6%	25.1%

OPEX	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2007-2012**
SIOFF	49.4%	54.1%	67.9%	66.7%	67.6%	74.0%	49.7%
Havila	37.4%	47.2%	50.3%	66.2%	66.8%	60.5%	61.5%
Farstad	49.1%	43.6%	46.7%	58.4%	60.9%	64.6%	31.6%
DOF	65.3%	67.1%	68.3%	68.8%	69.0%	65.7%	0.6%
Solstad	39.2%	42.6%	52.8%	62.6%	63.8%	56.9%	45.3%
Average	48.1%	50.9%	57.2%	64.5%	65.6%	64.3%	33.8%

Administration cost	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2007-2012**
SIOFF	7.4%	8.6%	10.6%	11.3%	10.9%	15.2%	105.8%
Havila	5.2%	4.8%	4.8%	6.4%	6.5%	6.3%	21.4%
Farstad	5.6%	5.1%	5.3%	5.9%	6.5%	7.8%	39.9%
DOF	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Solstad	2.2%	2.9%	2.8%	3.0%	3.0%	3.1%	40.9%
Average	5.1%	5.3%	5.9%	6.7%	6.7%	8.1%	59.2%

Appendix 4.4 – Indexing and common size analysis of peers invested capital

Source: Compiled by authors / Annual reports (2006-2012)

This is the highlight of the index analysis, and shows the invested capital separated into net working capital together with vessels and equipment.

SIOFF

Index of invested capital	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	100	68	67	94	112	91
Vessels and equipment	100	107	181	301	328	295
Invested capital	**100**	**112**	**171**	**236**	**254**	**231**

Farstad

Index of invested capital	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	100	170	231	50	47	132
Vessels etc.	100	117	152	170	174	184
Invested capital incl. Goodwill	**100**	**125**	**167**	**179**	**190**	**204**

Havila

Index of invested capital	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	100	72	36	123	59	219
Vessels etc.	100	179	312	362	526	580
Invested capital including goodwill	**100**	**177**	**272**	**306**	**418**	**436**

Solstad

Index of invested capital	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	100	52	70	21	69	26
Vessels etc. and newbuild contracts	100	113	148	207	212	190
Invested capital incl. Goodwill	**100**	**110**	**148**	**201**	**210**	**191**

DOF

Index of invested capital	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	100	107	286	167	130	178
Vessels etc.	100	112	131	204	245	270
Invested capital incl. Goodwill	**100**	**113**	**133**	**163**	**193**	**202**

This is the highlight of the common size analysis, and shows the invested capital separated into net working capital together with vessels and equipment.

SIOFF

Common size analysis	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	8%	4%	3%	2%	2%	2%
Vessels and equipment	85%	67%	64%	70%	85%	86%
Invested capital	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Farstad Shipping

Common Size analysis	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	2%	3%	3%	1%	1%	2%
Vessels etc.	104%	97%	95%	99%	96%	94%
Invested capital incl. Goodwill	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Havila Shipping

Common Size analysis	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	-16%	-7%	-2%	-6%	-2%	-8%
Vessels etc.	82%	83%	94%	97%	103%	109%
Invested capital incl. Goodwill	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Solstad

Common Size analysis	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	5%	3%	3%	1%	2%	1%
Vessels etc. and newbuild contracts	97%	100%	98%	100%	98%	97%
Invested capital incl. Goodwill	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

DOF

Common Size analysis	2007H	2008H	2009H	2010H	2011H	2012H
Net Working Capital	3%	3%	6%	3%	2%	2%
Vessels etc.	70%	70%	70%	88%	89%	94%
Invested capital incl. Goodwill	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix 4.5 – Calculations of solvency ratios

Source: Compiled by authors / Annual Reports (2006-2012) / Oslo Stock Exchange

Siem	**31.12.2007**	**31.12.2008**	**31.12.2009**	**31.12.2010**	**31.12.2011**	**31.12.2012**
Number of shares	253,891,866	253,891,866	359,774,219	395,751,640	395,951,640	395,902,000
Share price	19.3	8.2	8.9	10.85	8.3	7.65
Equity value (USD)	841,943,817	357,717,062	550,170,197	737,784,415	564,673,301	520,386,649
Invested capital (USD)	1,008,192,817	635,931,562	928,827,197	1,457,090,915	1,397,468,801	1,192,491,649
Solvency ratio	84%	56%	59%	51%	40%	44%
Farstad	**31.12.2007**	**31.12.2008**	**31.12.2009**	**31.12.2010**	**31.12.2011**	**31.12.2012**
Number of shares	39,000,000	39,000,000	39,000,000	39,000,000	39,000,000	39,000,000
Share price	148	67.5	128.5	175	151	134
Equity value (NOK)	5,772,000,000	2,632,500,000	5,011,500,000	6,825,000,000	5,889,000,000	5,226,000,000
Invested capital	8,815,358,000	6,309,201,000	9,550,366,000	11,844,745,000	11,351,800,000	11,607,591,000
Solvency ratio	65.5%	41.7%	52.5%	57.6%	51.9%	45.0%
DOF	**31.12.2007**	**31.12.2008**	**31.12.2009**	**31.12.2010**	**31.12.2011**	**31.12.2012**
Number of shares	82,767,975	82,767,975	91,037,975	91,037,975	111,051,348	111,051,348
Share price	62.1	33.9	38.4	49.4	21.5	27.6
Equity value (NOK)	5,139,063,568	2,806,662,032	3,495,858,240	4,495,455,206	2,387,603,982	3,065,017,205
Invested capital	14,324,409,568	12,839,128,032	14,931,019,240	20,120,718,206	22,223,603,982	24,103,017,205
Solvency ratio	36%	22%	23%	22%	11%	13%
Havila	**31.12.2007**	**31.12.2008**	**31.12.2009**	**31.12.2010**	**31.12.2011**	**31.12.2012**
Number of shares	15,960,000	15,960,000	15,960,000	15,960,000	21,410,000	29,743,000
Share price	117.54	34.08	58.77	60.75	34.08	24.1
Equity value (NOK)	1,875,938,400	543,916,800	937,969,200	969,570,000	729,652,800	716,806,300
Invested capital	2,611,785,400	2,271,960,800	3,626,548,200	4,218,911,000	5,674,939,800	5,754,413,300
Solvency ratio	72%	24%	26%	23%	13%	12%
Solstad	**31.12.2007**	**31.12.2008**	**31.12.2009**	**31.12.2010**	**31.12.2011**	**31.12.2012**
Number of shares	37,677,966	37,682,466	37,617,495	37,589,593	38,662,077	38,665,000
Share price	155	58.5	108	116	85.5	100
Equity value (NOK)	5,840,084,730	2,204,424,261	4,062,689,460	4,360,392,788	3,305,607,584	3,866,500,000
Invested capital	8,983,335,730	6,037,628,261	9,560,929,460	13,182,041,788	13,305,188,584	12,321,130,000
Solvency ratio	65%	37%	42%	33%	25%	31%

6.0 Forecasting

Appendix 6.1 – Regression output and forecasting of AHTS dayrates

Source: Platou Markets, Pareto Securities, oil price forecast, Fearnley Securities,

The historical input to the regression is summarized in the figure below.

Year	Rig fleet	Oil price, USD/Bbl.	Number of High-End AHTS	Spot rates North Sea
2001	454	24.5	58	49,907
2002	433	25.0	70	23,652
2003	436	28.9	81	16,056
2004	449	38.3	86	20,531
2005	481	54.6	92	51,868
2006	489	65.2	97	104,858
2007	501	72.4	111	112,044
2008	523	96.9	126	101,054
2009	488	61.7	143	35,500
2010	478	79.6	186	29,422
2011	559	111.3	220	51,146
2012	597	111.6	237	35,662

We have applied a time series from 2001-2013, which we characterize as sufficient as it covers an entire cycle of 8-10 years.[5] The input to the time series is based on different quantities, such as USD, number of rigs, and number of vessels. Hence, in order to make the input data comparable, we have transformed each times series to logarithmic numbers:

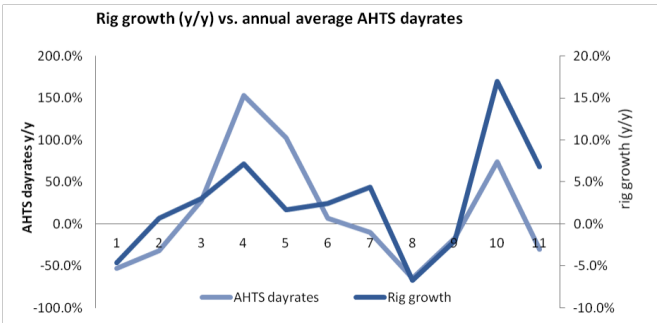
Year	LN growth Rigs	LN Oil Price, USD/BBl	LN High End AHTS	LN value AHTS
2001	6.118097	3.196864	4.060443	12.567117
2002	6.070738	3.218606	4.248495	11.820408
2003	6.077642	3.362138	4.394449	11.433043
2004	6.107023	3.644397	4.454347	11.678889
2005	6.175867	3.999568	4.521789	12.605658
2006	6.192362	4.176873	4.574711	13.309558
2007	6.216606	4.282775	4.709530	13.375847
2008	6.259581	4.574137	4.836282	13.272606
2009	6.190315	4.122912	4.962845	12.226481
2010	6.169611	4.377133	5.225747	12.038694
2011	6.326149	4.711908	5.393628	12.591636
2012	6.391917	4.715163	5.468060	12.231034

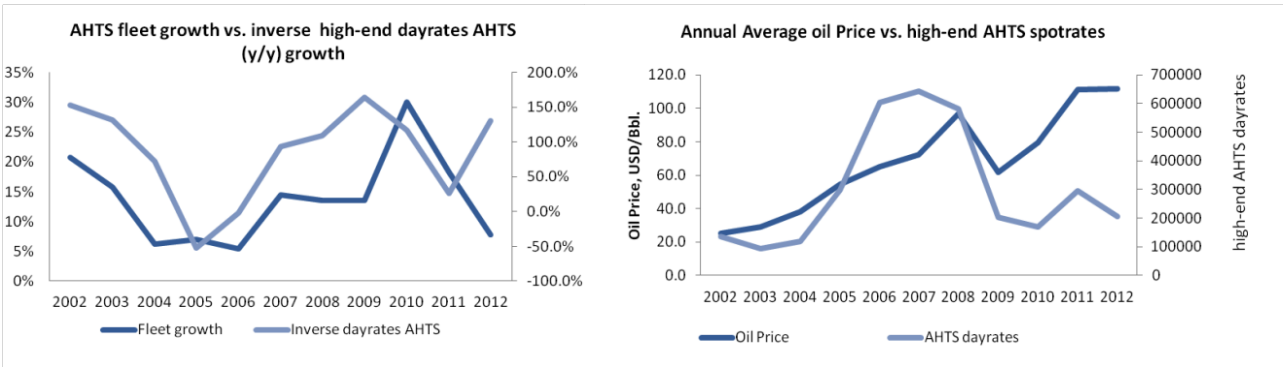
Our *dependent variable* is the North Sea dayrate for high-end AHTS.[6] North Sea spot rates can be applied as they are a leading indicator for other geographical areas as we discussed in section 2.9. This time series is representative for SIOFFs fleet of AHTS, as it comprise of only high-end vessels.

[5] Ref. Pareto figure, in section 2.11
[6] Arctic Initial Coverage SIOFF, pg. 24

The *explanatory variables* we have used in the regression are based on the findings from the shipping market model, where we have identified main value drivers of supply and demand that affects day rates. The AHTS segment is more closely related to exploration than production of petroleum, and thus more volatile towards changes in E&P spending ref. Section 2.2. We have therefore chosen the oil price as the first variable. The second demand factor is number of rigs, as AHTS vessels perform various tasks related to anchoring and movement of rigs. As an explanatory supply factor we have chosen growth in High-End AHTS as more vessels can have negative impact on dayrates.

To support the choice of the variables the linear relationship between the factors is illustrated below. There is evidence of a positive correlation between oil price and dayrates, rig growth and dayrates and an inverse relationship between fleet growth and dayrates.



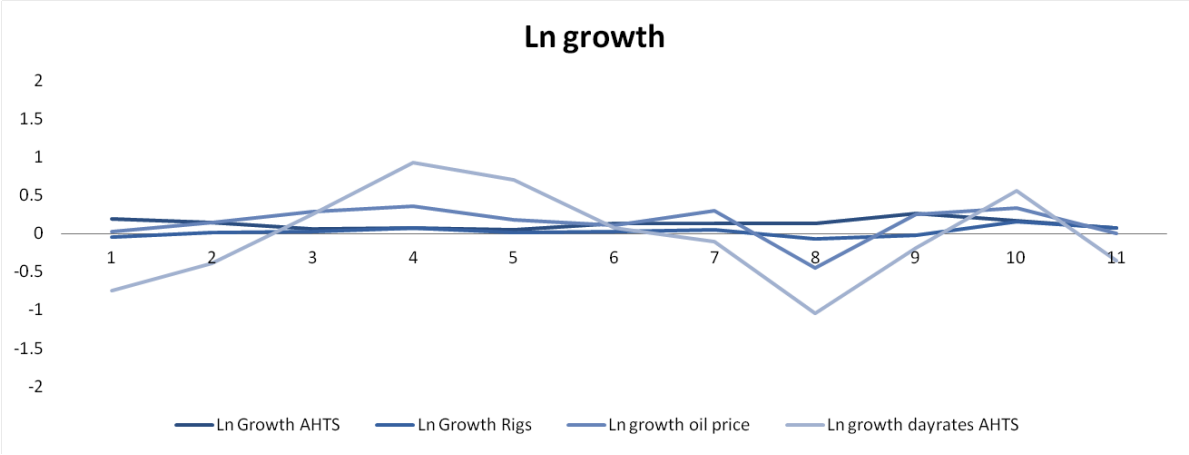


In order to generalize the results from the regression analysis to other time periods, the time series need to be stationary.[7] If the time series is non-stationarity, the regression analysis will be of little practical use to forecast dayrates. Time series are stationary if its mean and variance are constant over time and the value of the covariance between the two time periods depends only on the distance between the two time periods.[8]

[7] Gujarati, Damodar N. & Porter, Dawn C. (2009), pg. 741
[8] Gujarati, Damodar N. & Porter, Dawn C. (2009), pg. 740

There are several tests in order to determine whether a time series is stationary or not, but one of the most practiced is a graphical analysis.[9] At the next page we have plotted the time series of the relevant variables. As can be seen, there is an upward trend among all of the variables over the period of study. This perhaps suggests that the log of the variables is not stationary.

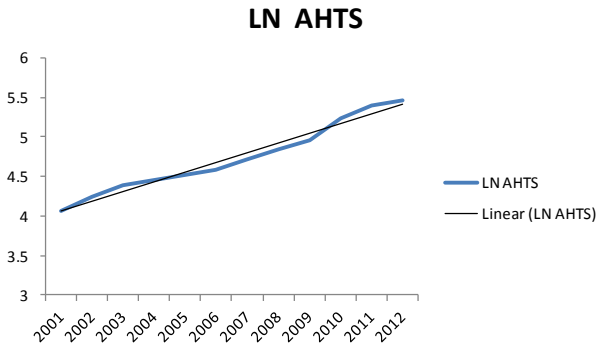
One way to confirm that the time series are stationary is to calculate the Ln growth between each year.[10] As can be seen from figure XX, the new Ln growth time series now move with a constant mean and variation. We are therefore confident to apply these figures into our regression model.

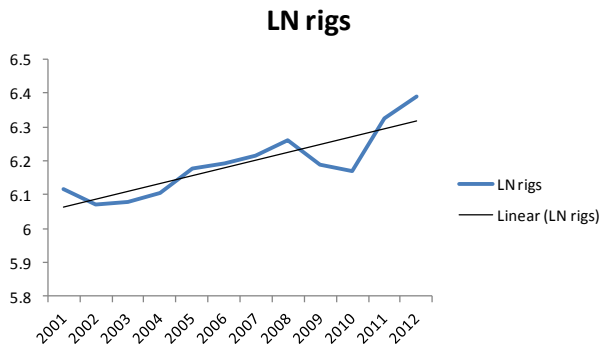


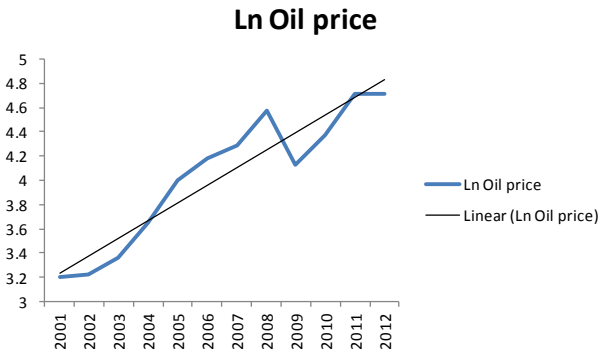
Before we performed the regression with the mentioned variables, we performed several regressions with different explanatory variables. The output didn't turn out functional as the significance was low, but the R^2 was high. This is one of the signals of multicollinearity, which indicates that there is correlation between the regressors.[11] This means it is impossible to isolate the individual impact on our dependent variable. We therefore removed one of the variables in order to achieve significant t-values. With the remaining explanatory variables, we have still covered the important value drivers determining dayrates, from both supply and demand side, and we believe that this will give us a reliable estimate of future day rates.

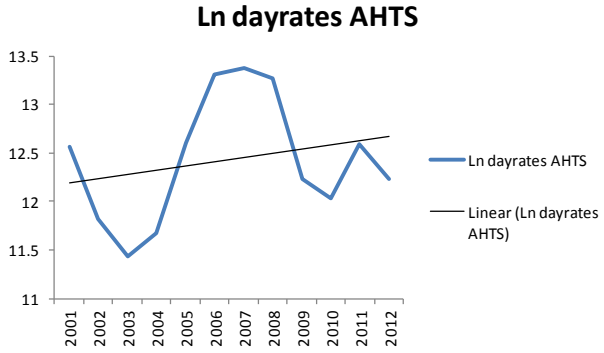
[9] Gujarati, Damodar N. & Porter, Dawn C. (2009), pg. 749
[10] Ln Growth_1 – Ln $\text{Growth}_{(T-1)}$
[11] Gujarati, Damodar N. & Porter, Dawn C. (2009), pg. 331

Below we have plotted the time series of the relevant variables.









Appendix 6.2 – Input in the regression model and output from the regression

Source: Compiled by authors/SAS Enterprise Guide

Input to the regression model

Year	LN growth Rigs	LN Growth Oil price	LN Growth number of AHTS	LN Growth Spot AHTS
2002	-0.047359	0.021742	0.188052	-0.746708
2003	0.006905	0.143532	0.145954	-0.387365
2004	0.029381	0.282259	0.059898	0.245846
2005	0.068844	0.355171	0.067441	0.926768
2006	0.016495	0.177305	0.052922	0.703901
2007	0.024244	0.105902	0.134819	0.066289
2008	0.042975	0.291362	0.126752	-0.103241
2009	-0.069266	-0.451225	0.126563	-1.046125
2010	-0.020705	0.254221	0.262902	-0.187787
2011	0.156539	0.334775	0.167881	0.552943
2012	0.065768	0.003255	0.074433	-0.360603

Output from SAS Enterprise

Linear Regression Results

The REG Procedure

Model: Linear_Regression_Model

Dependent Variable: LN Growth S

Number of Observations Read	11
Number of Observations Used	11

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	2.8928	0.96427	8.44	0.01
Error	7	0.79985	0.11426		
Corrected Total	10	3.69265			

Root MSE	0.33803	R-Square	0.7834
Dependent Mean	-0.0306	Adj R-Sq	0.6906
Coeff Var	-1106.4		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.12383	0.25838	0.48	0.6464
LN growth Rigs	1	1.73673	2.41642	0.72	0.4956
LN Growth Oil price	1	1.74896	0.62727	2.79	0.027
LN Growth number of AHTS	1	-3.43081	1.77475	-1.93	0.0945

In order to determine whether the results are a good approximation to forecast day rates, one option is to test them with reference to a zero or alternative hypothesis.[12] The decision whether to reject or not to reject the null hypothesis can be determined by confidence interval and test of significance. For a confidence level of 90% the P-value must be below 0.1 to reject the null hypothesis. If the parameters fall within the confidence interval, this is an indication of a linear relationship between the dependent variable and the explanatory variables and the day rate.[13]

[12] Gujarati, Damodar N. & Porter, Dawn C. (2009), pg. 113
[13] Gujarati, Damodar N. & Porter, Dawn C. (2009), pg. 114

Appendix 6.3 – Analyst forecast of AHTS and PSV dayrates

Source: Compiled by authors / Pareto Securities / ABG Sundal Collier

In the following we have listet investment banks estimates for dayrates. These are the only companies that estimate specific number, but other investment banks and brokerage firms have estimated future growth and development from todays level. These have been taken into consideration in our forecast of dayrates.

Forecast AHTS dayrates	2013	2014	2015
Pareto Securities AHTS 25.000 bhp (USD)	46,711	57,895	65,789
Pareto Securities AHTS 18.000 bhp (USD)	40,570	50,000	57,018
ABG Sundal Collier 18.000+ bhp, (USD)	46,316	54,035	N/A
Average	44,532	53,977	61,404

Forecast PSV dayrates	2013	2014	2015
Pareto Securities PSV 3000 dwt (USD)	20,395	23,465	23,684
Pareto Securities PSV 4500 dwt (USD)	26,096	26,754	28,070
Average	23,246	25,110	25,877

Appendix 6.4 – IRR calculations, Subsea dayrates

Source: Compiled by authors / Øyvind Hagen, analyst at ABG Sundal Collier

Year	0	1	2	3	4	5	6	7	8	9	10
Utilization		98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Number of days		365	365	365	365	365	365	365	365	365	365
Growth in dayrates		5.0%	5.0%	5.0%	5.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Dayrate		69825	73316.25	76982.0625	80831.16563	82447.78894	84096.74472	85778.67961	87494.2532	89244.13827	91029.02103
Growth in OPEX		5.0%	5.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
OPEX		(12,290,000)	(12,904,500.00)	(13,227,112.50)	(13,557,790.31)	(13,896,735.07)	(14,244,153.45)	(14,600,257.28)	(14,965,263.72)	(15,339,395.31)	(15,722,880.19)
Cashflow before tax	############	12,686,402.50	13,320,722.63	14,309,371.26	15,355,517.63	15,594,839.03	15,837,252.14	16,082,776.41	16,331,430.66	16,583,232.95	16,838,200.63
Tax		1,776,096.35	1,864,901.17	2,003,311.98	2,149,772.47	2,183,277.46	2,217,215.30	2,251,588.70	2,286,400.29	2,321,652.61	2,357,348.09
Cash flow after tax	############	10,910,306.15	11,455,821.46	12,306,059.28	13,205,745.16	13,411,561.57	13,620,036.84	13,831,187.72	14,045,030.36	14,261,580.34	14,480,852.54

11	12	13	14	15	16	17	18	19	20
98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
365	365	365	365	365	365	365	365	365	365
2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
92849.60145	94706.59348	96600.72535	98532.73986	100503.3947	102513.4625	104563.7318	106655.0064	108788.1066	110963.8687
2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
(16,115,952.20)	(16,518,851.00)	(16,931,822.28)	(17,355,117.83)	(17,788,995.78)	(18,233,720.67)	(18,689,563.69)	(19,156,802.78)	(19,635,722.85)	(20,126,615.92)
17,096,350.24	17,357,697.49	17,622,257.18	17,890,043.21	18,161,068.49	18,435,344.88	18,712,883.18	18,993,693.02	19,277,782.87	19,565,159.91
2,393,489.03	2,430,077.65	2,467,116.01	2,504,606.05	2,542,549.59	2,580,948.28	2,619,803.64	2,659,117.02	2,698,889.60	2,739,122.39
14,702,861.21	14,927,619.84	15,155,141.18	15,385,437.16	15,618,518.90	15,854,396.60	16,093,079.53	16,334,576.00	16,578,893.27	16,826,037.52

21	22	23	24	25	26	27	28	29	30
98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
365	365	365	365	365	365	365	365	365	365
2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
113183.1461	115446.809	117755.7452	120110.8601	122513.0773	124963.3388	127462.6056	130011.8577	132612.0949	135264.3368
2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
(20,629,781.32)	(21,145,525.85)	(21,674,164.00)	(22,216,018.10)	(22,771,418.55)	(23,340,704.02)	(23,924,221.62)	(24,522,327.16)	(25,135,385.34)	(25,763,769.97)
19,855,830.03	20,149,797.72	20,447,066.05	20,747,636.55	21,051,509.19	21,358,682.28	21,669,152.41	21,982,914.35	22,299,961.00	22,620,283.29
2,779,816.20	2,820,971.68	2,862,589.25	2,904,669.12	2,947,211.29	2,990,215.52	3,033,681.34	3,077,608.01	3,121,994.54	3,166,839.66
17,076,013.82	17,328,826.04	17,584,476.80	17,842,967.43	18,104,297.90	18,368,466.76	18,635,471.07	18,905,306.34	19,177,966.46	19,453,443.63

Input and results	
Days	365
Investment	(105,000,000)
Dayrate, ultimo 2012	66,500
Utilization	0.98
Taxrate	0.14
IRR	12%

Appendix 6.5 – Value of term contracts

Source: Compiled by authors/Fearnley Securities/SIOFF annual reports and company presentations

Dayrates is calculated based on the contract value and the number of days between contract signing and expiry. All numbers in USD.

Vessel name	Reported value	Contract start	Contract end	Estimated Utilizatior	Estimated dayrates
AHTS	**USD**				**USD**
Siem Emerald	70,000,000	1/1/2011	1/1/2015	100%	48,611
Siem Pearl	70,000,000	1/1/2011	1/1/2015	100%	48,611
Siem Diamond	70,000,000	1/1/2011	1/1/2015	100%	48,611
Siem Ruby	100,000,000	7/1/2012	7/1/2016	100%	69,444
Siem Sapphire	70,000,000	1/1/2011	1/1/2015	100%	48,611
PSV					
Siem Symphony	47,000,000	7/1/2014	7/1/2018	100%	32,639
Hugin Explorer	45,000,000	4/1/2012	4/1/2018	100%	20,833
Siem Supplier	Estimate	4/1/2013	4/1/2016	100%	24,561
Siem Sailor	Estimate		12/31/2013	100%	28,947
Siem Pilot	Estimate		12/31/2013	100%	28,947
Siem Mariner	Estimate		1/4/2013	100%	28,947
Siddis Skipper	Estimate		12/31/2013	100%	25,000
Siem Sasha	Estimate		1/7/2013	100%	25,000
Siem Louisa	Estimate		1/7/2013	100%	25,000
FCV/FSV					
Siem Piata	17,500,000	1/2/2011	1/2/2019	100%	6,076
Siem Pendotiba	17,500,000	1/2/2012	1/2/2020	100%	6,076
Siem Caetes	23,000,000	1/2/2011	1/2/2019	100%	7,986
Siem Carajas	23,000,000	1/2/2012	1/2/2020	100%	7,986
Norsul Parati	Estimate		1/7/2014	100%	3,993
Capela	Estimate		1/7/2014	100%	3,993
Norsul Paropria	Estimate		1/7/2014	100%	3,993
Parnaiba	Estimate		1/7/2014	100%	3,993
OSRV					
Siem Maragogi	94,000,000	1/1/2013	1/1/2021	100%	32,639
Siem Marataizes	94,000,000	1/1/2013	1/1/2021	100%	32,639
OSCV					
Siem Daya	Estimate	1/7/2013	1/7/2018	100%	73,000

Appendix 6.6 – Forecast of revenues AHTS, PSVs, Subsea, FCV/FSV, additional fleet growth

Source: Compiled by authors

Name	Region	Building year	2013	2014	2015	2016	2017	2018
AHTS > 16.000 bhp		**Utilization**	**85%**	**92%**	**95%**	**95%**	**95%**	**95%**
Siem Emerald	Brazil	2009	17,520,000	17,520,000	22,641,426	23,735,650	24,329,041	24,937,267
Siem pearl	Brazil	2009	17,520,000	17,520,000	22,641,426	23,735,650	24,329,041	24,937,267
Siem Diamond	Brazil	2010	17,520,000	17,520,000	22,641,426	23,735,650	24,329,041	24,937,267
Siem Ruby	Brazil	2010	17,520,000	17,520,000	17,520,000	20,345,252	24,329,041	24,937,267
Siem Sapphire	Brasil	2010	17,520,000	17,520,000	22,641,426	23,735,650	24,329,041	24,937,267
Siem Topaz	North Sea	2010	16,518,779	20,155,038	22,641,426	23,735,650	24,329,041	24,937,267
Siem Aquamarine	North Sea	2010	16,518,779	20,155,038	22,641,426	23,735,650	24,329,041	24,937,267
Siem Amethyst	North Sea	2011	16,518,779	20,155,038	22,641,426	23,735,650	24,329,041	24,937,267
Revenues			137,156,336	148,065,114	176,009,983	186,494,801	194,632,329	199,498,137

Name	Region	Building year	2013	2014	2015	2016	2017	2018
PSV > 900 m2		**Utilization**	**92%**	**92%**	**92%**	**92%**	**92%**	**92%**
Siem Supplier	Brazil	1999	8,964,912	8,964,912	8,964,912	11,119,152	11,162,509	11,441,572
Siem Atlas	Brazil	Q3, 2013	2,357,198	9,428,791	9,900,230	10,890,253	11,162,509	11,441,572
Siem Giant	Brazil	Q2, 2014		4,714,395	9,900,230	10,890,253	11,162,509	11,441,572
Siem Sailor	North Sea	2007	10,565,789	9,428,791	9,900,230	10,890,253	11,162,509	11,441,572
Siem Pilot	North Sea	2010	10,565,789	9,428,791	9,900,230	10,890,253	11,162,509	11,441,572
Siddis Mariner	North Sea	2011	9,713,040	9,428,791	9,900,230	10,890,253	11,162,509	11,441,572
Siem Symphony		2014, Q3		2,978,299	11,913,194	11,913,194	11,913,194	11,677,383
Hugin Explorer	West Africa	2006	7,604,167	7,604,167	7,604,167	7,604,167	7,604,167	11,228,410
PSV < 900 m2		**Utilization**	**85%**	**85%**	**85%**	**85%**	**85%**	**85%**
Siem Carrier	West Africa	1996	7,368,438	7,368,438	7,589,491	7,968,965	8,168,189	8,372,394
Siddis Skipper	North Sea	2004	7,368,438	7,368,438	7,589,491	7,968,965	8,168,189	8,372,394
Siem Louisa	West Africa	2006	8,246,719	7,368,438	7,589,491	7,968,965	8,168,189	8,372,394
Siem Hanne	West Africa	2007	7,368,438	7,368,438	7,589,491	7,968,965	8,168,189	8,372,394
Siem Sasha	India	2005	8,246,719	7,368,438	7,589,491	7,968,965	8,168,189	8,372,394
Sophie Siem	West Africa	2006	7,368,438	7,368,438	7,589,491	7,968,965	8,168,189	8,372,394
Revenues			95,738,083	106,187,560	123,520,367	132,901,569	135,501,553	141,789,590

Name	Region	Building year	2013	2014	2015	2016	2017	2018
Subsea		**Utilization**	**98%**	**98%**	**98%**	**98%**	**98%**	**98%**
Crane <250, LOA <120								
Siem Marlin	West Africa	2009	21,229,942	22,291,439	23,406,011	24,576,312	25,190,720	25,820,488
Adams Vision	North Sea	2009	21,663,206	21,663,206	22,534,609	24,576,312	25,190,720	25,820,488
Siem Moxie		Q1, 2014		16,718,579	23,406,011	24,576,312	25,190,720	25,820,488
Crane >250, LOA >120								
Siem Daya 1		Q2, 2013	13,322,500	26,645,000	26,645,000	26,645,000	26,645,000	28,820,992
Siem Barracuda	North Sea	Q4, 2013		26,225,223	27,536,484	28,913,308	29,636,141	30,377,044
Siem TBN	West Africa	Q2, 2014		13,112,611	27,536,484	28,913,308	29,636,141	30,377,044
Siem TBN	Brazil	Q2, 2014		13,112,611	27,536,484	28,913,308	29,636,141	30,377,044
Revenues			56,215,648	139,768,670	178,601,082	187,113,859	191,125,581	197,413,587

Term and spot
Newbuilding/scrapp
Term Contract
Spot

Name	Region	Building year	2013	2014	2015	2016	2017	2018
FSV/FCV		Utilization	100%	100%	100%	100%	100%	100%
Siem Piata	Brazil	2011	2,217,882	2,217,882	2,217,882	2,217,882	2,217,882	2,217,882
Siem Pendotiba	Brazil	2012	2,217,882	2,217,882	2,217,882	2,217,882	2,217,882	2,217,882
Siem Caetes	Brazil	2011	2,914,931	2,914,931	2,914,931	2,914,931	2,914,931	2,914,931
Siem Carajas	Brazil	2012	2,914,931	2,914,931	2,914,931	2,914,931	2,914,931	2,914,931
Norsul Parati	Brazil	1972	1,457,465	728,733				
Capela	Brazil	1980	1,457,465	728,733				
Norsul Paracaru	Brazil	1986						
Norsul Paropria	Brazil	1986	1,457,465	728,733				
Parnaiba	Brazil	1986	1,457,465	728,733				
OSRV								
Siem Maragogi	Brazil	Q2, 2013	2,978,299	11,913,194	11,913,194	11,913,194	11,913,194	11,913,194
Siem Marataizes	Brazil	Q2, 2013	2,978,299	11,913,194	11,913,194	11,913,194	11,913,194	11,913,194
Revenues			22,052,083	37,006,944	34,092,014	34,092,014	34,092,014	34,092,014

Additional fleet Growth	2013	2014	2015	2016	2017	2018
accumulated			1	2	3	4
Revenues			19,852,673	21,003,076	21,528,152	22,066,356
Revenue from new vessels			19,852,673	42,006,151	64,584,457	88,265,425

Total revenues	**311,162,151**	**431,028,288**	**532,076,120**	**582,608,394**	**619,935,934**	**661,058,753**

Appendix 6.7 – Historical development of value drivers

Source: Compiled by authors/SIOFF annual reports

The historical development of the key value drivers for the forecasting is summarized in the figure below. Operating income growth is measured based on the prior year. The remaining drivers are calculated in percent of operating revenue. Net interest bearing debt is calculated in % of invested capital

Value driver	2007H	2008H	2009H	2010H	2011H	2012H	Average
Operating Income, growth	123%	21%	-3%	23%	43%	-6%	33%
Other Income in % of operating income	5.3%	5.7%	4.0%	5.0%	3.9%	5.5%	4.9%
Results from associated companies	1.0%	0.8%	0.8%	0.9%	-0.6%	0.2%	0.5%
OPEX in % of operating income	44.7%	49.1%	60.1%	58.7%	55.4%	62.1%	55%
General/Admin expences in % of operating	7.9%	8.5%	11.1%	12.0%	11.3%	16.1%	11%
Gain/losses from sale of assets in % of operating	-0.2%	-4.4%	0.6%	2.9%	0.0%	4.7%	0.6%
Depreciation and amortization in % of vessels	3.8%	5.2%	3.8%	4.3%	5.4%	5.9%	4.7%
Effective tax rate	-12.7%	-8.2%	1.8%	-6.0%	-69.3%	-20.7%	-19%
Interest rate	3.6%	4.3%	2.5%	3.2%	4.5%	4.9%	3.8%
Minority interests	0.9%	-1.0%	-0.8%	0.2%	-0.3%	0.6%	-0.1%
Net Working Capital in % of operating income	18.5%	10.4%	10.6%	12.0%	10.0%	8.6%	12%
Vessels, contracts, project costs etc. In % of	333.1%	337.3%	550.1%	640.8%	481.2%	464.6%	468%
Intangible assets in % of operating income	0.0%	0.0%	0.0%	0.0%	6.6%	7.3%	2%
Deferred tax asset in % of operating income	2.2%	1.9%	2.8%	2.9%	2.0%	2.1%	2%
Investments in associated companies in % of	6.5%	5.8%	8.1%	4.4%	1.4%	1.4%	5%
Long term receviables in % of operating income	0.9%	0.4%	2.1%	1.8%	1.1%	2.4%	1%
Other non-current liabilities in % of operating	0.2%	0.2%	1.0%	3.2%	5.7%	4.7%	3%
Cash in % of operating income	62.2%	20.1%	25.8%	26.5%	21.9%	18.3%	29%
Tax liabilities in % of operating income	5.9%	2.2%	1.5%	0.9%	4.3%	2.3%	3%
Other Non Current Liabilities in % of operating	0.2%	0.2%	1.0%	3.2%	5.7%	4.7%	3%
Net interesting debt in % of Invested Capital	26.3%	40.8%	35.9%	48.3%	52.0%	46.1%	42%

Appendix 6.8 – Forecasting: Pro-forma Income statement and Balance Sheet

Source: Compiled by authors

These tables show the forecasted pro-forma income statement and balance sheet of SIOFF. The estimated cash flow for the DCF and EVA model is based on these figures.

Pro-forma Income statement

Core Operations	2013E	2014E	2015E	2016E	2017E	2018E	Terminal period
Operating Income	311,162	431,028	532,076	582,608	619,936	661,059	677,585
Other Income	15,558	21,551	26,604	29,130	30,997	33,053	33,879
Results from associated companies,	1,636	2,266	2,797	3,063	3,259	3,475	3,562
Gross income	**328,356**	**454,846**	**561,477**	**614,802**	**654,192**	**697,587**	**715,027**
OPEX	-172,852	-233,595	-266,225	-282,814	-300,066	-318,004	-325,954
-General/Admin expenses	-43,563	-51,723	-58,528	-64,087	-68,193	-72,716	-74,534
Total Expenses	**-216,415**	**-285,319**	**-324,754**	**-346,901**	**-368,259**	**-390,720**	**-400,488**
Gains/(losses) from sale of assets	1,877	2,600	3,209	3,514	3,739	3,987	4,087
EBITDA	**113,818**	**172,127**	**239,933**	**271,415**	**289,672**	**310,854**	**318,625**
-Depreciation and amortization	-65,599	-75,484	-88,012	-87,036	-86,127	-85,325	-87,459
EBIT	**48,219**	**96,642**	**151,920**	**184,379**	**203,545**	**225,528**	**231,166**
- Tax on core operations	-6,751	-13,530	-21,269	-25,813	-28,496	-31,574	-32,363
NOPAT	**41,468**	**83,112**	**130,652**	**158,566**	**175,049**	**193,954**	**198,803**
Net Financial expenses and other	**-46,308**	**-62,559**	**-72,738**	**-72,261**	**-71,692**	**-71,168**	**-72,947**
Tax on non operating items (tax shield)	6,483	8,758	10,183	10,117	10,037	9,964	10,213
Result for the financial year	**1,643**	**29,312**	**68,097**	**96,421**	**113,394**	**132,750**	**136,068**
Attributable to minorities	1,867	2,586	3,192	3,496	3,720	3,966	4,066
Attributable to equity holders	**-224**	**26,726**	**64,904**	**92,925**	**109,674**	**128,783**	**132,003**

Pro-forma Balance Sheet

Assets	2013E	2014E	2015E	2016E	2017E	2018E	Terminal period
Net Working Capital	**37,339**	**50,327**	**62,125**	**68,026**	**72,384**	**77,185**	**79,115**
Vessels and equipment	1,569,998	1,832,514	1,809,501	1,789,091	1,771,254	1,755,927	1,799,825
intangible assets	21,258	21,258	21,258	21,258	21,258	21,258	21,789
Deferred tax asset	7,191	9,961	12,296	13,463	14,326	15,276	15,658
Investments in associated companies	4,222	4,222	4,222	4,222	4,222	4,222	4,328
Long term receviables	4,512	6,250	7,716	8,448	8,990	9,586	9,826
Cash & Cash equivalents	53,534	53,534	53,534	53,534	53,534	53,534	54,872
Total operating assets	**1,660,715**	**1,927,739**	**1,908,527**	**1,890,016**	**1,873,584**	**1,859,803**	**1,906,298**
Tax liabilities	8,848	12,257	15,130	16,567	17,628	18,798	19,268
Other Non Current Liabilities	7,792	10,793	13,323	14,589	15,523	16,553	16,967
Sum non current liabilities	**16,640**	**23,050**	**28,453**	**31,156**	**33,152**	**35,351**	**36,235**
Invested capital	**1,681,415**	**1,955,016**	**1,942,199**	**1,926,886**	**1,912,816**	**1,901,637**	**1,949,178**

Equity and NIBD	2013E	2014E	2015E	2016E	2017E	2018E	Terminal period
Equity capital	773,451	899,307	893,411	886,368	879,895	874,753	896,622
Net interest bearing debt	907,964	1,055,709	1,048,787	1,040,519	1,032,921	1,026,884	1,052,556
Invested capital	**1,681,415**	**1,955,016**	**1,942,199**	**1,926,886**	**1,912,816**	**1,901,637**	**1,949,178**

Appendix 6.9 – Estimated general inflation, inflation in OPEX, OPEX pr. segment and total OPEX

Source: Compiled by authors

General inflation

Inflation	2013	2014	2015	2016	2017	2018
Average Inflation rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

OPEX inflation

Average OPEX Inflation accross geographical areas	2013	2014	2015
AHTS	7%	2%	0%
PSV	5%	2%	0%
Subsea	5%	5%	0%
FSV/FCV	-5%	2%	-10%
OSRV	5%	2%	0%

AHTS > 16.000 bhp	OPEX 2012	2013	2014	2015	2016	2017	2018
OPEX pr. Vessel	8,359	9,153	9,564	9,804	10,049	10,300	10,557
Number of vessels		8	8	8	8	8	8
OPEX, fleet		73,220	76,515	78,428	80,389	82,399	84,459

PSV	OPEX 2012	2013	2014	2015	2016	2017	2018
OPEX pr. Vessel	4,344	4,669	4,879	5,001	5,126	5,255	5,386
Number of vessels		11	13	14	14	14	14
OPEX, fleet		52,529	62,212	70,019	71,770	73,564	75,403

Subsea <250, LOA <120	OPEX 2012	2013	2014	2015	2016	2017	2018
OPEX pr. Vessel	8,794	9,454	10,163	10,417	10,677	10,944	11,218
Number of vessels		2	3	3	3	3	3
OPEX, fleet		18,908	27,948	31,251	32,032	32,833	33,654

Subsea >250, LOA >120	OPEX 2012	2013	2014	2015	2016	2017	2018
OPEX pr. Vessel	11,433	12,290	13,212	13,542	13,881	14,228	14,583
Number of vessels		1	3	4	4	4	4
OPEX, fleet		6,145	39,635	54,168	55,522	56,911	58,333

FCV/FSV	OPEX 2012	2013	2014	2015	2016	2017	2018
OPEX pr. Vessel	2,123	2,070	2,163	2,001	2,051	2,102	2,154
Number of vessels		9	6	4	4	4	4
OPEX, fleet		18,627	12,977	8,002	8,202	8,407	8,618

OSRV	OPEX 2012	2013	2014	2015	2016	2017	2018
OPEX pr. Vessel	6,368	6,846	7,154	7,333	7,516	7,704	7,897
Number of vessels		1	2	2	2	2	2
OPEX, fleet		3,423	14,308	14,665	15,032	15,408	15,793

Additional fleet Growth		2013	2014	2015	2016	2017	2018
Vessels, accumulated				1	2	3	4
Estimated annual OPEX				9,691	9,933	10,182	10,436
OPEX, New vessels				9,691	19,867	30,545	41,745

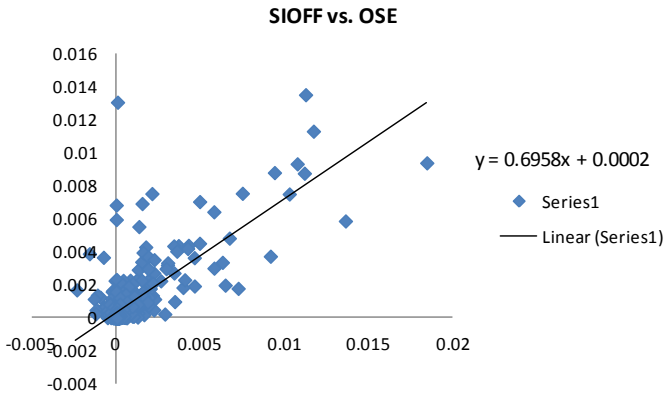
Total OPEX		**172,852,214**	**233,595,203**	**266,225,226**	**282,814,113**	**300,066,053**	**318,003,831**
EBITDA		**138,309,937**	**197,433,085**	**265,850,894**	**299,794,281**	**319,869,881**	**343,054,922**

7.0 Estimating cost of capital

Appendix 7.1 – beta values based on a five year and seven year period

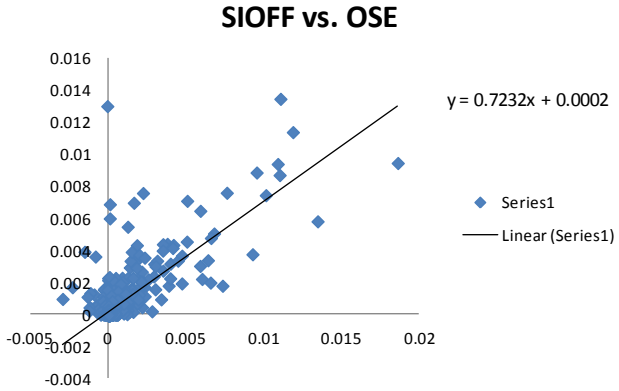
Source: Compiled by authors / Oslo Stock Exchange

In the following we have illustrated one scatter plot with SIOFF share and Oslo Stock Exchange return.



Beta values based on seven year regression:

Raw beta, past 7 year	Leveraged	Unleveraged
Beta OSE	0.72	0.44
Beta MSCI World	0.86	0.53
Beta MSCI Europe	0.65	0.40
Average		0.46
Source: Oslo Stock Exchange/Compiled by authors		



Appendix 7.2 – Beta from comparable companies

Source: Compiled by authors / Reuters Financial

Reuters raw beta	Leveraged beta	NIBD/Invested capital	Unleveraged beta
Havila Shipping	0.58	68%	0.21
Farstad Shipping	0.69	45%	0.41
DOF	0.65	71%	0.21
Solstad Offshore	0.82	17%	0.70
Average			0.38

Appendix 7.3 – Fundamental beta analysis

Source: Compiled by authors

Fundamental Beta analysis

Types of operating risk	Assessment of risk level	The firms ability to manage operating risk
External risk		**Not sufficient**
- Oil price and E&P spending	- High	Risk of fluctuating oil price
- Orderbook of new vessels	- High	High orderbook of PSVs
- Legislation/regulatory changes	- High	Regulatory preassure in Brazil and West Africa
Strategic risk		**Not sufficient**
- Rivalry among competitors	- High	Many competitors in the same market
- Suppliers power	- Medium	Tight labour market, limited yards for some segments
- Customers power	- Medium	Customers can choose between many owners
- Substitute products	- Low	No available substitutes
- Threat of entry	- Medium	High for PSV, medium for AHTS and Subsea
- Market Growth	- Medium	Weak market, but improvements expected
- Cost inflation	- High	OPEX expected to increase due to regulations
- Ability to adjust prices	- High	Price takers, can not influence prices
Operating risk		**Reasonable**
- Exploiting fleet facilities, utilization	- Medium	Weak utilization in 2013, expected to improve
- Quality of management	- Low	Good management, see internal analysis
- Choice of cost structure	- High	High degree of fixed costs
- Prodcut innovation	- Medium	Early adaptors of new technology
- Quality of fleet	- Low	Low average age, modern vessels, diversified fleet
- Newbuilding risk	- Medium	Low risk for Norwegian built vessels, medium for Brazil
Total assessment of operating risk: High		
Types of financial risk	**Assessment of risk level**	**The firms ability to manage financial risk**
- Financial leverage	- Low	Low gearing compared to the industry
- Access to financial markets	- Low	Good access to new debt facilities
Loan Characteristics		
- Variable interest rate	- Medium	
- Time to maturity	- Medium	
- Foreign currency	- Medium	
Total assessment of financial risk: Neutral		

Appendix 7.4 – Implied credit rating

Source: Compiled by authors / Plenborg & Petersen Financial Statement analysis / SIOFFs annual reports /

2007	AAA	AA	A	BBB	BB	B	CCC
EBIT-Interest coverage (x)							
EBITDA-Interest coverage (x)							
Total debt/capital %							
ROIC %							
Operating income/Revenue %							
Implied rating	A						

2008	AAA	AA	A	BBB	BB	B	CCC
EBIT-Interest coverage (x)							
EBITDA-Interest coverage (x)							
Total debt/capital %							
ROIC %							
Operating income/Revenue %							
Implied rating	A-						

2009	AAA	AA	A	BBB	BB	B	CCC
EBIT-Interest coverage (x)							
EBITDA-Interest coverage (x)							
Total debt/capital %							
ROIC %							
Operating income/Revenue %							
Implied rating	A						

2010	AAA	AA	A	BBB	BB	B	CCC
EBIT-Interest coverage (x)							
EBITDA-Interest coverage (x)							
Total debt/capital %							
ROIC %							
Operating income/Revenue %							
Implied rating	BBB						

2011	AAA	AA	A	BBB	BB	B	CCC
EBIT-Interest coverage (x)							
EBITDA-Interest coverage (x)							
Total debt/capital %							
ROIC %							
Operating income/Revenue %							
Implied rating	BB-						

2012	AAA	AA	A	BBB	BB	B	CCC
EBIT-Interest coverage (x)							
EBITDA-Interest coverage (x)							
Total debt/capital %							
ROIC %							
Operating income/Revenue %							
Implied rating	B						

8.0 Valuation

Appendix 8.1 – Valuation: Equity forecast, CAPEX and complete cash flow statement

Source: Compiled by authors

Equity forecast	2013E	2014E	2015E	2016E	2017E	2018E	Terminal
Equity primo	786,511	756,539	879,659	873,784	866,885	860,550	855,516
Concern Result	(864)	25,003	62,008	89,897	106,603	125,659	128,800
Dividends	(29,108)	98,117	(67,883)	(96,796)	(112,938)	(130,692)	(107,412)
Equity Ultimo	756,539	879,659	873,784	866,885	860,550	855,516	876,904
NIBD	924,659	1,075,139	1,067,958	1,059,526	1,051,783	1,045,631	1,071,772
Invested Capital ultimo	**1,681,199**	**1,954,798**	**1,941,742**	**1,926,411**	**1,912,333**	**1,901,147**	**1,948,676**

CAPEX	2013E	2014E	2015E	2016E	2017E	2018E	Terminal
Intangible and tangible assets end of period	1,660,637	1,927,659	1,908,359	1,889,845	1,873,413	1,859,632	1,906,123
Depreciation	65,599	75,482	88,010	87,031	86,122	85,321	87,454
Intangible and tangible assets beginning of period	1,453,978	1,660,637	1,927,659	1,908,359	1,889,845	1,873,413	1,859,632
CAPEX	**272,258**	**342,504**	**68,710**	**68,517**	**69,690**	**71,540**	**133,945**

Cash flow statement	2013E	2014E	2015E	2016E	2017E	2018E	Terminal
Nopat	40,816	82,366	128,879	156,645	173,074	191,917	196,715
Depreciation	65,599	75,482	88,010	87,031	86,122	85,321	87,454
Change in NWC	-11,751	-12,982	-11,519	-5,873	-4,344	-4,787	-1,915
Change in non current liabilities	-4,172	6,404	5,275	2,690	1,990	2,193	877
CAPEX	-272,258	-342,504	-68,710	-68,517	-69,690	-71,540	-133,945
FCFF	**-181,767**	**-191,234**	**141,936**	**171,976**	**187,151**	**203,103**	**149,186**
Change in NIBD	252,554	150,480	-7,181	-8,432	-7,743	-6,152	26,141
Net financial expenses after tax	-39,825	-54,790	-63,706	-63,281	-62,781	-62,322	-63,880
Attributable to Minority interests	1,855	2,573	3,165	3,467	3,690	3,936	4,034
FCFE	**29,108**	**-98,117**	**67,883**	**96,796**	**112,938**	**130,692**	**107,412**
Dividends	-29,108	98,117	-67,883	-96,796	-112,938	-130,692	-107,412
Cash surplus	0	0	0	0	0	0	0

Appendix 8.2 – Multiples comparison with Bloomberg

Source: Compiled by Authors / Bloomberg

	2013				2014			
	EV/EBITDA	EV/EBIT	EV/Sales	P/B	EV/EBITDA	EV/EBIT	EV/Sales	P/B
Bloomberg	8.7	12.8	3.1	0.63	5.8	10.6	2.2	0.58
Our estimate	10.4	24.7	3.6	0.66	6.8	12.2	2.6	0.57
Difference	1.67	11.89	0.51	0.03	1.09	1.59	0.44	(0.01)

9.0 Sensitivity Analysis

Appendix 9.1 – Sensitivity analysis

Source: Compiled by authors

The following sensitivity tables represent the input data used to construct graphs shown in the thesis. The bold figures correspond to the value applied in the DCF and EVA model, and the estimated shareprice is listed in the middle of the table.

Growth in terminal period vs. WACC

	WACC							
Growth in terminal period	**7.6079**	8.6%	9.1%	9.6%	**10.1%**	10.6%	11.1%	11.6%
	1.0%	8.3	6.8	5.5	4.3	3.3	2.3	1.4
	1.5%	9.8	8.1	6.6	5.3	4.1	3.1	2.1
	2.0%	11.5	9.6	7.9	6.4	5.1	3.9	2.9
	2.5%	13.5	11.2	9.3	**7.6**	6.1	4.8	3.7
	3.0%	15.8	13.2	10.9	9.0	7.4	5.9	4.6
	3.5%	18.6	15.5	12.9	10.7	8.8	7.1	5.7
	4.0%	22.1	18.3	15.2	12.6	10.4	8.5	6.9

Change in risk free rate and unleveraged beta

	Unleveraged adjusted Beta value							
Chane in risk free rate		0.56	0.66	0.76	**0.86**	0.96	1.06	1.16
	0.6%	23.0	18.9	15.7	12.9	10.7	8.7	7.0
	1.1%	19.4	16.0	13.3	10.9	8.9	7.2	5.7
	1.6%	16.4	13.6	11.2	9.2	7.4	5.9	4.6
	2.1%	13.9	11.5	9.4	**7.6**	6.1	4.7	3.5
	2.6%	11.7	9.6	7.8	6.2	4.9	3.7	2.6
	3.1%	9.9	8.0	6.4	5.0	3.8	2.7	1.7
	3.6%	8.2	6.6	5.2	3.9	2.8	1.8	1.0

Change in revenue growth 2014 and 2015

Growth in Revenues 2015	Growth in Revenues 2014							
		23.7%	28.7%	33.7%	**38.7%**	43.7%	48.7%	53.7%
	8.0%	-0.6	0.7	1.9	3.1	4.3	5.6	6.8
	13.0%	0.8	2.0	3.3	4.6	5.9	7.2	8.5
	18.0%	2.1	3.4	4.8	6.1	7.4	8.8	10.1
	23.0%	3.4	4.8	6.2	**7.6**	9.0	10.4	11.8
	28.0%	4.8	6.2	7.7	9.1	10.6	12.0	13.4
	33.0%	6.1	7.6	9.1	10.6	12.1	13.6	15.1
	38.0%	7.5	9.0	10.6	12.1	13.7	15.2	16.8

Change in long term OPEX vs. WACC

Level of long-term OPEX	WACC							
		8.6%	9.1%	9.6%	**10.1%**	10.6%	11.1%	11.6%
	45.1%	16.0	13.5	11.3	9.5	7.9	6.5	5.2
	46.1%	15.1	12.7	10.6	8.9	7.3	6.0	4.8
	47.1%	14.3	11.9	10.0	8.2	6.7	5.4	4.3
	48.1%	13.4	11.2	9.3	**7.6**	6.2	4.9	3.8
	49.1%	12.6	10.4	8.6	7.0	5.6	4.4	3.3
	50.1%	11.7	9.7	7.9	6.3	5.0	3.8	2.8
	51.1%	10.9	8.9	7.2	5.7	4.4	3.3	2.3

Appendix 9.2 – Target price consensus

Source: Compiled by authors / investment banks.

NOK	Target price	SOC	WIS
Arctic Securities	13.00	1.15	1
SEB Enskilda	9.5	N/A	N/A
Fondsfinans	12.5	3.15	0.8
Pareto Securities	12	N/A	N/A
Average	11.75	2.15	0.90
Our estimate	7.6	1.15	0
Source: Compiled by authors / investment banks			

10.0 – Summary of interviews with industry professionals

Appendix 10.1 Øyvind Hagen – Analyst at ABG Sundal Collier (Norwegian Investment Bank)

Phone interview, 23rd of April 2013

"First of all, there are difference in dayrates depending on whether the vessel is on Spot or Term contract. For vessels on term contract, contract length etc. affects the rate, but the final contract is determined based on the current and future market outlook. As North Sea is the only well functioning spot market, rates in other areas are affected by development in these rates. The most important thing is that rates vary between regions depending on OPEX. Therefore the margin is similar/equal across region markets. People in the business tend to underestimate how mobile the vessels are, and vessel owners allocate their vessels constantly depending on the profit outlook. The most "secure" market is the North Sea. As of OPEX, close to 70% is a result of labour costs. Over the last years OPEX inflation in Brazil has been as high as 7-10 % yearly, in the North Sea ~3% and West Africa ~5%. This is a result of the tight labour market, which is expected to continue going forward. OPEX will therefore increase by 3-7 % depending on the area of operation."

"For the high-end vessels, the OPEX level is generally higher, as everything is larger and they require more crew. Maybe the general level is 20-30% higher. The ROCE is also higher for these vessels."

"When it comes to WACC, it is where simple here at the sell side. We apply a WACC for the OSV industry of 10% flat. I believe that if you ask other investment banks, they will provide you with a similar estimate, generally between 10-11 %."

"For the subsea segment there are very little data available for dayrates as the vessels are heterogeneous. Going forward I believe a moderate growth of 5-10% sounds reasonable. To find the dayrates for SIOFFs Subsea vessels I would have calculated the IRR. This kind of investment should provide an IRR of 10-12 %, which will give a reasonable dayrate assumption."

"For SIEM WIS the stock market is probably not pricing the value as very high. Currently P/B is below 1 and the industry has been struggling to create returns. None of the petroleum companies have shown any significant interest in WIS, and the company has not managed to create and develop the technology. Now SIOFF is in the process of a potential sale, but as everything is so uncertain I would advise you to set the value to 0."

"In general, SIOFF is considered as a solid company with good management and high class vessels"

Appendix 10.2 - Terje Thorsen, VP Project Control Estimating, Statoil
Phone interview, 14th of February 2013

"As the water depths increase, petroleum production becomes increasingly complex. Fixed platforms sitting on the seabed have been used worldwide for water depths down to 300 meters. At greater water depths, or where floating production units are preferred, new subsea technology has been developed to extract the hydrocarbons. The subsea production systems are installed at the seabed. Through SURF systems (Subsea, Umbilical, Riser and Flowline) hydrocarbons is extracted and transported to the ocean surface, where a floating processing facility handle the fluids before exporting through a pipeline or a transportation vessel. Installation of the subsea systems is a complex task which requires assistance from some of the largest OSCVs available. Smaller mid-sized construction vessels are used frequently. Equipment transportation to and from the construction sites also require assistance from PSVs. Oil and gas discoveries in regions far from shore have increased the demand for PSVs. As the case for more shallow water production, both exploration and production wells must be drilled, which require large UDW rigs. This will require assistance from AHTS vessels for mooring and anchoring."

"Avoiding production disruption and also disruption of exploration is very important, as the cost of only small delays can amount to tens of millions of dollars. In terms of OSVs, the cost difference between high-end and low-end vessels is therefore not necessarily the key aspect. Sometimes petroleum companies choose a larger vessel than they actually "need" because this provides flexibility. Petroleum companies have different specifications, and their choice of vessels and vessel operators are also based on the OSV company´s track record for HSEQ, on time delivery, quality of operations and the strength of the organization."

"When it comes to the future oil supply growth, this is assumed to be influenced by the demand coming from China, India and Asia in general, as well as how fast US may be self contained with oil and gas from the increased exploration of shale oil/gas. Price development is likely to be influenced heavily by the US and China demand for import of oil. However, all oil and gas operators continue to be very active in international exploration activities in order to discover new oil and gas reserves to increase or maintain their future production volumes, a factor important for valuation of these companies. Areas with large focus are east and West Africa, Brazil, Australia and the new Arctic regions. Oil and Gas Companies are always looking for new regions where it is possible to develop new economically viable projects at lowest production costs. E.g. the reduced gas prices in US have resulted in a scale down of shale gas development in US, waiting on higher prices. In NCS the increased focus on IOR (increased oil recovery) from existing fields have resulted in several new small discoveries, resulting in many new subsea projects with tie-back to existing production facilities. The activity level in the oil and gas industry is assumed to continue, but will be influenced by changes in the oil and gas prices. "

"When we are drilling for petroleum, seismic surveys do not distinguish between oil and gas, and very often both of these hydrocarbons are found in the same reservoirs. In Europe the gas price have a high correlation with the oil price. In the exploration face, the oil price is therefore the most important factor affecting investment decisions."

Appendix 10.3 - Simen Granerød, Clarksons Offshore, London,

Phone Interview, 13th of February 2013.

"Currently there are none contracts within the conventional shipping segment and the shipyards need to employ themselves. As a result, we see that multiple yards are speculating towards the OSV market. This is applicable especially within the low-end segment, where Asian yards are building on speculation. Chinese yards are the main contributor to this trend. We forecast that conventional shipowners will start to build new vessels within the next 2-3 years. At this time there might be limited yards available, which might put a pressure on newbuild prices. The conventional shipping market is bleeding, especially in the North Sea.

At the moment, it doesn't matter if you have an AHTS at 35.000 bhp or 15.000 bhp, you will achieve the same dayrates. The same is applicable for PSV; if you have a PSV worth USD 20m or 60m, you will get the same dayrates. The gap between expectations from sell side and willingness from buy side is too big at the moment, resulting in few deals concluded in the second hand market. Due to the significantly high influx of new PSVs to the market, combined with high second hand values, we believe there will be a reduction in prices next year. Clarksons believe the second hand values are synthetic high.

Due to limited number of new orders within the conventional shipping at the moment, we do not believe that we will reach maximum capacity at yards until 2-3 years. So the threat of Asian yards still speculating is certainly present. When it comes to building high-end vessels, Norwegian and Western yards have a market leading position. These yards build the majority of these vessels. The average construction time for these vessels is between 1-3 years, depending on capacity and specifications. Overall, you can say that shipyards have a lot of influence when it comes to supply side of vessels.