

Strategic Analysis & Fundamental Valuation of Solstad Offshore ASA



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Abstract

This master thesis, in the field of financial economics, is written with the purpose of valuing Solstad Offshore ASA's equity at 31.12.2012. Solstad's price per share at 31.12.2012 was NOK 100. The reason why we estimate from this date is due to the late annual report for 2013. Two valuing methods are applied – fundamental valuation and comparable valuation.

The comprehensive thesis can be divided into five sections:

- Strategic Analysis
- Financial Statements Analysis
- Future Estimated Financial Statements & Cost of Capital
- Fundamental Valuation
- Summary and Recommendation

In the strategic analysis internal and external analyses are conducted. VRIO is applied for the internal analysis, Porter's Five Forces, and PESTEL. In the financial statement analysis, the purpose is to reformulate balance sheets and normalize income statements.

The next step is to estimate future financial statements and cost of capital. There are many key variables that have been predicted. These predictions are based on the strategic analysis and the reformulated financial statements. Future cost of capital is estimated to discount future cash flows.

The spread between the fundamental value and the comparable value was quite large. The fundamental price per share was estimated to be NOK 162 and the comparable price was estimated to be NOK 118. This represents an increase from Solstad's price per share per 31.12.2012 of 62 % and 18 % respectively. The comparable valuation supports our view of undervaluation, however, it is not as positive as the estimated fundamental value. We recommend buying the stock up to the going rate of NOK 145.8.

Preface

The Master thesis is written as a final towards our graduate in applied finance at the UiS Business School. The main goal for this thesis is to value Solstad Offshore by conducting a strategic analysis and using the findings to apply this to the fundamental valuation of their equity.

We decided to choose this particular company because of their position in the offshore supply market in Norway, and there has been very few valuations of Solstad Offshore ASA in the past decade. Valuing this company will give a better understanding over how Solstad Offshore operates and the offshore supply industry in general.

The past spring working with the thesis has been very comprehensive, but also very educational to us. By using the theory in practice, the understanding of various subjects has improved significantly. Especially since none of us have had a valuation course before, we had to start from scratch.

We would also like to give a big thank you to our guidance counselors Lorán Chollete, and Bernt Arne Ødegaard for the good advices and feedbacks throughout the process. Further on, also a big thanks to Kjell Henry Knivsflå for letting us use his lectures and presentations from his course at NHH (BUS 440) to better understanding the concepts of valuation. And last but not least, our friends and family with all their help and support through hard times working with our master thesis.

Stavanger, June 16. 2014

Liv Karina Døsen

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Abbreviations

AHTS – Anchor Handling Tug Supply vessel	NOK – Norwegian Krone
AOR – Abnormal Operating Result	NAA – Norwegian Accounting Act
aotr – Abnormal Operating Tax Rate	nom – Net Operating Margin (%)
β_e – Beta to Equity	NOR – Net Operating Result
β_{noa} – Beta to Net Operating Assets	notr – Normalized Operating Tax Rate (%)
CAPM – Capital Asset Pricing Model	NT – Normal Taxes
CSV – Construction Supply Vessel	NPV – Net Present Value
EQ – Equity	NRE – Net Result to Equity
VEQ – Value of Equity	OI – Operating Income
FA – Financial Assets	OINOA – Operating Income to Net Operating Assets
far – Financial Asset Rate (%)	OSE – Oslo Stock Exchange
FCF – Free Cash Flow	OSEBX – Oslo Stock Exchange Benchmark Index
FCFE – Free Cash Flow to Equity	OSV – Offshore Supply Vessels
fer – Financial Cost Rate (%)	OT – Operating Tax Cost
FC – Financial Cost	otr – Operating Tax Rate (%)
FI – Financial Income	PESTEL – Political Economic Social Technological Environment Legal
FL – Financial Liabilities	PSV – Platform Supply Vessel
Flr – Financial Liability Rate	RNOA – Return on Net Operating Assets
FR – Financial Result	SPE – Super-profit to Equity
FV – Fundamental Value	VRIO – Valuable Rare Imitable Organization
IASB - International Accounting Standards Board	WACC – Weighted Average Cost of Capital
IFRS - International Financial Reporting Standards	
IG – Income Growth	
k_E – Cost of Equity (%)	
MP – Market Premium	
NOA – Net Operating Assets	

1 Introduction

1.1 Research Problem

For our thesis we decided to choose the following research problem:

“What is Solstad Offshore ASA real value of equity based upon their share price from 31.12.2012?”

We have decided to value the equity of the whole group. Solstad Offshore ASA is the whole group that consists of many subsidiaries. Solstad discloses their annual reports with a focus for the whole group’s performance. Therefore, we will not scrutinize each subsidiary’s value, but look at the group’s composite figures.

1.2 Thesis Structure

Our main focus on this thesis is to conduct a fundamental valuation, which means we have to immerse ourselves in strategic- and financial analyses, which we find interesting and motivating. Since fundamental valuation is based on both external and subjective opinions, we want to apply a supplement to the fundamental valuation using comparative valuation. The comparative valuation can give indications on whether our estimations are reasonable or not.

Chapters 1-4 is introduction chapters which introduce the reader to the company, Solstad Offshore ASA, the offshore supply industry and the valuation methods we will use in throughout the thesis.

Chapters 5-9 are chapters that focus on various analyses such as strategic-, financial-, credit risk-analyses, as well as forecasted important variables for the valuation.

Chapters 10-13 are the valuation part of the thesis, which comprises of fundamental valuation, sensitivity analysis, comparative valuation and finally a conclusion.

Appendix is found in chapter 14.

Solstad Offshore ASA

The Company Philosophy

“Our vision is to conduct profitable, integrated shipping operations with high specification vessels - our own vessels and chartered vessels. The company's core business shall be petroleum-related operations.”

(Solstad's Annual Report 2007)

2 Presentation of the Company

Solstad Offshore ASA, hereafter called Solstad, is an offshore shipping company having a 100 % focus towards the offshore petroleum industry, and solely operates in the offshore supply vessel market. The market includes all of the necessary supporting activities for the offshore petroleum industry. Such operations include transportation of crew, supplies, equipment, and towing and anchoring of oilrigs. Per 31.12.2012, Solstad's fleet consists of 48 vessels, and they expect to finish constructing of two new vessels in 2014 and another in 2016. Their main headquarter is located in Skudeneshavn. They also have additional offices are in Aberdeen (Scotland), Rio de Janeiro and Macae (Brazil), Singapore, and in Perth (Australia). In total they have approximately 1800 people employed under the Solstad Group.

2.1 History

Johannes Solstad, from Skudeneshavn, founded Solstad Rederi AS in 1964. During the first 10 years, the fleet consisted of 11 dry-cargo vessels (liner type). When they had the potential to expand they ordered three new vessels (semi-container). From 1974 through 1982 the fleet was based with both dry-cargo vessels and offshore vessels. The trend, however, was moving more towards the OSV market, and out of the dry-cargo market. Solstad sold their last dry-cargo vessel in 1982, which was their turning point into the OSV-market. From this moment, Solstad continued as an offshore supply operator, and by 2007 Solstad had a fleet consisting of 43 vessels.

In 1997, Solstad was listed on the Oslo Stock Exchange (OSE), under the ticker SOFF with the starting price of NOK 47 per share. After the listing into the OSE Solstad has experienced growth yearly, which can be contributed by the international expansion, fleet-size, and vessel-size. New reserve findings in different continents and the declining demand in the North Sea forced Solstad to expand into other oilfields to be able to continue to grow in the

same rate as its competitors. Vessels are also getting more efficient by introducing larger vessels that are able to transport more goods on each trip.

2.2 Business Areas

Solstad's fleet consists of three types of vessels. The three types cover three different segments in the market, which are:

- Construction Service Vessels (CSV)
- Anchor Handling Tug Supply vessels (AHTS)
- Platform Supply Vessels (PSV)

Solstad's fleet consists of 18 CSVs, 21 AHTSs, and 9 PSVs. Additionally they are expecting 3 new vessels to be delivered by (2) 2014 and (1) 2016.

2.2.1 Construction Service Vessels

CSVs are the largest and most advanced types of vessels. Their objectives are to help in the subsea installations and constructions. Subsea activities are split into two different ways to develop oil fields, shallow and deep-water. This separation is to easily characterize the difference between the different facilities and approaches that are needed during an operation.

2.2.2 Anchor Handling Tug Supply Vessel

AHTSs are vessels that; supply oilrigs with required equipment, tow rigs to new locations, and anchoring the platforms. There are many similarities between AHTSs and PSVs, but AHTSs are bigger and better equipped to perform more operations. Each vessel is equipped with winches for towing and anchoring operations, and have special designed attributes so they are well equipped to conduct these operations.

2.2.3 Platform Supply Vessel

PSVs are designed to supply offshore oilrigs. They are the most basic types of vessels, and are generally 20 to 100 meters long. PSVs transport mainly personnel and cargo, like drinking water, chemicals, fuel out to the oilrigs, or other offshore constructions. On trips back to mainland, the vessels bring back personnel and cargo. These cargos are primarily filled with mud, chemicals, fuel, and powdered cement from the drilling processes. When arriving to the mainland all of it is recycled or disposed. (Asbjørnslett, 2008)

In the North Sea, the company's goal is to be one of the leading OSV-companies. Internationally, the goal is to be a major leader in the deep-water segment and subsea activities. For 2012 the net freight earnings from each segment were respectively: 49 % from CSVs, 38 % from AHTSs and 13 % from PSVs. Nearly 39 % of the total earnings came from North Sea operations, 23 % from South America, 1 % from West Africa, 8 % from the US Gulf, 7 % from the Mediterranean, and 22 % from Asia. The earnings have mainly been at the same level the past years, but because of their new focus we believe that the trend will have a slight change out from the North Sea and become more international, especially in Brazil. ((Solstad Offshore ASA, 2007-2012) 2012)

2.3 Investor Relations

Solstad Offshore ASA is listed on OSE and must abide by all of the laws that are listed for each company to follow. At the end of 2012 there was 38,662,733 outstanding shares. The price per share in the market was NOK100, and it makes the market capitalization of the company equal to NOK3.866 billion. The top 20 owners account for practically 80 % of the shares, which is a very large amount, and all investors with more than 1% holdings of shares in the company are listed in the appendix. The biggest shareholder is Solstad Holding AS, they hold 35.95 % and the Solstad family owns this holding company. Solstad is an illiquid stock to trade and investors who own shares has a long-term perspective in their investments in Solstad Offshore ASA.



Figure 1: Share price, period 01.07 – 05.14 (source: netfonds.no, SOFF)

The chart displays the historical stock price development from 01.01.2007 until today (12.05.2014), and index are adjusted for equity transactions. Since the financial crisis, we can see that the stock price has moved up and down in a long-term trading range. The typical cyclical movements in the market can explain some of these movements. More information about the cyclical movement will be presented in the strategic analysis.

Solstad aims to attract investors by the prospects of increased share prices, as well as dividend payouts. One of Solstad's goals is to pay out 20 % of earnings after taxes, adjusted for any currency changes in non-controlling interests. This goal, however, always needs to be evaluated according to prognoses for future earnings, financing questions and performing the previous year. (Solstad Offshore ASA, 2007-2012) 2012)

2.4 Company Structure

Solstad Offshore ASA is the name of the whole Solstad group. The group consists of fifteen wholly or jointly owned subsidiaries. Some of these are divided into new subsidiaries. The whole group is going to be our focus when valuing the company. It's easier to gather information about the group than some specific subsidiary. The company structure is added in the appendix as a graphical illustration, which will highlight the structure more detailed.

3 Offshore Supply Industry

The offshore supply industry is a relatively new industry compared to other segments in the shipping industry. It started out in the mid 1950s in the Gulf of Mexico due to findings of black gold, or better known as oil.

The offshore oil industry is a very large industry that is spread worldwide. All oil companies need logistics to be conducted between land and the offshore platforms, and this is the service the supply vessels can offer. Oil companies usually do not own these vessels but charter them through contracts with OSV companies. Factors such as demand/supply balance in the market, type of vessel, length of charter and the location of the vessel are influencing the rates oil companies need to pay when chartering vessels. In addition to chartering costs they usually pay for a part of the fuel, bunkers oil, and harbor dues. (Aas, Halskau Sr, & Wallace, 2009)

3.1 OSV Industry in Norway

For Norway, the offshore supply industry has grown to be an extremely important export industry. According to a report from Menon Business Economics, Norway's total revenue from abroad is NOK 170 billion. If we exclude oil and gas from the total revenue the offshore supply industry is the most important industry in Norway. Its profits even outweigh fisheries and fish farms. (Wikborg & Rein, 2013)

In general, the Norwegian offshore industry has the second biggest and most advanced fleet of vessels in the world. However, for the whole Norwegian offshore industry, an increasing part of the revenues comes from operations in other parts of the world. This indicates that the offshore supply industry has become much more globalized, and this can be seen in Solstad's revenues. Approximately, as mentioned earlier, more than 60 % of Solstad's earnings come from operations conducted in international waters. This trend will continue in the future, and in Brazil one quarter of Norwegian shipping companies control all the OSVs.

3.2 Norwegian Competitors

As one of the leading offshore supply nations in the world, the quality of Norwegian offshore supply companies is high. There are several Norwegian companies also listed on the OSE that are Solstad's immediate competitors. Some of the bigger companies listed are; Farstad ASA, DOF ASA, Siem Offshore ASA, Eidesvik Offshore ASA, and Havila Shipping ASA. Solstad and Farstad are the oldest companies among the Norwegian companies, and have

approximately 50 years of experience in operations. The youngest are Siem and Havila, both were founded after the new millennium. However, almost all of the OSV companies has been or still is working in other shipping industries as well. This makes those companies advantageous to others that have not yet began diversify their market sectors.

3.3 Key Drivers and Trends in the Industry

High oil prices along with several large discoveries are the main reason for growth in the petroleum and offshore supply industry. In general, the offshore shipping industry is characterized of being volatile and highly cyclical. The continuously higher oil prices make it much more profitable for the oil companies, which again will stimulate demand for offshore services like vessels, equipment and people. This is something Solstad can supply, and the trend in the petroleum industry is going more towards operations conducted in deep-water areas. This leads to an increase in the demand for CSVs, since they are specializing in deep-water areas.

Profitability in the OSV industry follows fleet-utilization closely. A high utilization-rate in the market indicates that the vessels are in activity that reduces the supply of vessels in the market. Reduced supply is good for shipping rates, and by using daily rates or long-term contracts vessels can be hired easily. The long-term contracts take away the risks for supply companies regarding falling rates. On the other hand, the safety net takes away the upside for even better rates that may come.

The tendency is that whenever utilization rates are good the OSV companies start to order new vessels to increase their earnings in the blooming market. This will later backfire when a lot of new vessels are completed which leads to excess supply of vessels. The rates will then plummet. (Taylor, Systemdynamics)

Another tendency in the market is increased demand for younger vessels. Customers expect high quality-services and prefer the newest up to date technology in the industry. The shift into deep- water is one of the main reasons for the increased demand for new vessels. The vessels design changes when conducting operations in deep-water because it requires different technology and equipment than earlier performed operations. This leads for the need to update vessels and switching out for new and better in development of deep-water. Consequently, the oil companies clearly prefer the newest vessels when operating in deep-

waters. A combination of increased scrapping of old vessels and orders for new vessels will reduce the average fleet age in the coming years. (Carlson Capital Market, 2012)

4 Valuation Methods

The purpose of our master thesis is to estimate Solstad's true equity per share. Based on the estimated result, there will be a buy, hold or sell recommendation. There are several valuation methods to use. In this chapter we will present some valuation methods and argument for why they are chosen. According to Penman the three most common methods are: fundamental valuation, comparative valuation, and option-based valuation. These are currently the most common used methods when evaluating companies. It is important to highlight that choosing one of these do not exclude the others. They are viewed as supplements to each other. That is, if a result in one is supported by a result in another, then this is believed to strengthen the quality of the overall valuation. (Penman, 2013)

4.1 Fundamental Valuation

The fundamental valuation is the method we think is the most important and will be our main focus throughout the thesis. Fundamental valuation is a very comprehensive and time-consuming task, but the quality is believed to be better than the comparative valuation and the option based valuation. This valuation method is based on Solstad's strengths, weaknesses, and market prospects. The value is derived from its intrinsic value. Whereas the comparative valuation value Solstad based on comparable market figures. Comparative valuation and option-based valuation do not consider Solstad's intrinsic value. Therefore, the fundamental valuation is believed to be of higher quality.

For companies that operate in mature industries, with many years of disclosed financial statements, fundamental valuation is a good candidate to be the main method to use. There are five steps that need to be conducted in a fundamental valuation. These steps are:

- Strategic Analysis
- Financial Statements Analysis
- Future Estimated Financial Statements & Cost of Capital
- Fundamental Valuation
- Summary and Recommendation

(Knivsflå K. H., 2014)

One of the main factors that affect the choice of valuation method is access to available data. For companies that operate in mature industries, with many years of disclosed financial statements, fundamental valuation is a good choice of method. Ever since Solstad was listed on OSE, they have had to disclose their financial statements. Solstad have operated in many

years and can be considered as a mature company, even though the company is believed to expand in the coming years. Thus, there are a lot of historical data easily available.

From the fundamental valuation, there are two methods that can be chosen – “*Equity-*” or “*Total Capital Method*”. We have decided to use the equity method. Equity method is a way to value just the equity of the company directly. Equity method is a good fit for companies that have stable leverage and if the equity (stock) is being valued. Solstad can show a relatively stable leverage ratio.

Total Capital Method is a valuation of the entire business and values the equity “indirectly”. If the estimations are calculated correctly and the various variables are used consistently, the two methods should yield the same values. So the choice between the two methods is not that much important. Knivsflå, however, argues that the focus to total capital is “old fashioned”.

Calculation of the equity value is conducted by discounting expected free cash flows to equity (FCFE) using the cost of equity. Since we have decided to use the Equity Method, we do not need to use the WACC when discounting the FCFs. By free cash flows, we mean the residual cash flows after all expenses, taxes and principal payments to the investors at the cost of equity are deducted from the cash flows. (Damodaran, 2002)

Under the Equity Method, there are four ways of calculating the value of equity. If all the needed variables are used correctly in the calculations, then all of the four methods should yield the same value. We have decided to estimate the equity value using the free cash flow to equity method (FCFE) and the Super-profit method.

FCFE Method

We assume that all the free cash flow to equity is paid out as dividends. This makes the FCFE method very similar to another equity method called the dividend method. (Knivsflå K. H., 2014)

SP Method

The value of the equity today is added to the NPV of all future Net Results to Equity (NRE), using the cost of equity as discount rate. These two methods should, if calculated correctly, yield the same value of equity.

4.2 Comparative Valuation

As a supplement to the fundamental valuation we will use a comparative valuation. This method uses market comparable of similar companies and compares them to the company that is being valued. The more similar the companies are, the better the quality of the market comparable.

Comparative valuation solves the same problem as fundamental valuation, however, using different information. This valuation method is much less time-consuming than fundamental valuation. That is a good reason for conducting this valuation method as a supplement to the fundamental valuation. Another reason for choosing this method is because of easily accessible data. Comparative valuation enables investors to get a better grip on whether the fundamental value was reasonable or not.

Comparing Solstad to its market comparable will give a good indication of how Solstad is valued compared to its rivals. Another benefit from this method is that we can compare the whole OSV industry to the OSE to evaluate whether the OSV industry is undervalued, overvalued or to get a grip on how the market's outlook for the OSV industry is. The most common used comparable are price to earnings (P/E) and price to book value (P/B). (Knivsfå K. H., 2014)

There are also weaknesses with this method. This method enables an investor to choose the comparables that seems to be "closest" to the fundamental value and might neglect using the ones that do not support their analysis. It indicates that the chosen market comparable might have been biased and based on the value of the fundamental value. Another weakness is that the comparative price is highly affected by the state of the market. If the market is optimistic, the price might become higher than the fundamental price. If the market is pessimistic, the comparative value might become lower than the fundamental. (Knivsfå K. H., 2014)

4.3 Option Valuation

Option valuation is an approach where a company's flexibility is valued. Option valuation is often used as a supplement to the fundamental valuation. That is, fundamental value + the present value of real option opportunities. The options can be both operating (real options) and financial. Investors tend to estimate pretty high values when using fundamental valuation. Secondly weakness is that real option values are included in the fundamental values, through high growth-expectations. The values of options are usually estimated by

using Black-Scholes. Information regarding options for both Solstad's clients and for the company itself is not sufficient. There are no contingent option-like characteristics of cash-flows for Solstad. Therefore, option valuation will not be used in this thesis. (Knivsflå K. H., 2014)

5 Strategic Analysis

The purpose of this chapter is to provide a strategic analysis of both the firm and the industry where the firm operates. Strategic analysis is an essential part of the fundamental analysis and gives an important overview of the firm, the industry and the macro-environments. By doing the strategic analysis, we will be able to highlight important factors that might affect the company's future cash flows. These different segments of impact, or also called layers, are displayed in the graphic illustration below.

(Johnson, Whittington, & Scholes, 2011)

In the valuation part of the thesis, future key variables' development is predicted. Explanations for their developments should be argued for in the strategic analysis.

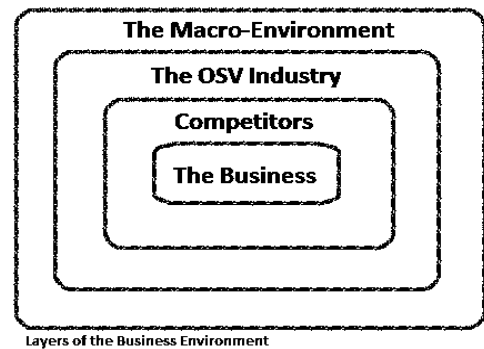


Figure 2 Layers of the Business Environment

5.1 Framework for strategic analysis

SWOT analysis will be applied and identify the firms strengths (S) and weaknesses (W) (internal factors) and opportunities (O) and threats (T) within the industry (external factors).

The SWOT model is illustrated below. ((Barney J. B., 1996)p. 22))

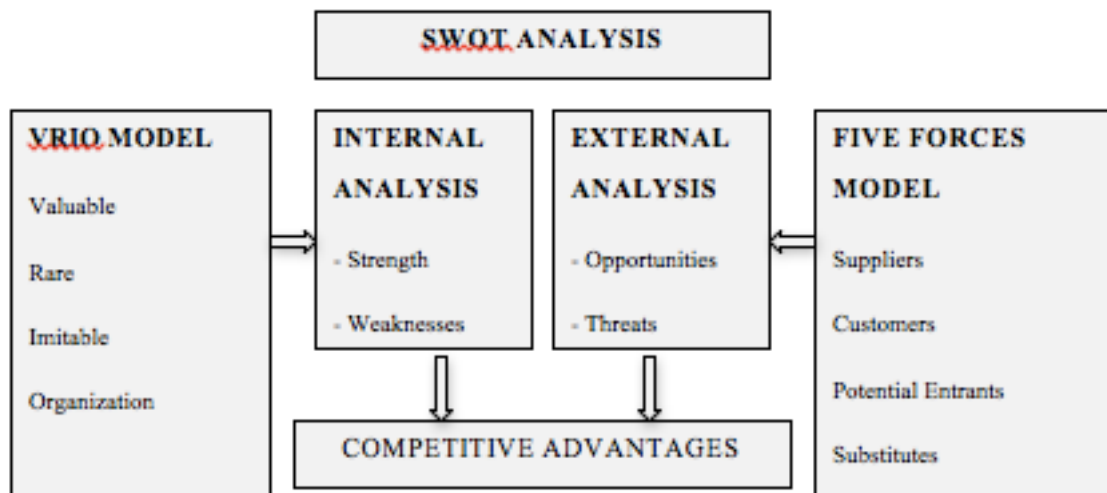


Figure 3: Overview of the Strategic Analysis

Internal analysis will be conducted using the VRIN/VRIO model. Illuminating if a resource is valuable, rare, imitable, and whether the company is organized in a way to best exploit the resource will do this.

External analysis of opportunities and threats will be conducted using Porter’s Five Forces and PESTEL. These analyses will give a much better overview of Solstad’s: potential competitors, potential intruders, customers, suppliers and substitutes, environmental issues, governmental issues, and legislations.

5.2 VRIO analysis – Internal analysis

The purpose of the VRIO analysis is to determine which resources a firm has at their disposal, and whether these resources are a strengths or weaknesses to their business. The resources may help to explain the current economic position. It can also tell how to improve the economic future by utilizing these resources optimally. VRIO’s framework separates resources by using these questions:

- **The Question of Value:** Do a firm’s resources and capabilities enable the firm to respond to environmental threats or opportunities?
- **The Question of Rarity:** Is a resource currently controlled by only a small number of competing firms?
- **The Question of Imitability:** Do firms without a resource face a cost disadvantage in obtaining or developing it?
- **The Question of Organization:** Are a firm’s other policies and procedures organized to support the exploitation of its valuable, rare, and costly-to-imitate resources? (Barney J. , 2006)

The VRIO Framework: IS a resource or capability...					
VALUABLE?	RARE?	IMITABLE?	ORGANIZATION?	COMPETITIVE IMPLICATIONS	PERFORMANCE
No	-	-	No	Competitive Disadvantages	Below Normal
Yes	No	-	-	Competitive Parity	Normal
Yes	Yes	No	-	Temporary Competitive	Above Normal
Yes	Yes	Yes	Yes	Sustained Competitive Advantage	Above Normal

Table 1: VRIO Framework

Above, the VIRO framework is displayed in the table. The competitive advantages increase according to how special the capability or resource is. VRIO Framework can be included to determine if a capability of resource is a strength or weakness.

5.2.1 Physical Capital

This section includes assets & technology and geographical localization that the company possesses, and we would therefore emphasize their fleet and geographical localization as the most important physical resources.

Fleet

Solstad's fleet is clearly their most precious resource and responsible for close to all of their earnings. Their fleet is the third largest among the Norwegian companies, and today they cover three segments of the market with their fleet consisting of 48 wholly or partially owned vessels. These vessels include: 18 Construction Service Vessels (CSV), 21 Anchor Handling Tug Supply Vessels (AHTS) and 9 Platform supply Vessels (PSV), and delivery of three new vessels as mentioned. Approximately 61 percent of their vessels are also used worldwide, while the rest are operative in the North Sea. (Solstad Offshore ASA, 2007-2012)

The trend in the market is that oil companies prefer the newest and most up to date vessels in the market, primarily due to more deep-water operations. Oil companies are looking for bigger, newer, and more equipped features to operate in these geographical segments. For oil companies, chartering of supply vessels is one of the most expensive up-stream costs. The newest vessels are more cost-efficient than the older ones. The costs of vessels increase rapidly after turning 20 years. This is a double-win for the oil companies – better technology and more cost-efficient models will help lower their costs.

The competition in the market is believed to drive the average fleet age to a minimum in the future. The average age on Solstad's vessels is 10.37 years, where the average for CSVs is 8.36, AHTSs 12.76 yrs and PSVs 8.77. The average Norwegian fleet age is 7.56 years, and Solstad holding the oldest fleet is a disadvantage compared to its immediate competitors in Norway. The Norwegian shipping industry in general is considered as one of the best in the world, in terms of quality of vessels, technology and innovations. So even though Solstad might have a disadvantage compared to other Norwegian companies when it comes to age, there is a big probability that they have a better fleet than average international OSV companies.

Solstad's vessels are not considered as rare and they are imitable. This is also the case for the whole industry. The OSV industry is characterized as being differentiated to a low degree and vessels can easily be imitated. However, imitation can be very time-consuming and

capital-intensive. Renewal of a fleet can take a couple years to complete and requires a lot of investments.

To cope with the disadvantage of having an old fleet, Solstad can imitate the best, new vessels in the market when they ordering new vessels.

Geographical localization

One of Solstad's strategies is to be able to provide their services all around the world. To follow up this strategy, Solstad has expanded geographically by starting up branch offices around the world. There are many potential benefits from geographical segmentation. The various offices are more knowledgeable about areas they operate in. The harbors they operate from are closer to the platforms that are consuming their services, which make their operations more efficient. By being spread around the world, Solstad is able to build up important long-term relationships with many international oil companies and/or Governments. They also acquire better knowledge about special laws in the various countries.

In the coming years, Solstad's most important areas will be in the deep waters of the North Sea and outside of Brazil. Skudeneshavn and Aberdeen are their offices in Europe, while Rio de Janeiro and Macae are their offices in Brazil. They also have offices in Singapore, Perth (Australia) and the Philippines. If there are great discoveries of oil in these areas in the future, Solstad is ready to supply their services. (Solstad Offshore ASA, 2009)

The geographical segmentation represents a valuable resource for Solstad. This strategy is common among big OSV companies, so this resource is not rare and it is possible for companies to imitate it. However, companies that are contemplating to spread their business around the world need a lot of capital and they need permission from the country's Government. So there are some obstacles representing this resource. Solstad is determined to compete in international markets and therefore has organized their business in a satisfying way with several international offices.

Technology

Solstad's vessels maintain a high standard and they always aim to have a high quality of technology. Even though their vessels are older than the other Norwegian companies, they keep their vessels updated with the newest technologies. Solstad also has a good connection

with Norwegian yards that has great reputation throughout the world for the quality and innovations they offer.

Every Offshore supply company can contact a Norwegian yard and get a high-quality vessel. This means that this strength is imitable and not rare. Even though Solstad has great technology they are not alone in the market to possess it. The other Norwegian companies can easily acquire the same technology.

- Solstad's physical capital is evaluated to be of competitive parity with its competitors.

5.2.2 Human Capital

Their most important human resources are the crew and the management. Therefore these two resources will be closely examined.

Crew

Solstad has been around for many years and possesses a lot of experience in the market. They know what is required to operate offshore and therefore also know what to look for when hiring their crewmembers. Solstad uses a lot of resources when recruiting new workforce, and have long-term strategies to ensure that the company receives basic and up to date maritime knowledge. Solstad is known for having great reputation for their working environment. That is one of the main reasons why they have many applicants who want to work for Solstad. As a result of this, they get the best and most ambitious workers through their recruitment program.

Solstad actually has the largest maritime training program in Norway with approximately 80 men in training positions, which include 50 apprentices. They also have close collaborations with maritime schools in the Haugaland-area. Anyone that completes his or her maritime education is secured an apprentice position in the company. (Solstad Offshore ASA, 2007-2012)

Solstad has more than 900 Norwegians in their work force. Norwegians are known for their expertise and have a good reputation around the world.

- Parity/Advantage

Administration

Through the years, the administration and management have gained experience on how to manage the company. This resource is clearly valuable, but not a unique skill in the industry. Solstad's management is skilled, but most firms in the OSV industry have skilled managements. Therefore, it is better to call this a competitive parity than an advantage.

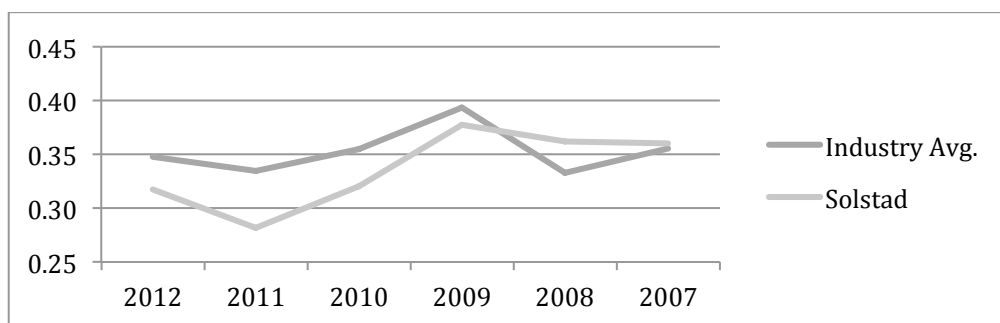
- Parity

We consider Solstad's crew and management as valuable resources. The crew conducts the offshore operations and the administration organizes every aspect of the company. Both the crew and the management are experienced and are highly qualified to fulfill the job. These resources are not very rare, but we consider the quality of the human capital to be limited and it will take a long time to imitate, i.e. train up the quality of the human capital for other companies. It goes without saying that the organization of this resource is of good quality, because the administration organizes the human capital well.

5.2.3 Financial Capital

For a company to be able to operate, they need to finance these operations. "Financial capital pertains to all monetary resources a firm may utilize to develop and initiate strategies, e.g. banks, equity holders, bond holders etc." (Barney J. , 2006) p. 134)

To evaluate Solstad's financial capital, we want to focus on the equity to assets ratio. This illustrates a company's solvency, which indicates how a company can survive losses in the future. In the figure below, we have displayed this ratio and compared Solstad to the industry average in Norway.



Figur 4: Equity to Asset Ratio

As illustrated Solstad's ratio moves closely to the industry average. We consider Solstad's ratio to be satisfying except for the last couple of years. Post 2009 the ratio gap could have been even closer to the industry average.

- Parity

Solstad's financial capital is considered to be valuable, imitable and not. Also after analyzing their financials, we have found areas that could be improved.

5.2.4 Organizational Capital

Organizational capital comprises of the administration. It explains the structure, culture, network and reputation within the business environment. Since Solstad was created it has been a family-dominated business where many members of the company have been active in the daily operations, and they are in possession of the company's specific know-how. Still, several of the family members that are active in the operations today have earlier been seafarers so they also have acquired the knowledge of how things operate on the vessels. This makes them in possession of general management expertise.

Most companies in any industry strive to have a good relationship with their business associates. This can be hard to build up since it is a constant pressure on delivering what the customers want and get their trust. Relationships like these can be a good spine when times get rough.

To evaluate whether or not Solstad has organized its business in an optimal way to exploit the fleet is difficult to answer. One can argue that this follows the cycles in the OSV industry. In great markets their big fleet has the potential to be fully utilized. In bad markets their big fleet can be a disadvantage. This is hard for the management to control and is impacted by external forces.

Companies in this size should and will have professional and well-developed administrative framework, and have good relations with all of their partners/customers in its business network similar to Solstad. This resource must be considered as very valuable, hard to imitate and rare for each company and in Solstad's case to be considered as a competitive advantage.

- Competitive advantage

Table 2 displays and summarizes the results of the VRIO analysis of Solstad

The VRIO Framework: Is a resource or capability...					
	VALUABLE?	RARE?	IMITABLE?	ORGANIZATION?	IMPLICATIONS
Physical Capital	X	NO	X (long-term)	X	Competitive Parity
Human Capital	X	NO	X (long-term)	X	Competitive Parity
Financial Capital	X	NO	X	No	Competitive Parity
Organization Capital	X	X	X	X	Sustained Competitive Advantage (Strength and Sustainable Distinctive Competence)

Table 2: VRIO, Framework for Solstad

5.3 Porters’ Five Forces – External Analysis

The internal analysis is conducted using the VRIO model. To achieve an external view over their position an external analysis using Porter’s Five Forces and PESTEL has also been completed. It’s important to include these models in order to highlight external information that has potential to affect Solstad’s future cash flows.

Porter’s five forces analysis is a framework for a business strategy and industry analysis developed by Michael E. Porter in 1979. It helps to illuminate five forces that can be defined as external threats of opportunities for the company in the industry, by identifying threats as new entrants, substitutes or opportunities as power of suppliers and power of buyer and the immediate competitive rivalry in the market.



Figure 5: Porter's Five Forces

Porter’s Five Forces aims to evaluate the attractiveness of the OSV market. An attractive market indicates that it has great profitability opportunities. High forces mean that the competition and threat of competition is high and the market loses attractiveness in terms of potential profitability.

High barriers of entry are good for Solstad and good for the OSV industry as a whole. If it was easy to enter this market, the competition would probably increase even further which would lead to higher supply of vessels in the market. This could potentially lead to a huge

drop in freight rates, and currently operating companies would lose money. (Johnson, Whittington, & Scholes, 2011)

5.3.1 Potential Entrants

Whether or not potential entrants are a threat depends on the barriers of entry in the OSV industry. Low barriers indicate that it is easy for companies to enter this market. The result of this would lead to a saturated market in which case there are too many competitors in the market and an over supply of vessels. In this scenario, profitability would plummet. To highlight these, following factors will be presented and evaluated for determining whether or not potential entrants are a threat or not: Capital, pressure on prices, experience and differentiation.

Capital

One essential factor in the OSV market is capital. The OSV market is highly capital-intensive and requires funding from both equity as well as external funding. The high capital requirements for the OSV industry may prevent any company that contemplates to enter the industry. (MAKAMERA)

Pressure on prices

The fact that the freight rates are so vulnerable to the supply of vessels in the market might be a barrier itself. This could prevent potential new companies to enter, which can make them realize that if they enter the market the prices would decrease and be less attractive for profitability.

Experience

In the OSV market experience is crucial. Experience is important because of all the equipment and technology, as well as just being able to handle the “life on the ocean”. Inexperienced people can result in more injuries on the personnel and reduced quality. Putting together a whole new experienced crew will be difficult and expensive. Therefore, the experience-factor functions as a barrier for new companies looking to enter. The already tough competition in the market will also function as a barrier of entry.

Differentiation

The OSV industry is not a typical differentiated industry but one can argue that different types of vessels are adjusted for different types of operations. For example, CSVs are supposed to operate in the subsea segment. Another way of differentiation is by offering better quality on the services. This is strongly connected to the experience-factor, and high quality of services and experience function can act as barriers against potential entrants.

- After having examined the most important barriers against entrants, the conclusion is that there is no significant reason to fear entries from potential competitors. The barriers are evaluated to be high in this market. To illustrate this, one can take a look on the history of the most similar companies to Solstad on the OSE. DOF and Farstad Shipping are two of the most similar companies to Solstad. Solstad was founded in 1964, Farstad was founded in 1956, and DOF was founded in the early 1980's. These companies have been in the game for a long time, and still are big players. This strengthens the notion of the high barriers in this market. (Solstad Offshore ASA, 2007-2012) (Farstad Shipping ASA, 2007-2012) (DOF Subsea AS, 2007-2012)

5.3.2 The Threat of Substitutes

Does the OSV market have reasons to fear substitutes? Substitutes are alternative product that can satisfy the same requirements of the buyer, and through this chapter we will take a look at potential substitutes.

Offshore Oil Production

The most effective way to transport required technology, construction equipment, food, and other crucial goods is to use supply vessels. Other transportation objects like airplanes or helicopters would not be a good alternative. Helicopters transport people more efficiently out to the rigs, but have been supplying this service for a long time. They are not as competitive because the amount of crew being transported is very low compared to vessels. There are not really any substitutes that can do the same jobs more efficient than the supply vessels.

Onshore Oil Production

Onshore oil plants clearly don't need OSV services. They use other distribution services than the offshore rigs.

Alternative Energy

Oil is a fossil fuel and a resource the world has benefited a lot from for decades. Oil is a non-renewal form of resource, which means that eventually the oil reservoirs will be emptied. There are many negative effects from using oil as energy, and the recent years, the focus on reducing pollution in the environment has increased a lot. The current trend for sustainability has opened the door for alternative energy sources. Alternative energy includes sectors like solar energy, wind power and hydropower. In the future, these energy industries will probably have an increasing amount of importance in the world. When considering the future

generations the world needs to start planning for other energy sources to use after the oil reservoirs are gone. The increased focus on a “greener world” with less pollution is also a factor that strengthens the idea that more alternative energy will be used in the future.

Alternative energy might be a threat to oil. If oil-prices increase substantially in the future, alternative energy will be even more attractive. This threat will most likely not be so important in the nearest future, but it’s definitely something to look out for in the longer term.

- The threat from substitutes is considered to be low in the nearest future.

5.3.3 The Power of Buyers

The buyers are the company’s immediate customers. The immediate buyers in the OSV market are the oil companies. If the oil companies are powerful, they are able to get deals with cheaper prices for the products and services. Whether a buyer is powerful or not depends on the following conditions below:

- Concentration of buyers
- Low switching costs
- Buyer competition threat

(Johnson, Whittington, & Scholes, 2011)

Table B.1.

Distribution of Rigs by Class and Operator, Including Cold-Stacked Rigs and Rigs under Construction in the 1Q 2011

Company	Jackup	Drillship	Semi	Total
Transocean Ltd.	68	23	50	141
Noble Drilling	45	13	14	72
ENSCO	49	7	20	76
Diamond Offshore	13	3	32	48
Seadrill Ltd	21	6	12	39
Hercules Offshore	53	0	0	53
COSL	27	0	6	33
Rowan	31	0	0	31
Maersk Drilling	14	0	6	20
Aban Offshore	15	3	0	18
Saipem	7	2	7	16
Nabors Offshore	16	0	0	16
Atwood Oceanics	6	1	6	13
National Drilling	13	0	0	13
ONGC	8	2	0	10
Petrobras	6	0	4	10
All others (87 firms)	147	46	66	259
Top 4 firms	205	46	116	367
Top 8 firms	337	52	134	523
Total	539	106	223	868

Source: Data from RigLogix, 2011.

Table 3: OCS Study, Offshore Drilling Industry and Rig Construction Market in the Gulf of Mexico

Are the buyers concentrated?

Only a few buyers are concentrated most large oil companies will have increased their power over the OSV companies. It is important to remember that the oil market is very fragmented with a lot of players. It can be seen in a report from 2011, where there were 868 oilrigs, and approximately 100 oilrig operators. But the top four companies; Transocean, Noble Drilling, ENSCO and Diamond Offshore, owned 36 % of the world fleet of rigs, and the top 8 companies owned over 50 % of the fleet.

The buyers' power to affect prices will of course be affected by their size, besides four of the biggest companies have greater negotiation power than the smaller companies. These companies are able to affect the demand in the market. The number one factor that determines the rates in the OSV industry is the demand/supply balance. To build up good relationships with the biggest oil companies is something all OSV companies strive for. OSV companies would probably offer better deals to the biggest than they otherwise would.

Are the switching costs low?

Oil companies have greater power over OSV companies if they can easily switch supplier and the extra costs and time consumption incurred are not of significant magnitude. If this is the situation, they have increased negotiation power.

The vessels in the OSV market are often hired for long-term contracts. If the oil companies were to switch supplier during an existing long-term contract, this could potentially be very expensive for the company. The costs to consider include; lawsuits, finding new contracts, construction of new contracts, etc. Many oil companies lease the platform that can become very costly for them. Therefore, it is in the oil companies' best interest to have the platforms in production all the time.

If they decide to switch supplier during operations, due to various reasons, they will have a stop in revenue but the huge costs will continue. Extra time would incur because the new OSV listed company would have to plan new operations. Therefore, the time lag between they decided to switch supplier might be longer than they originally expected.

Expired contracts do not necessarily mean incurred extra switching costs, but after having worked together the oil company and the OSV company would have developed a relationship of either good or bad. Switching to a new supplier, the oil company takes a risk, which can

go wrong. Switching costs are evaluated to incur extra costs, time-consumption and risk. This reduces the power of the buyers.

Does the buyer have competition potential?

If oil a company can and will integrate the supply segment into their business chain, then this represents a threat against the OSV companies. The buyer would then have increased power to pressure the OSV companies. This is called backward vertical integration.

It's not likely that oil companies would threaten the OSV companies to integrate their own supply vessel fleet in their company. As stated earlier, the OSV industry is very capital-intensive. A lot of capital would be needed for vessels and labor. To make this a potential success, a lot of planning would also have to be conducted. Such investments are not likely to yield any net present value to the companies. Therefore, the oil companies are most likely to profit most from renting the OSV suppliers' services.

- Overall, the threat from the buyers is considered to be moderate. The power of buyers is highly linked to their size. The biggest oil companies have much better negotiation power over the smaller companies.

5.3.4 Supplier Power

The suppliers are the companies that source the offshore supply companies with the resources they need to produce and conduct their services. The most important resources and equipment in the OSV market are the vessels, newest technologies, and the experienced labor. If the suppliers of these resources have increased power, they have the opportunities to require increased prices for their products. This reduces the profitability for the OSV industry. The following factors increase the supplier power: (Johnson, Whittington, & Scholes, 2011)

- *Concentration of Suppliers.*
- *High Switching Costs.*

Shipyards.

When OSV companies need to order new builds or make some repairs, they have to send an order to a shipyard. In total, there are 75 shipyards in Norway. Not all of them, however, build new ships. There are 25 yards that specializes in new builds, plus the shipyards are also responsible for the required technology on the vessels. The supplier market in the OSV

market is characterized as being fragmented. Due to the amount of suppliers of vessels the shipyards lose power over OSV companies. The competition within the shipyard industry reduces prices. An OSV company that is dissatisfied with a shipyard has plenty of alternatives to choose from.

Wage level

Another factor worth considering is the high wage level in Norway. To be competitive against foreign companies, Norwegian yards have to compete by being innovative and having the high quality of their vessels. If they push the prices up even more they risk to be priced out of the market. The tendency for Norwegian yards is that they lose 3 out of 4 contracts to foreign yards, and a majority of these are in Asia. This indicates that the shipyards, and especially not the Norwegian shipyards, don't have very much power to pressure the OSV companies. (Qvale & Stensvold, 2013)

Switching costs

The switching cost for Solstad is not considered to be very high. Of course, if Solstad were to switch supplier during an already started contract with a shipyard, this would potentially be very costly for the company. However, if the vessel is delivered and there is no agreement of further business between the yard and Solstad, there is no obvious increase in costs from switching a supplier. The shipyard market is very fragmented, and there shouldn't be very hard to find a new shipyard that is eager to undertake a new vessel project.

If we combine the arguments that the shipyard market is highly fragmented and that switching suppliers for OSV companies is not considered to incur high costs, then the conclusion is that the vessel suppliers in the market do not have much power over OSV companies.

Labor

This is one of the most important resources for OSV companies. Inexperienced crew on the vessels results in reduced quality on the services they supply. Another consequence is more injuries and possibly deaths. The labor the companies hire need to have the appropriate training and education to be successful. This limits the supply of this resource. Normally this would be a sign of power for the labor force, however the tendency has been that many companies in the whole oil industry need to lay off many employees. The main reason for

this is that they want to reduce costs to become more competitive. For the moment, it seems like the employees don't have very much power to increase the wages and pressure through better conditions for themselves. If there is excess supply of labor, as seems to be the case right now, the labor force loses power. In better times, however, the labor force has increased power, as demand for people increase and the supply decrease.

Another argument that reduces the employees' power is that they might have realized that if they actually managed to pressure through better deals for themselves, this would not be good for them in the long-term perspective. The companies would probably outsource more of the labor force abroad to reduce the wage expenses. (Madsen, 2014)

- For the moment, the suppliers for OSV companies have decreased power. The main reason is excess supply of their services. OSV companies have a lot of suppliers to choose from.

5.3.5 Competitive Rivalry

The Norwegian OSV industry has a lot of experienced people and inherent expertise in the profession, as well as being leading in technology and innovation. The domestic Norwegian OSV market is quite competitive and intense. This domestic competition is good for the Norwegian companies if we look on a global scale. It makes them powerful and a step ahead of the foreign competition when it comes to technology and innovation.

However, the competition among the Norwegian companies is relatively strong, and they are always looking for new updates fitted their vessels. Farstad, Eidesvik, DOF, Seim and Havila are some of the listed OSV companies on OSE and Solstad's immediate rivals. They are constantly trying to have the best offers and solutions for customers. Degree of competitive rivalry depends on various forces. The main factors are: *competitor balance, industry growth rate, high fixed costs, high exit barriers and low differentiation.*

Competitor balance

The market's balance among competitors is determined by whether they are roughly equally sized. A relatively equally sized market can lead to intense rivalry behavior as one competitor might attempt to gain dominance over others. The Norwegian OSV market does not have one leader of substantially larger size than the others, which indicates high competition in the market. Competitor rivalry is considered as a threat for Solstad.

Is the industry growing or slowing down?

The industry is affected by increasing exploration and production. New reserves discovered and high oil prices create growth possibilities for the OSV market. In recent years, the supply of vessels has increased because of many new builds and large oil/gas fields have been discovered. Stabilization in today's oil prices indicates a stable industry growth. This will lead to a high degree of rivalry in the industry. The activities in the OSV market are likely to grow in the coming years. However, the amount of profitability this growth becomes depends on how the companies handle the supply of vessels in the market. Too many vessels and low utilization of the world fleet can reduce the rates significantly. This depends much on the competitive behavior in the market. A highly competitive market results in large amount of orders on new vessels. (U.S. Energy Information Administration, 2002)

High fixed costs

“Industries with high fixed costs, perhaps because requiring high investment in capital equipment or initial research, tend to lead to high rivalry.” ((Johnson, Whittington, & Scholes, 2011), p 59)

The OSV market is highly capital-intensive and has high fixed costs. The only way to earn money is by leasing out their vessels. When vessels are placed in harbor it is potential services being lost and thus incurring costs to the company. If the companies get too desperate, they will cut prices to their customers. Ultimately, this can lead to a price war and everyone in the industry will suffer from this. In a bad market with low utilization, high fixed costs are a threat that has the potential to lower the prices even further.

High exit barriers

High exit barriers work as a barrier against potential entrants, and in the OSV market it is a result of all the capital invested in vessels. The company would first need a buyer, which is not a certain thing to find. The high exit barriers will increase the competition in the market preventing the OSV companies to exit the industry easily. There are, however, no indications of OSV companies contemplating an exit of the industry.

Low or high differentiation between their product?

When there is little differentiation between products it usually leads to higher rivalry. In the

OSV market there is one service that needs to be satisfied which is the supply of offshore services. Nevertheless, the offshore supply services can be divided into many different segments. AHTSs, CSVs and PSVs are examples of types of vessels that operate in different types of segments. The ways a company can differentiate their operations is to have the newest technology, up to date vessels, and to have top-notch quality on their services. The overall trend in the market is to renew the vessels. When all the companies do this, the vessels become less differentiated. So the differentiated vessels increase competition.

- The competition within the OSV industry is strong. Competition is the number one factor that makes this industry so cyclical. Whenever rates are satisfying, companies start ordering new vessels to make more profits. When every company does this, rates will plummet whenever the new vessels enter the market. This is something that will continue to happen in the future.

Table 4 gives a summarization of the Five Forces.

	New Companies	Substitutes	Buyers	Suppliers	Competitive Rivalry
High					X
Moderate			X		
Low	X	X		X	

Table 4: Summary of Five Forces - Degree of Threat

Threat from potential entrants and substitutes are evaluated to be low unless there are some fundamental changes within the industry in the nearest future. Such changes are expected to be unlikely. Buyers are evaluated to have moderate power to negotiate better conditions for themselves. On the other hand the most powerful oil companies have increased power. The suppliers of resources in the OSV market have low negotiation power. The main reason is due to excess supply of their services. Competitive rivalry is strong within the Norwegian OSV market, and is expected to continue in the future. This will influence the industry and is the main reason for the cyclical waves.

5.4 PESTEL - Macro economic trends – Supply and Demand

The PESTEL-framework will be used as a supplement to the Five Forces. This framework provides a list of comprehensive influences on the possible success or failure of particular strategies.

PESTEL is more of an environmental model, which categorizes six types of potential environmental threats. It is important for Solstad to analyze their environments to be able to anticipate environmental change. If they are aware of such changes, they might be able to acclimate to them.

The framework categorizes the environment into: political (P), economic (E), social (S), Technological (T), environment (E) and legal (L). Every one of these categories can affect Solstad in various ways and will need to be evaluated.

5.4.1 Political

The political element in PESTEL analysis comprises of many factors such as taxations, labor law, environmental law, political stability, etc.

Solstad is affected by political factors in every country they choose to operate in. Their main geographical areas are currently in the North Sea, Brazil, Singapore and Australia. The political conditions in these areas are relatively stable.

The greatest political threats can be found in the Brazilian operating segment. Brazil is today more stable than it was a decade ago, however there still are issues to consider. Corruption is one of leading threats to business. Another is the relatively high labor and tax costs. The Brazilian Government have earlier been eager to seek deeper ties with the US and EU. However, a new industrial policy shows greater support for protectionism. If this evolves further more seriously, it can be a threat against the OSV market. (AMB, 2013)

The Brazilian Government has preferred foreign companies in the oil industry instead of domestic. This is due to inexperienced Brazilian companies and lack of knowledge. As of today there are many different foreign actors in the market trying to help Brazil develop this area in a reasonable way. If these foreign companies succeed in conducting their operations in a positive manner with high quality and cooperation working with the Government, then president Dilma Rousseff will most likely be less eager to legislate new laws that can function as threats against foreign companies. (Solstad Offshore ASA, 2009)

In Norway, a potential threat against the OSV market could be a change of the tonnage tax. This tax regime is one of the most favorable and competitive in the world. In 2007, there was improvement in the shipping taxation regime. The tonnage tax regime offers tax exemption on shipping income, gains on sale of vessels, and relating management activities. (Myklebust & Zachariassen, 2012)

OSV companies under the Norwegian tax regime have to pay an annual tonnage tax based on the net registered tonnage. This special taxation is essential to maintain competitiveness in the market against foreign competitors who can intrude their areas. However, there are no indications today of changes in the tonnage tax regime. If this happened, Norwegian companies would probably flag the ships out of Norway. This would not benefit Norway, which makes it very unlikely.

5.4.2 Economic

The development in the world economy and oil prices has significant effects for Solstad's income and future. Economic downturns and low oil prices will lead to lower offshore activities. The margins throughout the whole comprehensive oil industry would decrease, making it less attractive to operate in the oil industry. Less activity leads to less utilization of vessels, which again will lower the day rates. In economic upturns, however, the opposite happens.

The world economy experienced growth in the beginning of the millennium – until the liquidity crisis in late 2007. After this event the world economy has struggled. Results of this have been slowdowns in GDPs and debt crises. “In industrialized countries, growth is still burdened by the debt crisis. From 2011 to 2012 the GDP in developed countries rose by 1.2 percent, compared to an average of twice in the three decades prior. Towards the end of the year, growth was probably even lower.” (DNB, 2013)

After the crisis, Norway has developed quite different than the majority of the other countries in the world. In contrast to many countries, Norway has experienced relatively higher growth, declines in unemployment and fairly healthy wages. The two main growth pillars for Norway have been oil and housing investments, which are more likely to lose its importance in the next few years.

Even though there still are several problems in the world-economy, there are several factors that will maintain high oil prices in the future. High break-even prices for the OPEC-countries and increased Chinese demand for oil are very important factors. On the Norwegian Continental shelf high oil prices create increased willingness to invest. It is planned and implemented development of new fields and upgrading of old fields on a large scale. In other offshore markets, high oil prices have created increasing activities and it is expected a sharp increase in investments in offshore exploration and production in the future. This indicates

that OSV companies will experience an improvement in the market with a higher demand. This will have a positive impact on Solstad. (Norwegian Shipowners' Association, 2013)

5.4.3 Social

This element comprises of how social and cultural characteristics in different parts of the world affect the OSV industry. In many ways this tends to follow the development in the economy. In general, developing countries have more economic growth than developed countries. With improved prosperity follows demand for new things such as increased manufacturing, building constructions, motoring, infrastructure, and more. These demands affect the improved conditions in the countries trying to develop themselves. China, Brazil, Indonesia and India are examples of prospering countries. With the improved conditions follows increased demand for energy. The world's demand for energy is expected to increase by one third between 2010 and 2035. Expectations for the dynamics of the energy market are influenced by developing countries that will account for 90 % of the increased demand for energy over the next 25 years. Although the amount of fossil energy out of the total energy consumption is expected to fall, the demand for oil is expected to increase by 25 %. Oil is a resource that can supply the increased demand for energy. This is another argument for why oil prices will remain high in the future, and lead to a fold increase in the world fleet by 2035.

Social and environmental responsibilities are becoming more and more important in the corporate world. Bad reputation is a factor that can have significantly poor effects for a company. For any company, independent of which industry it operates, it will be very important for them to integrate these values in their strategies. For OSV companies this is very important because they are operating in an industry where they are directly in contact with the nature. The oil segment has been the cause of environmental catastrophes in the past. It's very important for OSV companies to maintain a good public reputation to look attractive for potential partners such as oil companies and other countries Governments. Solstad's program, "Solstad Green Operations", will be a good contribution concerning the environment. Thru this program they are fighting to reduce the usage of fuel to avoid unnecessary pollution of CO₂ by making changes in their operations. (Solstad Offshore ASA, 2009)

5.4.4 Technological

The OSV industry is one where the companies with the best technology and vessels have competitive advantages over their competitors. The competition in the industry causes the companies to update their fleet. (Norges Rederiforbund, 2007-2013)

More of the petroleum industry is moving on to deeper and more challenging waters, and deployed vessels need new and improved requirements. To satisfy the demands from the oil industry, OSV companies have to invest in larger and more complex ships in terms of engine capacity, crane and winch capacity, maneuverability and mechanized handling equipment on board. Underwater features are also increasingly integrated into the ships. The increased requirements of vessels are also increasing the need for the crewmembers competences and skills.

Considering that the fleet is steadily increasing, ship-owners can get a challenge in terms of ensuring the quality of its workforce. This could also be a challenge for Solstad in the future. The North Sea has long been a driving force in the technological development and the maritime cluster in Norway has been central. Although more and more vessels are being built in Asia, shipyards in Norway remain a key position in the development of offshore vessels and a leading position in the construction of more sophisticated vessels. The fact that the Norwegian maritime industry is strong in the international context will be positive for Solstad in the future.

5.4.5 Environment

Increased awareness of the environment has intensified the focus on the vessels' fuel consumption and harmful emissions. Innovation and new technology for vessels are required for reductions in emission. This places greater focus on the environmental awareness of the shipping companies. Stricter environmental regulations are also something Solstad must pay attention to in the future. If the world's governments focus on environmental policies and thus more focus on powerful renewable energy, this will have consequences for the use of fossil energy. This could have implications for shipping companies that provide services to the oil and gas businesses. In such a scenario there will be an increased need for development of renewable energy sources. Offshore service vessels could probably be used for the development of offshore wind farms. For this scenario to turn out it must be a massive change in global environmental policy, and even if there is a tendency that the politicians are

beginning to take greater responsibility for the environment, this is not likely to happen in the foreseeable future.

Oil spill is an environmental factor that has the potential to shut down production in the specific area. In 2009, the production of oil had its peak in the Gulf of Mexico. In 2010, BP was the cause of a huge oil spill and the production in the gulf shut down for five months. Oil spills in the future can, and most probably will happen. A shutdown in the oil production will affect the OSV companies that operate in the contaminated areas. This is a factor that is totally unpredictable, but one should be prepared for it. (Klump, 2013)

5.4.6 Legal

Solstad must abide the laws and regulations that exist in the countries where the vessels are registered and where they operate. Laws and regulations may regard; the employees' rights, health, safety, environmental legislation both on board and on land, tax laws, environmental standards, and competition laws. The near future can predict stricter; environmental regulations, health, and safety legislation. It is not expected that there will be changes that will have major impact on Solstad's earnings and future in general.

5.4.7 Conclusion

PESTEL analysis shows that the offshore supply industry is facing several challenges and requirements imposed by different participants in the form of political regulation and specialized technology. The cyclical periods within the industry make the future uncertain. This is an industry where timing can differ between success and "failure". Through PESTEL analysis, we have become familiar with conditions that can affect the major trends and the macro economy.

The most important factors for the future are how the world economy and demand for oil develops. The world economy is expected to grow slowly which is primarily driven by newly developing countries. Also oil prices are expected to remain high and demand for oil is driven by growth and demand for energy.

Another important factor for the OSV industry in the future is increased demand for new and improved vessels. The updated technology will become increasingly important throughout the industry. The companies that do not accomplish to update their fleet in time are expected to have competitive disadvantages, and will struggle to regain their market dominance.

6 Financial Statement Analysis

This chapter will be used to conduct a financial strategic analysis of Solstad Offshore ASA by examining their published annual reports compiled to their creditors, investors and the public. First, the analysis period and framework is presented. Then, the reported financial statements are disclosed. Normalization and reformulation of the statements will be conducted after this.

The analysis aims to cover Solstad's underlying financial circumstances, and give a picture of the historical, current and future financial position of the company. Historical performance is an important indicator of future cash flows. Historical results reflects fundamental value in the company such as the employees' and the managements' competence, the level of technology and the competitiveness in the OSV market. Strengths and weaknesses usually do not change just over night. And according to Penman, a company's historical results can indicate its future results, at least in the short- and middle term future (6-10 years). (Penman, 2013)

All of Solstad's financial statements, since 2007 until 2012, have been in accordance with the Norwegian Accounting Act (NAA), International Financial Reporting Standards (IFRS), and interpretations by the International Accounting Standards Board (IASB). This indicates that the reported financial statements are of satisfying quality and the disclosed numbers should be trustworthy. (IFRS Foundation, 2001)

6.1 Analysis Level and Period

Solstad is a big corporation that consists of many underlying subsidiaries that are located in Norway, as well as other countries and continents. The ideal way to conduct this valuation is by analyzing each subsidiary or business areas of Solstad. However, since there are many subsidiaries and some of these are also registered abroad, it becomes difficult to obtain all the relevant financial information. Therefore, we have decided to value the whole group, Solstad Offshore ASA.

After 50 years in the shipping industry and almost 40 years in the OSV market, Solstad can show a steady and continuously development. In the past 10 years the oil market has been unstable and this has had a big effect on the OSV industry. For example, the liquidity crisis in the end of 2007 led to a huge drop in oil prices. This event had a major effect on the oil industry and which consequently spread to the OSV industry. After the crisis, all financial

terms got modified, and the unstable tax policy has also led to additional unforeseen tax expenses, which later have been reversed.

When determining how many years to go back to when analyzing a company, it is important to take a look at their stability and structure over a long time period. Companies that are assumed stable should be analyzed over a long time frame, which is considered approximately 10 years or even longer. With the unstable history in the OSV industry, due to acquisitions, sales of business segments, and a financial crisis, going 10 years back is evaluated to be unreasonable. Therefore, a shorter period of six years (2012-2007) is more appropriate as the analysis period. By excluding four years from the analysis period we believe the risk of margin of error will be lowered, and will have a better indication of the companies trends.

Since the 2013 annual report will not be disclosed until the middle of May 2014, we will not include the reported statements from 2013 in our thesis. This means that we will estimate the figures for 2013.

6.2 Financial Statements

The following tables provide an overview of Solstad's historical financial statements in the time period 2007 – 2012. The financial statements consist of comprehensive income statements and balance sheet. Here the most important items are displayed. More detailed statements can be found in the Appendix, as well as the cash flow statement.

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Freight Revenues	3 288	2 975	2 614	2 519	2 135	869
Other Income/Gain on fixed assets	74	5	3	11	74	38
EBITDA	1 432	1 070	981	1 195	1 318	435
Operating Result	869	163	342	466	797	155
Net Finance	(420)	-562	-209	401	-941	-40
Ordinary Profit Before Tax	362	-399	133	866	-144	116
Net Profit For the Year	396	-406	19	1 037	27	703

Table 5: Financial Income Statements

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Assets						
Deferred Tax Asset	95	43	17	-	24	-
Long Term Assets	12 988	14 048	13 856	9 974	8 638	8 464
Current Assets	1 624	1 582	1 693	2 293	1 551	1 851
Total Assets	14 707	15 673	15 566	12 267	10 213	10 315
Equity & Liabilities						
Equity	4 665	4 416	4 989	4 630	3 698	3 717
Long-Term Liabilities	7 165	9 509	8 584	6 414	4 831	4 027
Current Liabilities	2 815	1 657	1 884	1 176	1 402	2 118
Bank Overdraft	63	92	109	46	283	453
Total Equity & Liabilities	14 707	15 673	15 566	12 267	10 213	10 315

Table 6: Balance Sheet

6.3 Rearrangements for Analysis

In general, according to investors, financial statements are too emphasized with regards to a company's creditors. In investors' opinions, disclosed financial statements should have an increased focus towards investors. This will make it easier to evaluate the true value of a company. This is one of the reasons why there will be normalization of the income statement and reformulation of the balance sheets.

The financial analysis starts with a normalization of the income and cost items. The purpose of this is to exclude any abnormal numbers that is hard to predict in the future. The objective is to highlight the normal operating income and costs, which can be used as a normal base for the future cash flows.

Reformulation of the balance sheets is the next step. Here, the objective is to divide between operating assets and non-operating assets. We will also have to adjust for dirty surplus. In the following sections we will present these adjustments. (Gjesdal, 2007).

6.3.1 Reformulating the Income Statement

When reformulating the income statement, we need to do the following:

- Calculate total comprehensive income (dirty surplus)
- Identify abnormal items
- Tax allocation

6.3.1.1 Calculation of Total Comprehensive Income

The first task is to calculate Solstad's total comprehensive income using the formula below.

Total comprehensive income = Net result + Other comprehensive income/Dirty Surplus

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Reported Net profit for year	396	(406)	19	1 037	27	703
Translation adjustments foreign currency	(91)	6	(4)	(46)	56	7
Net gain on available for sale financial assets	0	0	0	31	50	(7)
= Total Comprehensive Income	305	(400)	15	1 022	133	703

Table 7: Comprehensive Income - Clean Surplus

Dirty surplus occurs whenever a company reports income or costs directly to a company's equity without reporting them in the income statement. Dirty surplus will lead to inaccurate profitability because the financial result is now wrong. A clean surplus means that there are no items that are directly added to the equity without including them in the income statement. Solstad has reported every change to the equity in the income statements, so the reported statements have been clean except the annual report from 2007 because of changes in IFRS & NAA. The figures used here can be found in the Reported Financial Income Statement in the Appendix. (Penman, 2013)

6.3.1.2 Identification of Abnormal Items

The next step is to divide between ordinary and extraordinary results and to divide between operating and financial results. It is necessary to identify abnormal items in the reported income statements. Abnormal items are gains or losses included in Solstad's income statements that are unusual for their business and/or in frequency. Below, Solstad's abnormal operating and financial items have been identified. (Penman, 2013) (Gjesdal, 2007)

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Gain on Sale of Vessel	54	0	0	0	66	106
Income from invest. In joint ventures	20	12	0	0	0	0
Insurance Claims	0	0	20	33	0	0
Abnormal Operating Income	74	12	20	33	66	106
Abnormal Operating Expense						
Accrued Liabilities	0	0	0	0	(126)	0
Abnormal Operating Expense	0	0	0	0	(126)	0
Abnormal Operating Result	74	12	20	33	(61)	106

Table 8: Abnormal Operating Result (2007-2012)

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Currency Gain	520	378	554	850	606	393
Gain Financial Derivatives	87	71	118	311	8	179
Gain Sale Shares	0	0	117	152	9	71
Dividend	0	0		1	28	47
Abnormal Financial Income	607	449	789	1314	652	690
Abnormal Financial Expense						
Currency Loss	(488)	(426)	(524)	(610)	(844)	(334)
Loss Financial Derivatives	(19)	(66)	(127)	(40)	(126)	(58)
Other Financial Expenses	(5)	15	(4)	(18)	(144)	(11)
Loss on sale of Stocks, shares & other invest.	0	0	0	(5)	(220)	0
Abnormal Financial Expense	(512)	(77)	(655)	(673)	(1334)	(404)
Abnormal Financial Result	95	(28)	135	641	(682)	286

Table 9: Abnormal Financial Result

Solstad has experienced gain on sale of vessels in three out of the six-year historical period. “Income from Investment in Joint Ventures” and “Insurance Claims” are two other items that have occurred in two of the years. In 2008 they also had an unexpected expense, “Accrued Liabilities”. These gains/reductions are reported as operating income and expenses in the statements because of the uncertainty regarding these items. We will consider them not to be a regular part of Solstad’s operations.

There are many abnormal financial items, mainly regarding derivatives, currencies and other financial expenses. These financial items are highly uncertain and they are not part of Solstad’s normal operations.

6.3.1.3 Tax Allocation

Tax allocation is the third step when normalizing the income statement. The motive for calculating the effective tax rate is to determine how much Solstad pays in taxes when considering their operating profits/losses and normal/abnormal items. It is also necessary to adjust for abnormal taxes because they will affect the tax Solstad is obliged to pay.

The various taxes in table 10 below are calculated from these items:

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Reported Tax	34	7	114	(171)	(171)	403
Abnormal Tax -(old tax regime, in reported notes)	0	0	116	(312)	(131)	388
Normal Tax	(34)	(7)	2	(141)	40	(15)
Financial Income Tax - (28 % of normal FI)	(2)	(5)	(8)	(4)	(16)	(23)
Financial Expense Tax – (28 % of normal FC)	147	154	104	71	88	62
Tax on Abnormal Financial Result – (28 % of abnormal FR)	(27)	8	(38)	(180)	191	(80)
Operating Tax Costs (OT)	84	150	60	(54)	303	(56)
NOR+AOR	853	149	322	433	797	960
Operating Tax Rate (otr)	0.10	1.00	0.19	(0.58)	0.38	(0.06)
Normal Operating Tax Rate (notr)	0.17					
Abnormal Operating Tax Rate (aotr)=(otr-notr)	(0.07)	0.83	0.02	(0.76)	0.21	(0.23)

Table 10: Operating Tax Rate

- Reported tax is what Solstad has reported in their annual statements.
- Financial Income Tax derives from normalized income statement below (Table 13)
- Financial Expense Tax derives from normalized income statement (Table 13)
- Abnormal Financial Result derives from the calculation above (Table 9)
- NOR is found in Table 13 and AOR is found in Table 8

$$otr = \frac{NT - FI * ft_{fi} - AFR * frt_{ afr} + FC * ft_{fc}}{NOR + AOR}$$

Equation 1: Operating Tax

NT	= Normal Taxes	ft _{fc}	= Tax on Financial Cost
FI	= Financial Income	FC	= Financial Cost
ft _{fi}	= Tax on Financial Income	NOR	= Normal Operating Result
frt _{afr}	= Tax on Abnormal Financial Result	AOR	= Abnormal Operating Result

Dividing the operating tax cost (OT) by operating result before tax (NOR + AOR), the operating tax rate (otr) will be discovered. There is one otr for every corresponding year, which indicates what Solstad has to pay/receive that specific year. (Penman, 2013)

Abnormal operating and financial items have been identified above. Taxes on these items need to be excluded to avoid double taxation, which could lead to the wrong normalized income statements that will be used as basis for future cash flows.

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Abnormal Operating Income	74	12	20	33	66	106
- Abnormal Operating Costs	0	0	0	0	126	0
= Abnormal Operating Result	74	12	20	33	(61)	106
- (otr) % tax on Abnormal Result	7	12	4	(19)	(23)	-6
- (aotr) on Normal Operating Result (NOR is from Table 13)	(55)	114	6	(305)	180	(196)
- Abnormal Operating Tax	0	0	(116)	312	131	(387)
= Abnormal Net OR to Equity	122	(114)	127	45	(349)	695

Table 11: Abnormal Net Operating Result

In NOK 1 000 000	2012	2011	2010	2009	2008	2007
Abnormal Financial Income	607	449	789	1314	652	690
- Abnormal Financial Cost	(512)	(477)	(655)	(673)	(1 334)	(404)
= Abnormal Financial Result	95	(28)	135	641	(682)	286
- 28 % tax on Abnormal FR	27	(8)	38	179	(191)	80
+ extraordinary FR	0	0	0	0	0	0
+ Financial Clean Surplus	(91)	6	(4)	(15)	108	10
Abnormal Net FR	(23)	(14)	93	446	(383)	216

Table 12: Abnormal Financial Result

Abnormal operating results and abnormal financial results have been calculated excluding taxes. These numbers will be included in the normalized income statement below.

6.3.2 Reformulated Financial Statements

6.3.2.1 Income Statement

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Total Operating Income	3289	2968	2597	2497	2143	2113
Total Operating Cost	(2510)	(2831)	(2295)	(2096)	(1285)	(1259)
Total Normal Operating Result (NOR)	779	137	302	401	858	854
Normal Operating Tax Rate (notr, 17 %)	(133)	(24)	(52)	(68)	(147)	(146)
Net Operating Result	646	113	251	333	711	708
Normal Financial Income	6	18	27	14	56	81
Net Financial Income (excl. 28 % tax)	4	13	19	10	40	58
Net Result to Capital Employed	650	126	270	343	751	766
Normal Financial Cost	(524)	(550)	(371)	(254)	(315)	(222)
Net Financial Costs (excl. 28 % tax)	(377)	(396)	(267)	(183)	(227)	(160)
Net Minority result	(20)	45	29	(10)	19	(23)
Net result to Equity	253	(225)	32	150	543	583
Abnormal net operating result	122	(114)	127	45	(349)	695
Abnormal net financial result	(23)	(14)	93	446	(383)	216
Comprehensive Net Result to Equity	358	(315)	279	652	(132)	1575
Net dividend payout	(59)	(79)	(99)	(84)	(152)	(154)
Other adjustments	2	(95)	443	(6)	(1)	(16)
Δ Equity	301	(489)	623	562	(283)	1405

Table 13: Normalized Income Statement

The income statements have been normalized and abnormal items have been separated from normal items in order to get a better understanding on the normal operating results. Solstad's normal operations are the driving force of the profitability, thus important to identify. (Penman, 2013).

Solstad had negative results in only two out of the six years. 2011 and 2008 are negative. The main reason for this is because of the abnormal items such as depreciation/write-downs. In 2008 it is easy to see how much the crisis affected them, not only financial but also operating. Solstad has loans in both Norwegian and international banks, which is an argument for the financial, but the operating part is however different. It comes from the "Norwegian exit tax, old shipping regime" and high abnormal operating cost as shown in table 11.

Operating result in 2011 was exceptional low, because of high depreciation/write-down charges. It is hard to normalize this item Solstad does not differ between depreciation and write-downs in their notes. Write-downs are clearly and abnormal item, so it is difficult to decide how much of this cost that is abnormal.

6.3.2.2 Reformulated Balance Sheets

To discover Solstad's ability to generate profitability from operations, it's important to divide the balance sheet into operating and financial assets and liabilities. The reformulated balance sheets will display this separation.

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Net Operating Assets	12 902	13 964	13 630	10 000	6 997	6 349
Financial Assets	934	812	938	1 575	1 992	2 696
Capital Employed	13 836	14 766	14 568	11 575	8 989	9045
Equity	4 665	4 416	4 990	4630	3 697	3 717
Financial Liabilities	9 171	10 360	9 578	6945	5 292	5 328
Capital Employed	13 836	14 776	14 562	11 575	8 989	9 045

Table 14: Reformulated Balance Sheet

After having normalized and reformulated the statements, we can better see how profitable Solstad's net operating assets are from their normal operations. More detailed balance sheets can be found in the Appendix.

7 The Analysis of Credit Risk

Solstad is financed through both equity and debt. Investors have resourced Solstad's equity, and have incurred debt through loans from creditors. The investors require a return on equity and the creditors require a return on debt. The Cost of Equity rate will be used as discount rate to find the NPV of the estimated cash flows. WACC will not be used, but instead we will be conducting the fundamental valuation using the equity method.

In this chapter there will be an examination of Solstad's liquidity, solvency, operating profitability. The chapter will be concluded with an estimation of Solstad's SMP credit rating. The ratios that will be calculated will be compared to the industry averages to evaluate how Solstad financial health is compared to similar Norwegian companies. The following ratios should, in a perfect evaluation, be calculated using the reformulated statements. However, we chose to use the official annual reports because it's too time-consuming to reformulate all the companies' financial statements. To keep the results compatible we used Solstad's official annual reports compared to the other companies official reports. In general companies' financial statements are structured with a focus towards the creditors, so the need for reformulation becomes reduced.

The ratio analysis consists of short-term and long-term ratios. Short-term is liquidity ratios and long-term is solvency-ratios. Both of these ratios are indicators of Solstad's ability to pay off their debt.

7.1 Liquidity-Ratios

The first thing to do in the Financial Risk-analysis is to calculate Solstad's Liquidity-Ratio. The purpose is to measure Solstad's ability to pay off their liabilities. We will analyze two liquidity-ratios. Number one is the current ratio that measures Solstad's ability to use their current assets to pay off current liabilities. The second liquidity ratio is called cash ratio which measures how Solstad's most liquid assets of the current assets are able to pay off their current liabilities.

$$\text{Current Ratio} = \frac{\text{Current Operating Assets} + \text{Current Financial Assets}}{\text{Current Liabilities}}$$

Equation 2: Current ratio

Current assets consist of operating and financial short-term assets, where a current ratio of one or above is considered to be satisfying. Comparing Solstad to the OSV average will give a better picture over which percentage rate they should focus on acquiring.

	2012	2011	2010	2009	2008	2007
Solstad	0.58	0.96	0.89	1.95	1.11	0.87
Industry Avg.	1.09	1.15	1.37	1.79	1.58	2.15

Table 15: Current Ratio

Here, we can see that Solstad's current ratios in general are less than the industry average. The current ratio peaked in 2009, but has since then had a negative trend. For the whole OSV industry, we can see a falling trend ever since 2007, except for an upward movement in 2009. This means that the OSV-companies in general are less liquid now than in 2007. A reason for this can be the consequences from the liquidity crisis in 2007 and the aftermath. Another reason might be that the companies have invested more of their total capital in vessels, which are long-term assets. The reason why their current ratio in 2009 was close to 2 is because of almost a doubling in bank deposit and cash equivalents combined with a reduction in liabilities. The main reason to the doubling in deposits and cash equivalent is due to a big reduction in investment vessels (tangible fixed assets).

Some of the current assets might be more liquid than others. So, it's also of importance to calculate the ratio of the most liquid assets to current liabilities. The most liquid assets are cash and other marketable securities.

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Marketable Securities}}{\text{Current Liabilities}}$$

Equation 3: Cash ratio

	2012	2011	2010	2009	2008	2007
Solstad	0.29	0.39	0.46	1.23	0.59	0.50
Industry Avg.	0.59	0.60	0.83	1.03	0.99	1.29

Table 16: Cash Ratio

For the last couple of years, Solstad's cash ratios have been the worst in the industry. This is not an ideal situation for a business, and they should focus on getting a higher cash ratio to moderate the risk.

In Solstad's annual report from 2012 they claim that one of their most important goals is to maintain their strong creditworthiness and solidity. Their policy is to maintain and adjust the capital structure by changes in dividends, share-issues, or sale of assets to reduce debt. The way to accomplish this is through risk management. The board receives monthly reports about operational, administrative and financial developments. Through evaluations of the maturity of financial investments, financial assets, and projected cash flows, Solstad thinks they are able to monitor the risk of lack of available capital. Solstad can also finance current

liabilities through credit facilities. Since cash and securities are an important part of total current assets, it is natural that these assets follow the current ratio's trend, which is a reduction for the last couple of years.

7.2 Interest Coverage

Another measurement of degree of financial risk associated with Solstad is called the Interest Coverage ratio, which is based on earnings. This measures Solstad's ability to meet their interest expenses through their operating earnings. It is an indication of how many NOK of earnings that are available for each NOK in interest expenses. Interest coverage equal to one means that a company barely can cover their interest expenses through their operations. This indicates a risky situation. (Palepu, Healy, & Bernard, 2000)

$$\text{Interest Coverage} = \frac{\text{Operating Result} + \text{Interest Income}}{\text{Interest Expenses}}$$

Equation 4: Interest coverage

	2012	2011	2010	2009	2008	2007
Solstad	1.67	0.33	1.00	1.89	2.71	4.69
Industry Avg.	1.82	1.40	1.52	3.69	2.54	3.95

Table 17: Interest Coverage

We can see that Solstad actually follows the industry averages pretty well, except for the abnormal year, 2011. However, Solstad was above average only 2 out of the 6 years we have included in the calculations. In 2011 the interest coverage was critically low. One reason for this was due to abnormal depreciations/write-downs, which can be found in the Appendix (Reported Financial Income Statement). In 2012 the interest coverage increased to a satisfying level. Looking at the industry average, Solstad has relatively more interest expenses. As for the OSV industry, we can see that after 2009, the coverage decreased drastically. This trend has been turned around, and is showing increasing coverage in 2012. This is actually a satisfactory number, and starting to go back towards the industry average of 2.48.

7.3 Solvency Analysis

The reason for including this ratio is to evaluate how much of Solstad's total assets that are financed with equity. The capital structure for a company can be of utmost importance, especially if the future cash flows and capital expenditures are unpredictable.

We have already found that Solstad's liquidity ratios, in general, are unsatisfying. So, it's important that Solstad's equity-to-assets ratios are satisfying. This is a measurement of how able Solstad is to overcome tough times, with possibly losses in their income statements.

	2012	2011	2010	2009	2008	2007
Solstad	0.32	0.28	0.32	0.38	0.36	0.36
Industry Avg.	0.35	0.33	0.35	0.39	0.33	0.36

Table 18: Equity to Assets

$$\text{Equity to Assets} = \frac{\text{Equity} + \text{Minority Share}}{\text{Total Assets}}$$

Equation 5: Equity to assets

Having equity to asset ratio of 0.32 in 2012 means that 32 % of Solstad's total assets are financed by equity and the residual is financed by liabilities. Since there are a large number of investments in long-term assets in the OSV market the companies require a larger amount of debt compared to other industries. Compared to the OSV industry Solstad has a satisfying equity to assets ratio. However, it is hard to determine a ratio good suited for this industry.

7.4 Return on Net Operating Assets (NOA)

This ratio measures Solstad's profitability from its operations. As stated earlier it's important to evaluate the profitability from the operations because these sources generate value.

$$\text{Return on NOA (RNOA)}_t = \frac{\text{Operating Result}_t}{\text{Net Operating Assets}_{t-1}}$$

Equation 6: Return on net operating assets

	2012	2011	2010	2009	2008	2007	Average
Solstad	0.056	0.010	0.030	0.057	0.135	-	0.058

Table 19: Return on Net Operating Assets

For this ratio, we have not included the industry ratios. The reason is because we would have to reformulate every company's balance sheets to find their total NOA. Due to no reformulated balance sheet in 2006, 2007 there is no calculated return. The return was very low in 2011. The main reason for this is the abnormal depreciation/write downs we have stated earlier.

7.5 Synthetic Rating

The ratios we have calculated measure Solstad's liquidity, solvency and operating return ability. These ratios give an indication of Solstad's financial health. The question is this: do the numbers indicate default risk? It's necessary to calculate a corresponding credit score that

will give an indication of the possibility of default. Based on the ratios, we will calculate a composite credit score.

According to Knivsflå, we can use current ratio, interest coverage, equity to assets and return on net operating assets as indicators for Solstad's default risk and credit rating. Knivsflå has also made a table (Appendix, Analysis of Credit Rating) that displays this.

	2012	2011	2010	2009	2008	2007	Average
Current Ratio	0.58	0.96	0.89	1.95	1.11	0.87	1.06
	CCC	B+	B	BBB+	BB-	B	BB-
Interest Coverage	1.67	0.33	1.00	1.89	2.71	4.69	2.05
	BB+	CCC+	B+	BBB	BBB+	A+	BBB+
Equity to Assets	0.32	0,28	0,32	0,38	0,36	0,36	0.34
	BB	BB-	BB	BBB-	BB+	BB+	BB
Result on Net Operating Assets	0.056	0.010	0.030	0.057	0.135	-	0.058
	BB-	BB-	BB-	BBB+	BBB+	-	BB-
Synthetic Rating							BBB-

Table 20: Solstad's Synthetic Rating

This is a calculation of Solstad's synthetic rating. Solstad's composite credit rating is estimated to be BBB-. BBB- is the lowest rating that still is investment grade, and means that Solstad's default risk is considered to be low. However, this isn't a very good rating, and Solstad should be careful in the future. A downgrading to BB could potentially be bad for Solstad.

(Knivsflå K. , 2014)

8 Future Analysis and Forecasts

We have normalized the financial statements and will use them as basis for our future estimations. The sustainable earnings are important to focus on when evaluating the future earnings and growth. In this chapter, there will be forecasts and predictions for the most important variables that will affect Solstad's future performance. Both historical financial statements and our strategic analysis will be the basis for the key variables' development. The future growth variables are:

- Operating Income Growth
- Net Operating Assets
- Net Operating Margin
- Net Financial Liabilities
- Net Financial Assets
- Net Financial Costs
- Net Financial Income

8.1 Forecasting Period

The first thing we need to do when forecasting the future is to choose an appropriate number of years of future cash flow, called planning period. Normally, the planning period is 5-7 years. 5 years is what we have decided to use as the planning period. The reason for this is that we believe the OSV market is difficult to predict. It's highly cyclical and also highly affected by external variables such as changes in oil prices, activities in the oil sector, and the world economy in general. Due to all the uncertain factors, we find it rational to use 5 years. After planning period comes the terminal period. The terminal value is calculated by discounting the sum of all infinite future cash flows. The assumption is constant growth in operating income.

8.2 Operating Income (OI) Growth

Solstad's operating income comes from shipping revenues. Operating income is affected by the world economy, demand for oil, oil prices, and the utilization rate of the fleet.

In the strategic analysis, it is stated that exploration and demand for oil have increased the last years, which have benefited the OSV market. The oil price has been relatively stable the last three years, moving around USD100 per barrel. There are no signs of this price to

plummet in the foreseeable future. Therefore, a stable increase in activity in the oil market will have positive effect on the OSV market in the coming years.

In the strategic analysis, it was stated that the OSV industry is highly competitive. A combination of the competition and increased demand for vessels has increased the amount of vessels in the market. Another finding was those activities in deep-water are going to be a key driver for income growth in the OSV market. For deep-water operations oil companies require modern, bigger, and the better technology. These requirements combined with the competition will lead to more modern vessels being ordered and the world fleet will increase.

However, the strong competition has the potential to slow income growth down. If the world fleet grows relatively larger than the overall demand for vessels, the utilization rate will decrease. This has adverse effects on the freight rates and income growth would be expected to decline. The utilization rates have increased every year since 2009, and the rate for 2012 was approximately 87 %. For the next two years, the supply of vessels is estimated to increase at a decreasing rate compared to demand. Therefore the utilization rate will increase in the coming two years. After this, the vessel growth will become abundant to demand causing the utilization to fall. RS Platou’s estimation for supply and demand also supports our view. They also report that the consensus in the market is still growth in operating income. This view is something we share; however, on a declining rate. In general, one should be a little skeptical about shipbrokers’ market views since they might be biased. (RS Platou, 2013)

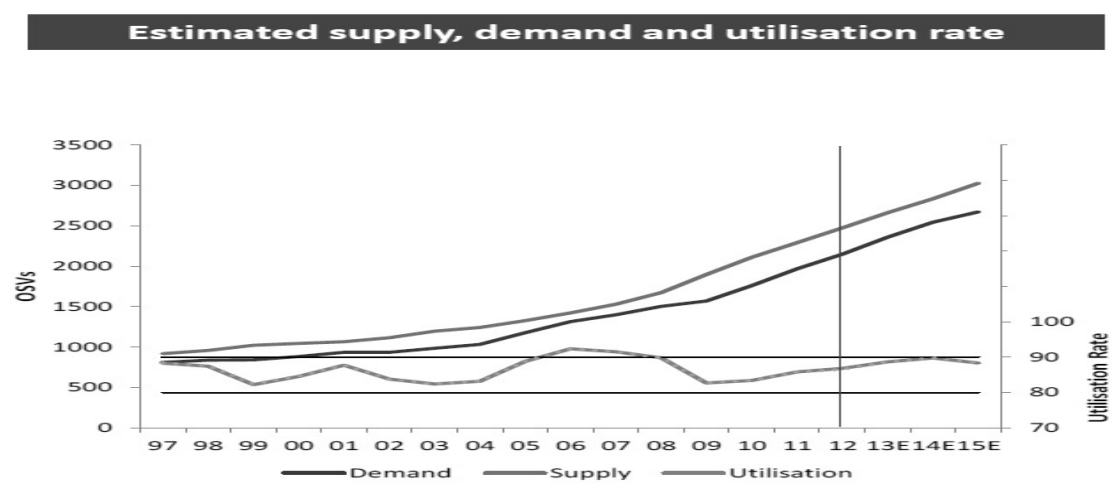


Figure 6: RS Platou's Predictions for Supply, Demand & Utilization

In 2014, Solstad will receive two new vessels, which can generate even larger income revenues. However, from 2014 and out, the utilization rate in the world fleet is expected to decline.

During the past five years, Solstad has experienced income growth in every year since 2007. Solstad's average income growth is 10.90 %. For the last two years, 2011 and 2012, operating income ratio has increased since 2010, and might indicate better conditions in the OSV market.

Amounts in NOK million	2012	2011	2010	2009	2008	2007	Average
Operating Income	3 289	2 968	2 597	2 497	2 143	2 113	
Income Growth	0.108	0.143	0.040	0.165	0.014	0.182	0.109

Table 21: Income growth (2007 - 2012)

Based on both the strategic analysis and historic performance, Solstad is expected to still generate income growth, but on a falling rate. To cope with the uncertainties, the falling income growth rate will be on a stable decline until it reaches steady state in the terminal period. That is, 10 % in 2013, 8 % in 2014, 6 % in 2015, which are the best years in the estimation. From 2015 until terminal period, the income growth will decline on a constant basis until it reaches steady state in the terminal period. Steady state is estimated to be the same as the world economic growth, which is 3 %. In terminal period, the OSV market will sometimes perform better than the world economy and sometimes worse. Therefore, it will be a reasonable estimate to use the growth in the world economy as a target for the OSV market.

Amounts in NOK million	2013E	2014E	2015E	2016E	2017E	Terminal
Operating Income (OI)	3 618	3 907	4 142	4 349	4 523	4 658
Income Growth	10 %	8 %	6 %	5 %	4 %	3 %

Table 22: Future Estimated Income Growth

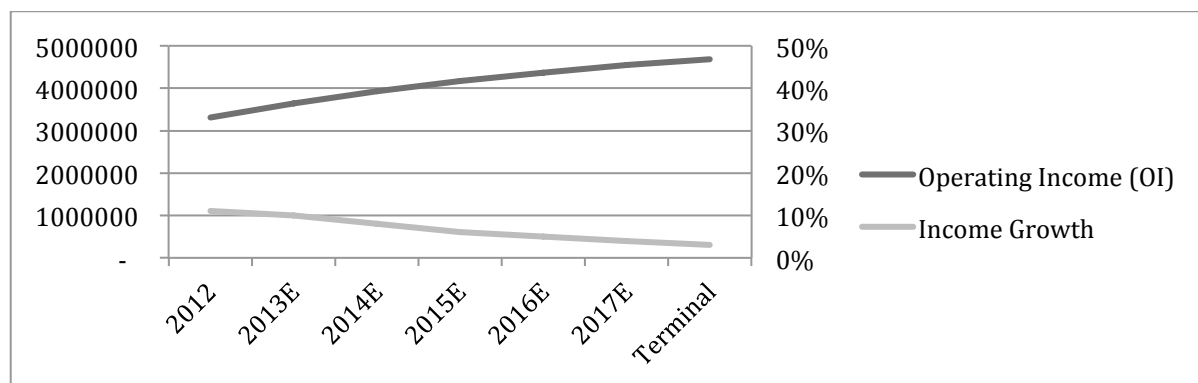


Figure 7: Operating Income & Income Growth

8.3 Net Operating Assets (NOA)

The *NOA* is all the assets that enable Solstad to generate operating income. Operating Income to Net Operating Assets (*oinoa*) is a percentage rate of the operating earnings for the total operating assets. According to Knivsflå, one can use the ratio between operating income and net operating assets to estimate future development of net operating assets. This implies that the growth in NOA is dependent on Solstad's income.

$$OINOA_t = \frac{\text{Operating Income}_t}{NOA_{t-1}}$$

Equation 7: Calculation of *oinoa*

Net operating assets consist almost exclusively of vessels. From 2007 to 2012 NOA has increased significantly. In 2007, total NOA was NOK 6.3 billion and in 2012 NOA was NOK 12.9 billion (this can be found in Table 14 in the reformulated balance sheet). Solstad had 34 operating vessels in 2007 and 48 operating vessels in 2012. During this period they have expanded by building many new vessels while selling off their old ones.

From the strategic analysis, it was discovered that Solstad's average fleet age was older than the Norwegian average. The fleet age has decreased during the past six-year period, but is still not satisfying compared to the other Norwegian companies. From 2011 to 2012 the total NOA has actually decreased. The reason is due to depreciation/write downs of the vessels, and that Solstad sold shares in some of their vessels.

From the strategic analysis we emphasized the importance in continuing renewing the fleet. Solstad is most likely going to continue this trend in the coming years. In 2014 they have scheduled deliveries of two new vessels and one in 2016. This indicates that total NOA is going to increase in the future. We estimate a steady increase in total NOA. However, depreciation/write downs and disposals of older vessels will decrease the growing NOA rate. Another prediction is that NOA for 2013 will be lower than in 2012 due to no additional vessels and depreciation/write downs on the fleet.

When estimating future NOA, it is common to use a percentage of operating income to net operating assets (*oinoa*) as a basis. This ratio measures how much operating income Solstad's net operating assets generate. The historical average percentage was calculated to be 28 %.

Amounts in NOK million	2012	2011	2010	2009	2008	2007	Average
Operating Income (OI)	3 289	2 968	2 597	2 497	2 143	2 113	
Net Operating Asset (NOA)	12 902	13 964	13 630	10 000	6 997	6 349	
<i>oinoa</i> = OI(t)/NOA(t-1)	0.25	0.22	0.26	0.35	0.34	-	0.28

Table 23: Net Operating Assets (2007 - 2012)

After calculations using the average rate of *oinoa* in the future, the finding was that NOA would increase in amounts that were not probable. A reasonable estimate in the future is that the growth-rate of NOA will decrease. The high growth-rate that NOA has had over the past six years will not maintain in the future.

A combination of higher income and lower NOA growth-rates indicate that *oinoa* will increase in the future. An *oinoa* rate of 28 % in the future gives plausible increases in the NOA, which is why we have decided to use this rate as an assumption. For the terminal period we assume even better *oinoa*. The reason is that in the infinite future, fleet growth will probably slow down and stabilize. Therefore *oinoa* will be a little better in the terminal period, and our assumption is 29 %. Estimating this ratio in the future involves so many uncertainties that we find it most reasonable to use a stable *oinoa*. The increased *oinoa* implies that Solstad's total NOA is yielding more operating income per NOK invested in net operating assets.

Amounts in NOK million	2012	2013E	2014E	2015E	2016E	2017E	Terminal
OINOA	0.25	0.28	0.28	0.28	0.28	0.28	0.29
Operating Income	3 289	3 618	3 907	4 142	4 349	4 523	4 658
Future NOA	12 902	12 921	13 954	14 793	15 532	16 154	16 083

Table 24: Future Estimated NOA

8.4 Net Operating Result (NOR) and Net Operating Margin (nom)

The future *NOR* is affected by estimated *nom* and *OI* at year (t). The net operating margin is a ratio that tells how much the operating result is compared to the operating income.

Amounts in NOK million	2012	2011	2010	2009	2008	2007	Average
Industry Average	20.57 %	16.86 %	14.76 %	21.27 %	29.79 %	30.82 %	22.34 %
Solstad	23.59 %	4.72 %	11.55 %	16.02 %	31.03 %	39.90 %	22.14 %

Table 25: Net Operating Margin

Solstad's average operating margin for the past six years is 22.14 %. The calculation can be found in Appendix (Forecasted Equations for Variables). Solstad's average *nom* for the past six years is 22.14 %. This is really close to the Norwegian market, which is 22.34 %. The margin was good before the financial crisis, but after 2008 the trend has been declining. In 2011, the margin was really bad due to low demand and abnormal depreciation and write-downs. The margin has improved a lot in 2012, reaching 23.59 %. This supports the argument that there have been recent improvements in the market. Future operating margins are affected by how income and costs are going to develop. If income grows relatively more

than costs, *nom* will increase. The opposite can be assumed if income grows relatively less than costs, *nom* will decrease. Greater cost-efficiency will increase the *nom*.

Assumption for future income is growth but on a declining rate. Solstad's costs are highly affected by wages to employees and technical costs. Both of these cost items follow the number of vessels in the fleet closely. So if number of vessels increase, both of these items will incur more costs. A reasonable assumption is that technical costs will increase, as the ships get older, lowering the margin.

The future prospects will continue to have good income growth for the next two years, and operating margins for 2013 and 2014 will remain close to the margin from 2012. After this, a combination of the competition in the market, lower rates, and aging vessels will cut the margin down until it reaches steady state of 20 % in 2015.

One prerequisite of improved margins is to renew the fleet. Older vessels inflict more costs. Renewal of Solstad's fleet will make the company more cost-efficient in the future. In the terminal period, the assumption is that the fleet will be more modern and that demand rates have improved.

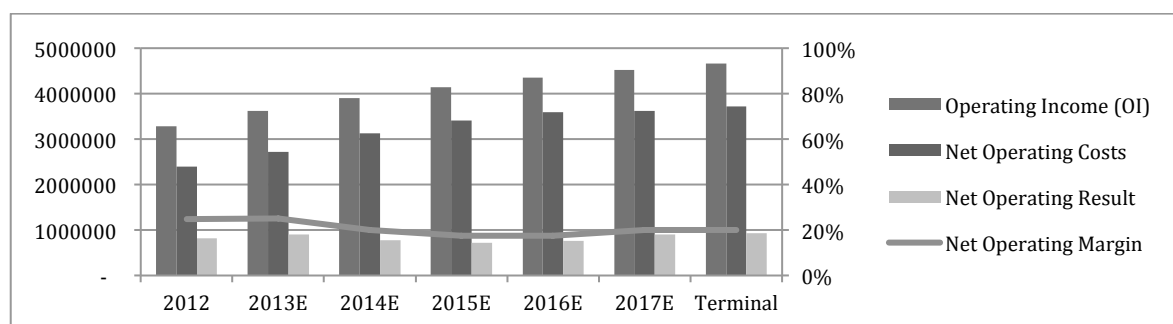


Figure 8: Overview of Operating Account

The graph above displays future estimations of net operating results. The horizontal line shows future development of *nom*.

Amounts in NOK million	2013E	2014E	2015E	2016E	2017E	Terminal
Operating Income (OI)	3 618	3 907	4 142	4 349	4 523	4 658
Net Operating Margin (<i>nom</i>)	25 %	24 %	22 %	21 %	20 %	20 %
Net Operating Costs	2 713	2 970	3 231	3 436	3 618	3 726
Net Operating Result	904	938	911	913	905	932

Table 26: Net Operating Margin & Operating Result

The table displays estimated operating results, based on estimated operating income and net operating margin.

8.5 Financial Liabilities (FL)

Financial liabilities have increased significantly since 2007. In 2007 the total financial liabilities amounted to NOK 5.32 billion and by 2012 this had increased to NOK 9.17 billion, which is an increase of 72 %. The development in FL follows the development in net operating assets closely because financial liabilities are financing much of the investments in new vessels.

Amounts in NOK million	2012	2011	2010	2009	2008	2007	Average
Financial Liability	9 171	10 350	9 572	6 945	5 267	5 328	
NOA	12 902	13 964	13 630	10 000	6 997	6 349	
flr = FL/NOA	0.71	0.74	0.70	0.69	0.75	0.84	0.74
Industry avg. flr	0.65	0.67	0.65	0.60	0.67	0.65	0.65

Table 27: Financial Liability Ratio

Financial liability rate (flr) measures how much FL is compared to NOA. The historical average flr is 74 %. This is much higher than the industry average that is 65 %. One reason for the current high financial liability rates for Solstad and the industry is because of the huge new builds in the program in 2007. In 2007 the total amount of new orders was 54. On average it takes two years for the completion of a new vessel. Thus, the majority of these vessels were delivered in 2009. Since vessels are so capital-intensive, the companies need to finance this with a large degree of financial liabilities.

In Solstad's financial statements for 2012, they inform that one of their targets is to have equity to total assets ratio no less than 30 %. In this thesis, we measure (flr) by dividing total FL to net operating assets. Total net operating assets are less than total assets. Therefore our estimated (flr) becomes a little higher than Solstad's target of no higher financial leverage than 70 %. They also inform that another goal is to reduce the financial liability rate in the future by steadily making ordinary installments, and hopefully improving the contract coverage in the future. The (flr) has been relatively steady during the past six-year period. 2012's rate will be used as a starting point for the coming years' (flr). In 2012, the (flr) was at 71 %. For every year in the future, until the terminal period, 1 %-point will be deducted from the prior years' (flr). This is a steady, small reduction in liabilities per year. By following this decreasing rate, the FL in the terminal period will be a constant of 65 %, which is the same as the industry average. Without having any information regarding their (flr) target, this is one sensible prediction.

Amounts in NOK million	2012	2013E	2014E	2015E	2016E	2017E	Terminal
Flr	0.71	0.70	0.69	0.68	0.67	0.66	0.65
Financial Liability = NOA x (flr)	9 171	9 045	9 629	10 059	10 406	10 661	10 454
NOA	12 902	12 921	13 955	14 792	15 532	16 153	16 083

Table 28: Future Financial Liabilities

8.6 Financial Assets (FA)

Financial assets have decreased significantly, from NOK 2.7 billion in 2007 to NOK 0.93 billion in 2012. FA consists mainly of cash and bank deposits, investments in various securities, and other financial assets. In 2007 FA was 42.5 % of total net operating assets. For an OSV company, it makes no sense to have so much financial assets and in 2012, the financial asset rate (*far*) was reduced to 7 %. FA has been reduced in accordance with the huge investments in vessels. This indicates that the vessels are partly financed by FA.

Amounts in NOK million	2012	2011	2010	2009	2008	2007	Median
far = FA/NOA	0.072	0.058	0.069	0.158	0.285	0.425	0.115
Financial Assets	934	812	938	1 575	1 992	2 696	
NOA	12 902	13 964	13 630	10 000	6 997	6 349	

Table 29: Financials Assets Ratio (2007-2012)

Ultimately there is no reason for having excess cash that is not spent on operations. However, since Solstad's assets are tied up in illiquid assets, having some financial assets on hand can become helpful in the future. Sudden unforeseen requirements for money can occur, and it is a good idea to have some excess money put away for emergencies.

Solstad's historical median for FA to NOA is 11.5 %. The assumption for the future is that the frequency for ordering new vessels is going to decline. At least compared to what we have seen during the past six years. Therefore, less FA needs to finance new vessels. A potential result of this is that FA is going to increase in the future. Solstad does not inform any target for the amount of financial assets, but they state that their risk management includes maintenance of sufficient liquid assets. Based on the presented arguments, FA is going to increase on a yearly basis in steady small increments until it reaches terminal period. In terminal period the *far* is set to 10 %. This rate reduces Solstad's risk in the market and increases the current and cash ratio. The OSV market is uncertain and volatile, and this rate is a more sensible rate than 7 % in 2012. The reason the rate is set a little under the previous six-year median is that during these years they had higher FA rates than what is reasonable in this type of industry.

Amounts in NOK million	2012	2013E	2014E	2015E	2016E	2017E	Terminal
far = FA/NOA	0.072	0.075	0.080	0.085	0.090	0.095	0.100
Financial Assets	933	969	1 116	1 257	1 398	1 535	1 608
NOA	12 902	12 921	13 955	14 792	15 532	16 153	16 083

Table 30: Future Estimated Financial Assets

8.7 Net Financial Income (FI)

A majority of the financial assets are cash and equivalents. We calculated the median for the financial income to financial assets that was 1.8 %, which is a very low ratio (Appendix, Forecasted Estimations for Variables). Some of the years had abnormally financial income rates and therefore we assume small yearly increases. However, for Solstad, financial income is a relatively insignificant variable, so changes in the interest rates will not affect Solstad's value substantially. We predict a small, yearly increase in the financial income to financial assets rate in the future.

	2013E	2014E	2015E	2016E	2017E	Terminal
FI to FA (after tax)	0.019	0.02	0.021	0.022	0.023	0.024

Table 31: Estimated Risk-free Rate

8.8 Net Financial Costs (FC)

Financial costs are affected by the financial costs rate (*fcr*) and total financial liability from the previous year (*t-1*). Contrary to financial income, financial costs add up to a substantial amount due to the large amount of total liabilities. Financial costs have been low since the financial crisis, however, the rate has been increasing since 2009. Solstad's historical average of financial cost rate is 3.4 % (Appendix, Forecasted Estimations for Variables). This will be used as a basis for 2013, and we predict small, yearly increases of financial cost rates in the future.

Amounts in NOK million	2012	2011	2010	2009	2008	2007	Average
Net Financial Costs	(377)	(396)	(267)	(183)	(227)	(160)	
Financial Liabilities	9 171	10 350	9 572	6 945	5 267	5 328	
Percent of Costs to Financial Liability	(0.041)	(0.038)	(0.028)	(0.026)	(0.043)	(0.030)	(0.034)

Table 32: Financial Costs (2007-2012)

In future estimations of financial costs, 3.4 % will be our starting point, and this rate will grow steadily towards 3.9 %. We will use the same rate of increases as the financial income growth.

8.9 Summary of Future Key Variables

	2013E	2014E	2015E	2016E	2017E	Terminal
Operating income growth	0.1	0.08	0.06	0.05	0.04	0.03
oioa	0.28	0.28	0.28	0.28	0.28	0.29
Net Operating Margin	0.25	0.24	0.22	0.21	0.20	0.20
Financial Liability Rate	0.70	0.69	0.68	0.67	0.66	0.65
Financial Assets Rate	0.075	0.08	0.085	0.09	0.095	0.10
Financial Income Rate	0.019	0.02	0.021	0.022	0.023	0.024
Financial Cost Rate	0.034	0.035	0.036	0.037	0.038	0.039

Table 33: Future Key-Variables

8.10 Future Estimated Financial Statements

Amounts in NOK million	2013E	2014E	2015E	2016E	2017E	Terminal
Operating Income	3 618	3 907	4 142	4 349	4 523	4 658
Operating Costs	(2 713)	(2 970)	(3 231)	(3 436)	(3 618)	(3 727)
Net Operating Result	904	938	911	913	905	932
+Net Financial Income	18	22	26	31	35	39
=Net Result to SYSSELSATT	923	960	938	944	940	970
- Net Financial Costs	(308)	(337)	(362)	(385)	(405)	(408)
=Net Result to Equity	615	623	575	559	535	563
=Total Comprehensive Net Result	615	623	575	559	535	563
- Net Dividend Payout	434	26	27	26	32	352
Δ In Equity	181	597	548	533	503	211

Table 34: Future Estimated Income Statement

Amounts in NOK million	2012	2013E	2014E	2015E	2016E	2017E	Terminal
Net Operating Assets	12 902	12 921	13 955	14 792	15 532	16 153	16 083
Financial Assets	934	969	1 116	1 257	1 398	1 535	1 608
Capital Assets	13 836	13 890	15 071	16 050	16 930	17 688	17 691
Equity	4 665	4 846	5 443	5 991	6 524	7 027	7 238
Financial Liability	9 171	9 045	9 629	10 059	10 406	10 661	10 454
Capital Employed	13 836	13 890	15 071	16 050	16 930	17 688	17 691

Table 35: Future Estimated Balance Sheet

Amounts in NOK million	2013E	2014E	2015E	2016E	2017E	Terminal
Net Operating Result	904	938	911	913	905	932
Δ Net Operating Assets	19	1 034	837	740	621	(70)
= Free Operating Cash Flow	885	(96)	74	174	283	1 002
Net Financial Income	18	22	26	31	35	39
Δ Financial Assets	35	147	141	141	137	74
=FCF to Capital Employed	868	(221)	(41)	64	182	967
Net Financial Costs	(308)	(337)	(362)	(385)	(405)	(408)
Δ Financial Liabilities	(127)	584	430	348	255	(207)
= FCF to common equity	434	26	27	26	32	352

Table 36: Future Free Cash Flow

In 2013, the *FCFE* is greater than any of the following years. The reason is due to the lack of investments in new vessels. There is actually a reduction in *NOA*. In this model, we assume that all of the *FCFE* to equity is going to be paid out to the shareholders.

Solstad has four years with low FCF (2014-2017). In the predictions for the future *NOA*, Solstad is going to invest in new vessels and to upgrade their fleet. Therefore, they need capital to invest. Thus, investors cannot expect to receive very much dividend payments in these years.

In 2017 and the terminal period, *FCFE* to equity has once again improved. The reason is that in the long-term, investments in *NOA* are going to slow down and actually decline a little bit in the terminal period, due to reduction in vessel-orderings and depreciations and write-downs.

9 Cost of Equity

To conduct a good valuation it's important to estimate the future cost of equity. The key variables that affect cost of equity are: Beta, risk-free interest rate, market premium, and illiquidity premium.

Sharpe and Lintner introduced the Capital Asset Pricing Model (CAPM) in the 1960's, and five decades later, economists are still extensively using it to estimate the cost of capital for firms and evaluating the performance of managed portfolios (French & Fama, 2004). There are four assumptions that need to be made; the investors have to be well diversified in the market, the new project must account for a small share of the market portfolio, the market portfolio contains all risky projects in the economy, and lastly the investors are risk-averse.

CAPM before tax:

$$k_E = r_f + \beta_e \times [E(r_m) - r_f]$$

$$k_E \quad \text{Return to equity}$$

$$\beta_e \quad \text{Systematic risk to equity}$$

$$E(r_m) \quad \text{Expected market return}$$

$$r_f \quad \text{Risk-free rate}$$

$$[E(r_m) - r_f] \quad \text{Market premium (MP)}$$

CAPM after tax:

$$k_E = r_f \cdot x(1 - t) + \beta_e \times [E(r_m) - (r_f + r_f(1 - t))]$$

$$k_E = r_f t + \beta \times MP^t$$

Equation 8: CAPM, before & after tax

The return to equity for Solstad will be calculated on an after-tax basis.

9.1 Risk-Free Interest Rate [r_f]

There is no definite answer to what risk-free interest rate one should use. The time-horizon influences the length of the risk-free rate. When conducting long-term valuations, one should use longer-term risk-free interest rates. (Damodaran, 2002)

We have decided to use 10 year Norwegian Government debt rates as a proxy for risk-free interest rates. However, there are no investments that have zero inherent risk. Therefore, the interest rates come with a risk premium that needs to be excluded from the bond rates in order to find the true risk-free interest rate. Norway's credit rating is AAA. From Knivsflå's table in the Appendix, AAA-rated investments have credit risk-premiums of 0.6 %. The calculations are displayed in the table below.

	2012	2011	2010	2009	2008	2007	Average
10 Y Gov. Debt Rates	2.10	3.12	3.52	4.00	4.47	4.78	3.66
Credit Risk Premium	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Tax on Bonds (28 %)	0.42	0.71	0.82	0.95	1.08	1.17	0.86
Risk-Free Interest Rate (excl. Tax)	1.08	1.82	2.1	2.45	2.78	3.01	2.21

Table 37: Risk-free interest rate in %

In the calculation above, we used Norwegian Bank's estimated annually debt rates on the 10 year Government bonds, and calculated an average base on these. Thereafter, we excluded the credit risk premium and tax (28 %) on yields. We ended up with an average risk-free interest rate of 2.21 %. (Knivsfå K. H., 2014) (Norwegian Bank, 2013)

We have decided to use the current average risk-free interest rate as the basis for further development:

	2013E	2014E	2015E	2016E	2017E	Terminal
Risk Free Interest Rate (after tax)	0.0221	0.0221	0.0221	0.0221	0.0221	0.0221

Table 38: Future Risk-free Interest Rate

9.2 Market Premium [$E(r_m) - r_f$]

An investor tends to be risk averse and will therefore be compensated for the portfolio's risk with a risk premium, MP, also called market premium. From the equation, the market premium is the difference between the expected return on the market portfolio [$E(r_m) - r_f$] and the risk-free rate [r_f]. In other words, the market premium represents excess return achieved on the stock exchange beyond risk-free investments, i.e. 10Y Norwegian Government debt rates. The market risk premium should measure the extra yield investors demand to invest in a market portfolio relative to a risk free investment. The market risk premium can be estimated either by calculating the historical market premiums or by estimating forward-looking market premiums (Finanstilsynet, 2010).

In the end of 2000 and 2007, there were extreme variations because of miscellaneous crises where it was both positive and negative market premiums. Therefore, because of the uncertainty, it is more difficult to estimate a correct risk premium for the Oslo Stock Exchange. Factors such as less variation in the exchange's liquidity, reduced inflation risk and better-capitalized companies indicate a lower market premium than the historical premium of approximately 6%. (Gjesdal & Johnsen, Kravsetting, lønnsomhetsmåling og verdivurdering, 1999) The Ministry of Finance's recommended that the entire oil-industry should use a market premium of 5 %. According to PWC, a comprehensive analysis on the OSE has been conducted and the result was that the market risk premium should be 7 %. This

is, however, a non-taxed rate. If we exclude taxes, the market risk premium is approximately 5 %. With recommendations from Gjesdal and Johnsen (1999), the Ministry of Finance and PwC, the market premium after taxes will be set to 5%. The market-risk premium will be set as a constant at 5 % after tax in the future. (Regjeringen, 2000) (PwC, 2012)

9.3 Beta to Equity [β_e]

The risk an investor faces is two-folded. The first side is idiosyncratic risk and the second is systematic risk. An idiosyncratic risk is firm-specific risk in which an investor can get rid of by diversification. Systematic risk, on the other hand cannot be diversified away only through hedging. Beta measures how sensitive a specific company is to these risk factors. The market-portfolio has a beta equal to 1. If a company has beta higher than 1, this indicates that a company is more risky in terms of volatility than the market. Vice versa with a beta less than 1.

$$\text{Beta} = \frac{\text{Covariance (return on i, return on the market)}}{\text{Variance (return on the market)}}$$

Equation 9: Beta to equity

When calculating the beta, we need to compare Solstad's historical returns to the market's return. We have decided to use OSE as a proxy for the market, and more precisely OSEBX. The historical beta was calculated to be 0.73 by using monthly closing prices for both Solstad and the OSEBX. The calculation can be found in the Appendix.

Beta to equity is not a constant if the debt to equity ratio (D/E) changes in the future. Based on the numbers from the future balance sheet in table 35, we have found that the D/E ratio is declining in the future. And since the D/E ratio is changing in the future, beta to equity will change. However, beta to net operating assets is a constant variable. The reason is due to Miller-Modigliani's proposition 1, that the value of a company's *NOA* is independent of its financing. The results can be found in Appendix (Cost of Equity).

By reconstructing the equation for β_e (Appendix, Cost of Equity), we are able to calculate both β_{noa} and β_e . It is important to highlight the fact that we have assumed that beta to debt is zero. This is not a perfect way of conducting it, because all debt has some degree of risk. However, according to Damodaran, this is a conventional way of conducting it. (Damodaran, 2002)

First, in 2013, we calculated the β_{noa} by reconstructing the equation. β_{noa} is constant in the future years. Based on the constant β_{noa} , equity/ NOA , and net financial liabilities/ NOA we are able to calculate the development of future β . The betas for the future years will be used when calculating the yearly cost of equity. (Knivsflå K. H., 2014)

9.4 Future Cost of Equity

All the key variables that are needed for calculating the future cost of capital have been estimated. The table below shows the estimations.

	2013E	2014E	2015E	2016E	2017E	Terminal
Risk Free Interest Rate (after tax)	0,0221	0,0221	0,0221	0,0221	0,0221	0,0221
Risk Premium (after tax)	0,05	0,05	0,05	0,05	0,05	0,05
Beta	0,727	0,701	0,674	0,649	0,626	0,604
Illiquiditypremium	0,02	0,02	0,02	0,02	0,02	0,02
Cost of Equity (ke)	0,0784	0,0771	0,0758	0,0745	0,0734	0,0723

Table 39: Future Cost of Equity

We have made the assumption that the illiquidity-premium will be constant in the future. The cost of equity is calculated using the CAPM.

10 Fundamental Valuation

We have forecasted Solstad's main variables based on the strategic and financial analyses. From these forecasts, we are now able to calculate Solstad's fundamental value. Based on Knivsfå's valuation methods there are two methods to use when estimating fundamental value; equity valuation or total capital valuation.

We have decided to use the equity valuation. In theory, if all variables are calculated correctly, both of these methods should yield the same values. The equity valuation estimates all the future cash flows "directly" to the equity.

There are four ways to conduct an equity valuation:

- Net Dividend Pay-out model
- Free Cash Flows to Equity model (*FCFE*)
- Super-profit to Equity model (*SPE*)
- Δ Super-profit model

FCFE and *SPE* are the models that will be used in the fundamental valuation. If conducted correctly they should be equivalent and yield the same value of equity. The numbers used in the valuation methods can be found in the future financial statements in chapter 8.10.

10.1 Free Cash Flow to Equity

This model is based on the company's future free cash flows to equity and discounted using the cost of equity (*ke*). The present value of equity (*VEQ₀*) is equal to the sum of all the discounted cash flows in the planning period and in the terminal period.

Amounts in NOK million	2013E	2014E	2015E	2016E	2017E	Terminal
Net Operating Result	904	938	911	913	905	932
Δ Net Operating Assets	(19)	(1 034)	(837)	(740)	(621)	70
= Free Operating Cash Flow	885	(96)	74	173	284	1 002
Net Financial Income	18	22	26	30	35	39
Δ Financial Assets	(35)	(147)	(141)	(141)	(137)	(74)
=FCF to Capital Employed	868	(221)	(41)	64	182	967
Net Financial Costs	(308)	(337)	(362)	(385)	(405)	(408)
Δ Financial Liabilities	(127)	584	430	348	255	(207)
= FCF to common equity	433	26	27	27	32	352

Table 36: Future Free Cash Flow

$$VEQ_0 = \sum_{t=1}^T \frac{FCFE_t}{(1 + ke_1) * \dots * (1 + ke_t)} + \frac{FCFE_{T+1}}{(1 + ke_1) * \dots * (1 + ke_T) * (ke - g)}$$

Equation 10: NPV of FCFE

Amounts in NOK million	2012	2013E	2014E	2015E	2016E	2017E	Terminal
FCF to Equity		434	26	27	26	32	352
Cost of Equity		1.078	1.162	1.249	1.343	1.441	1.545
		403	22	22	20	22	5 777
Σ NPV Planning Period	488						
NPV Terminal Period	5 777						
Value of Equity	6 266						
Number of Shares	38 662 733						
Value Per Share	162						

Table 40: Fundamental Valuation, FCFE-Method

Based upon the *FCFE* method, the total value of Solstad's equity is NOK 6.266 billion, and gives us a price per share equal NOK 162. The calculation of the *FCFE* can be found in table 36. Constant growth (*g*) in the terminal period is assumed to be at 3 %, which is the predicted growth in the world economy, and k_e in terminal period is 7.23 %.

10.2 Super-Profit to Equity

This model is based on subtracting the cost of equity from the net result to equity (*NRE*). Future *NRE* can be found in table 34 and future equity can be found in table 35. Super-profit is calculated by subtracting the cost of equity from the *NRE*. The super-profit is then discounted using the accumulated cost of equity. The sum of *NPV* is then added to the equity ($t=0$) from 2012.

$$VEQ_0 = EQ_0 + \sum_{t=1}^T \frac{NRE_t - k_e * EQ_{t-1}}{(1 + k_{e1}) * \dots * (1 + k_{et})} + \frac{NRE_{T+1} - k_e * EQ_T}{(1 + k_{e1}) * \dots * (1 + k_{eT}) * (k_e - g)}$$

Equation 11: NPV of Super-Profit

Amounts in NOK million	2012	2013E	2014E	2015E	2016E	2017E	Terminal
Equity (t=0)	4 665						
Net Result to Equity		615	623	575	559	535	563
Equity (t-1)		4 665	4 846	5 443	5 991	6 524	7 027
Cost of Equity		0.078	0.077	0.076	0.074	0.073	0.072
Super-profit		250	250	163	113	56	55
Acc. Cost of Equity		1.078	1.162	1.249	1.343	1.441	1.545
NPV Super-profit		232	215	131	84	39	901
Σ NPV Super-profit	1 601						
Value of Equity	6 266						
Number of Share	38 662 733						
Value per Share	162						

Table 41: Fundamental Valuation, Super-Profit Method

Based upon the Super-profit model, the value of Solstad is NOK 6.266 billion. This is equal to NOK 162 per share. As we can see, the *FCFE* method and the *SPE* method yield the same values.

The super-profit is on a steady decline in each year. This can be attributed to NRE being relatively stable while equity is increasing more rapidly, thus making the cost of equity more expensive.

11 Sensitivity Analysis

A fundamental valuation of a company is affected by many variables. There are many predictions for the future development that might have been estimated incorrectly. Therefore, there are always uncertainties regarding an estimated value of a company. The reason for conducting a sensitivity analysis is to better understand how changes in key variables might affect the value of the company. That is, how volatile the price is when changes in the variables occur. One variable at a time will be changed, *ceteris paribus*. The key variables that will be used in the sensitivity analyses are; income growth, operating margin, operating income to net operating assets (*oinoa*), risk-free interest rate, and financial costs. The findings are presented graphically and labeled accordingly. The calculations can be found in the appendix. For every variable, we have estimated how both short-term and long-term changes can affect prices. The short-term changes will occur for the year 2013, and long-term changes in the terminal period. We have calculated how 10 %, 20 % and 30 % increases or decreases in variables affect prices. Prices are displayed on the y-axis and %-changes is displayed in the x-axis.

11.1 Income Growth

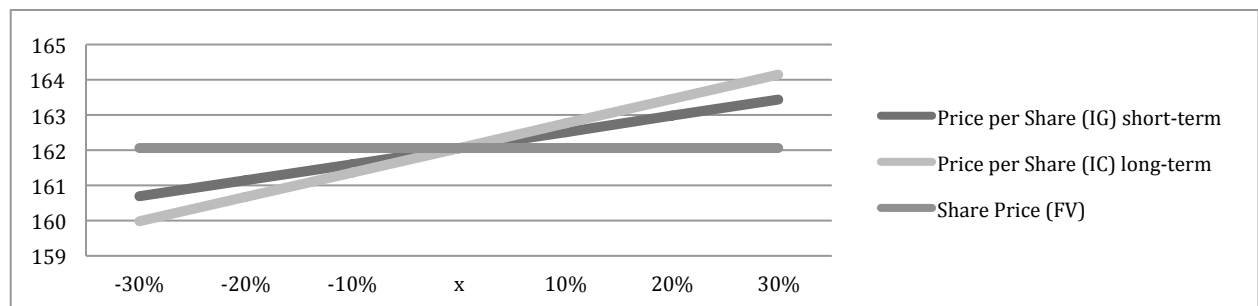


Figure 9: Sensitivity of income growth, short & long-term

Income growth has a moderate effect. In the short-term it affects prices more than in the long-term, which is puzzling. The reason why changes in income growth affects prices insignificantly in the terminal period is because the growth rate is set low (3 %) in this period. Thus, increases/decreases of 30 % will not affect Solstad's total income substantially. Looking at the short-term, however, income growth for 2013 is set to 10 %, thus a change of 30 % will affect income more in the short-term than in the long-term.

11.2 Operating Margin

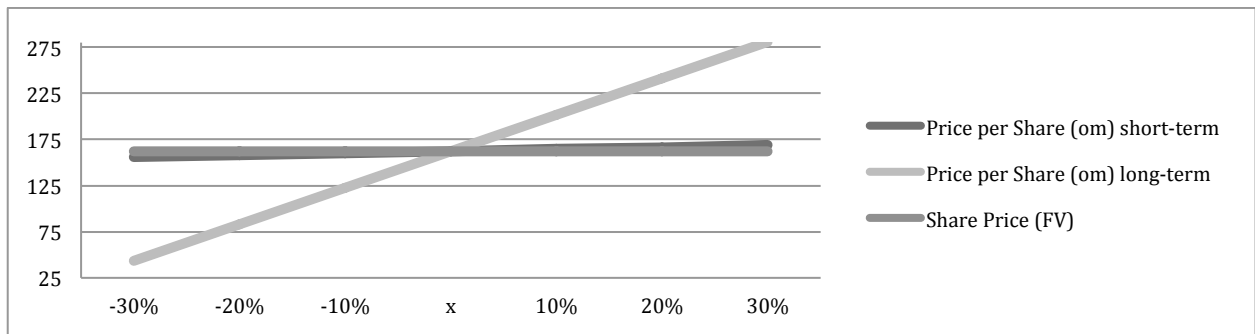


Figure 10: Sensitivity of operating margin, short & long-term

Prices are sensitive to changes in operating margin and especially in the long-term. With a 30% amendment in long-term, operating margin will inflict a change in the price per share of 73%. This is a huge price movement, and indicates that it is important for the management to keep the operating margin at satisfying levels. In short-term, the effect is insignificant.

11.3 OINO A

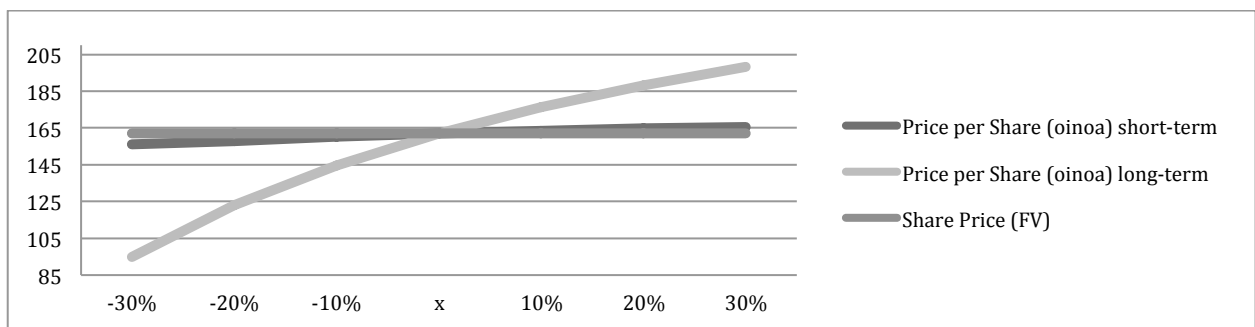


Figure 11: Sensitivity of oinoa, short & long-term

Prices are sensitive to changes in *oinoa*. Naturally, the effect is more significant in the long-term than in the short-term. A decrease of 30% reduces the price per share by approximately 41.5%, and an increase in *oinoa* of 30% leads to an increase in share-price of 22.3%. Thus, the effect is larger on the downside than on the upside. Increases/decreases in *oinoa* indicate that Solstad's earnings on invested operating assets are improved/worsened.

11.4 Risk-Free Interest Rate

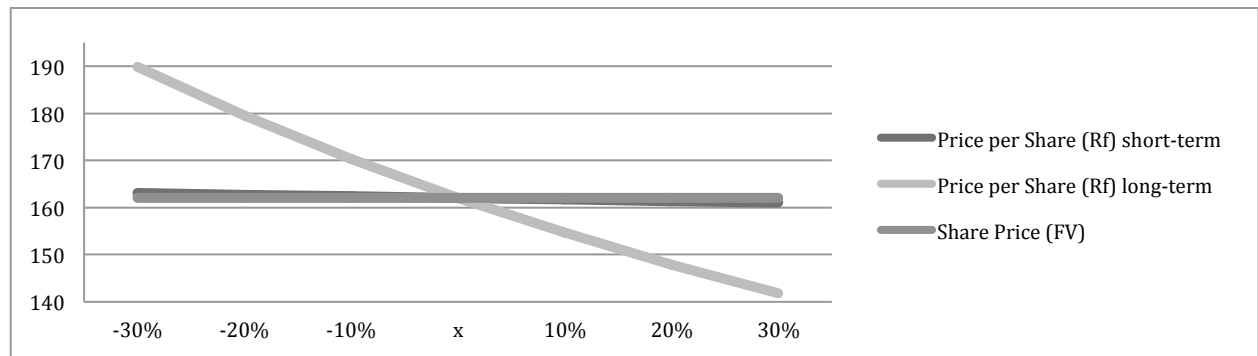


Figure 12: Sensitivity of risk-free rate, short & long-term

As we can see, the share price is evaluated to be moderately sensitive to changes in the risk-free interest rate. In the long-term, a reduction of 30 % leads to an increase in the share price of 17 %, and an increase of interest rate of 30 % leads to a reduction in the share price of only 12.5 %. Higher interest rates lead to higher cost of equity, which reduces the *NPV* and yields less in return. The opposite is true for reductions in the interest rates.

11.5 Financial Costs

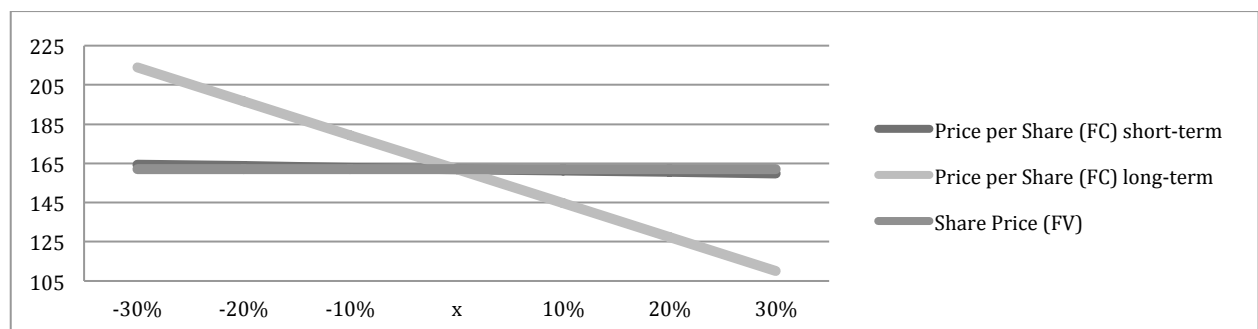


Figure 13: Sensitivity of financial cost, short & long-term

As mentioned in chapter 8.7 (Net Financial Income), financial income has an insignificant effect on Solstad's equity, but financial costs have more effect on Solstad's results. Therefore, financial income is neglected in the sensitivity analysis. In the long-term, financial costs have moderate effect on the share price. An increase/decrease of the financial costs of 30% reduced/increased the share price by approximately 32 %.

11.6 Summary of the Analysis

From the analysis the findings are that the operating margin and *oinoa* clearly have the largest effects on prices in the long-term. In the short-term, prices are most sensitive to changes in operating income. In the long-term, changes in operating income growth have little effect. The reason is that the terminal operating income growth is set to 3 %, which is

low, therefore increases/decreases of 30 % will not have significant effects on operating income compared to 10% for 2013. Prices are moderately sensitive to changes in financial costs and risk-free interest rates.

Based on the sensitivity analysis, Solstad's management should focus on keeping the operating margin and the *oinoa* rate on satisfying rates. Operating income and financial costs are also important, even though the prices did not seem to be very sensitive to these two variables.

12 Comparative Valuation

Comparative valuation can be used as a supplement to the fundamental valuation. The purpose is to choose key-ratios for Solstad and compare them with the ratios for the OSV market. Comparing the ratios can give indications on whether Solstad is undervalued or overvalued, or just how the market evaluates the future for the OSV industry.

As explained in the chapter 4.2 (Comparative Valuation), comparative valuation is not as complex as the fundamental valuation and is significantly less time-consuming. There are also weaknesses with this type of method. The findings might be that Solstad is way too undervalued or way too overvalued. The most commonly used comparable values in a comparative valuation are P/B and P/E. We have decided to use them as well as EV/EBIDTA. The benefits of using EV/EBIDTA are that this comparable is not affected by a company's capital structure and that EV does not include abnormal items and amortizations.

The companies that will be included in the comparative valuation are Solstad, Farstad, DOF and Eidesvik. When estimating value using comparative valuation it is important to adjust for differences in the capital structure among the various companies since this might affect the comparables. We found adjusted comparable for the different companies using Thomson Reuters' database. The calculations can be found in the Appendix (Comparative Valuation). (Thomson Reuters, Version 5.1.)

Amounts in NOK million	P/E	P/B	EV/EBIDTA
Comparables	13.75	0.71	10.76
x Base	305 327 000	4 664 513 000	1 428 000 000
Enterprise Value			15 370 114 397
-Net Financial Liabilities			9 171 311 000
Market Value of Equity	4 198 246 250	3 323 465 513	6 198 803 397
# Shares	38 662 733	38 662 733	38 662 733
Value per Share	109	86	160
Average Price per Share	118		

Table 42: Comparative Valuation

As we can see, the different comparable yield different price per shares. The estimated average price per share is NOK 118. The price per share per 31.12.2012 was NOK 100, so the estimated comparative valuation represents an increase of 18 %.

Solstad's adjusted P/E ratio is 15.4, which is higher than both the OSV average (13.75) and the OSE average (11.8). This might indicate overvaluation for both Solstad and the OSV industry.

Solstad's price to book ratio is 0.82, and the average for the OSV market is 0.71. The historical average P/B ratio on OSE (1910-2013) is 1.46. This is significantly greater than the P/B ratio for both Solstad and the OSV industry. So, based on the P/B ratio, the market either undervalues the OSV industry or the market has pessimistic prospects for the industry.

The EV/EBIDTA comparable increases the average price per share significantly. It seems that the market undervalues Solstad's EBIDTA compared to the average OSV companies' EBIDTA.

The comparative valuation supports the fundamental valuation in that there should be an increase in the price per share, even though not as large as the fundamental value. However, we would like to emphasize that this analysis has some shortcomings. The valuation could have been conducted using more than just three similar companies. We also base the comparative valuation on the statistics from the Thomson Reuters' database, and we assume they are correct.

13 Conclusion of the Valuation

To conduct this valuation we used strategic analysis and financial statements to determine Solstad's position in the market and its value.

Based on the findings from the strategic analysis, we predicted development for various variables in the future. These have been used to estimate future cash flows, which will affect the future results and the *NPV*. Price per share from the fundamental valuation was estimated to be NOK162. This represents an increase of 62 % from the market price per 31.12.2012.

From the comparable valuation, the price was calculated using the average of the three comparables, which resulted in NOK 118 per share. This indicates that the market either undervalues the OSV industry or they have pessimistic outlook for the industry.

The discrepancy between the fundamental valuation and the comparative valuation is quite large. The fundamental valuation might suffer from us being too positively biased, which is a frequent phenomenon in the financial world. Wrong growth assumptions can therefore occur. On the other hand, from the comparative valuation, it seems that the general financial market is pessimistic about Solstad and undervalues them. This combination can lead to a large gap between these two prices.

There might be several reasons why the market undervalues Solstad's equity. One reason is that Solstad is an illiquid stock on the OSE. The company is not a typical stock that attracts traders, so the trading volumes are low. This might be due to the owner structure. Solstad is owned by many and large long-term investors.

The market might not have identified the growth potential in the OSV industry. One reason for this might be due to the lack of interest in the OSV industry. The OSV industry is not among the most popular industries that are traded on the OSE. Thus, the companies in this industry might be unnoticed. Another reason is that the OSV industry is highly cyclical, and the frequent cycles might scare some short-term focused investors away from this industry

13.1 Trading Strategy

The intention of conducting this fundamental valuation of Solstad Offshore was to estimate the values of the company's equity, and to make a sensible trading strategy for both the internal and external investors.

The recommendation is determined on the basis of the current market price (31.12.2012) and the estimated price of the company. If the estimated price is lower than the market price, investors should sell their shares. When the opposite is the case the strategy will be to buy into the company. The stock market is volatile, and especially when it comes to the shipping industry. There will always be some movement in the market, and we see it reasonable to give the share price a range of 10% in movement from the price target on NOK162.

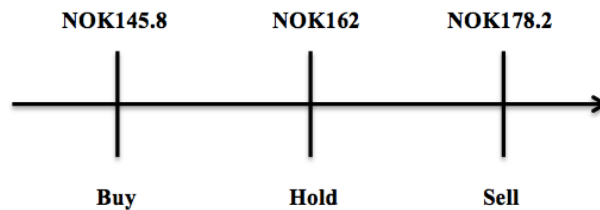


Figure 14: Trading Recommendation

With a share price equal to or lower than NOK145.8 we would recommend an investor to buy, since we look at the price as undervalued at this point. If the price goes above a rate of NOK178.2, selling the stock is recommended. At this point and higher up, the shares are valued overpriced. We recommend a hold-strategy when the stock moves in the price-range of 145.8 to 178.2.

Solstad Offshore ASA's share price going into 2013 (31.12.2012) started at NOK100. This means that the stock must increase 62 % in order to hit our estimated price per share. We strongly recommend buying this stock, at least until it reaches the buying point of NOK145.8.

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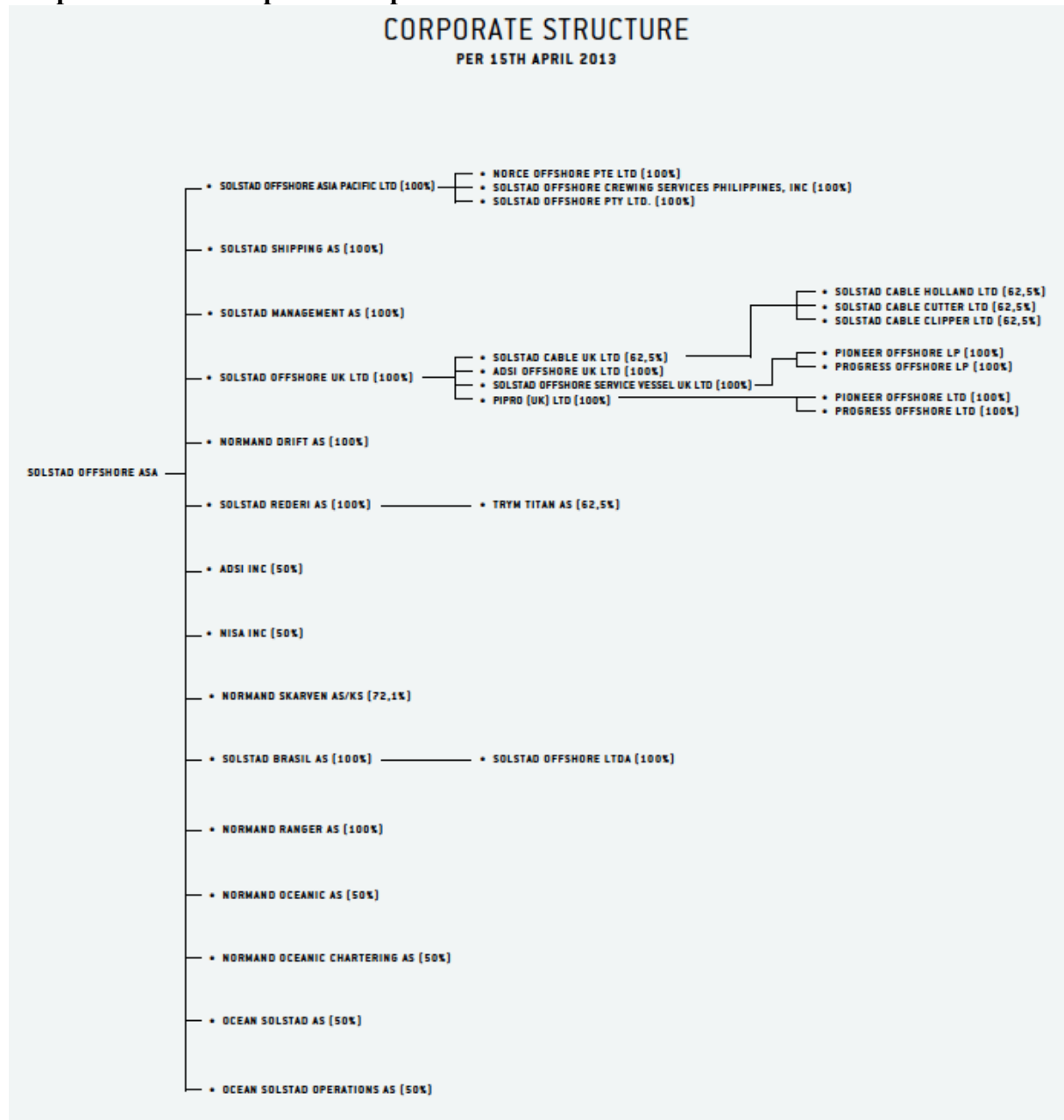
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Appendix

2.4. Company Structure

Corporate Structure per. 15th April 2013



The figure displays how the whole group is structured. The subsidiaries are displayed and the groups' ownership in percent.

Shareholders with more than 1 % holding at 31.12.2012.

Shareholders with more than 1% holding at 31.12.2012:

	Number of shares	Ownership
Soff Holding AS	13 906 506	35,95 %
Ivan II AS	2 358 158	6,10 %
Pareto Aksje Norge	2 286 943	5,91 %
Skagen Vekst	1 938 650	5,01 %
Solstad Invest AS	1 861 604	4,81 %
Fidelity Low-Priced Stock Fund	1 150 000	2,97 %
Odin Offshore	1 055 204	2,73 %
Pareto Aktiv	970 002	2,51 %
Skips AS John	738 757	1,91 %
Solhav Invest X AS	563 080	1,46 %
Vindbalen AS	540 375	1,40 %
MP Pensjon PK	535 355	1,38 %
Pareto Verdi	517 642	1,34 %
RBC Dexia Investor Services BA	470 429	1,22 %
	28 892 705	74,68 %

6.2 Financial Statements Analysis (Reported Statements)

These are all of Solstad's reported financial statements. They do not include normalization and reformulation, so they include abnormal items.

Income Statements

Amounts in NOK million	2012	2011	2010	2009	2008	2007
Freight income	3 288	2 975	2 614	2 518	2 135	2 108
Other operating income	74	5	3	11	74	111
= Total operating Income	3 362	2 980	2 617	2 529	2 209	2 219
Personnel cost	(1 229)	(1 160)	(961)	(804)	(608)	(491)
Ordinary depreciation and write down	(417)	(730)	(446)	(584)	(417)	(340)
Depreciation on capitalized periodic maint.	(167)	(188)	(192)	(145)	(104)	(97)
Other operating expenses	(700)	(750)	(698)	(566)	(349)	(342)
Insurance claims	-	-	20	33	26	-
Income from Investment	20	11	2	2	41	11
= Total operating costs	(2 493)	(2 817)	(2 275)	(2 064)	(1 411)	(1 259)
= Operating profit/loss	869	163	342	465	798	960
Termination lease	(87)	-	-	-	-	-
Income from investment in ass. Comp.	3	(2)				
Interest income	6	18	27	14	56	81
Other financial income	607	449	789	1 314	652	441
Interest charges	(524)	(550)	(371)	(254)	(315)	(222)
Other finance costs	(512)	(477)	(654)	(673)	(1 334)	(155)
Net financing	(420)	(562)	(209)	401	(941)	145
= Ordinary profit before taxes	362	(399)	133	866	(144)	1 106
Tax on ordinary result	34	(7)	(114)	171	171	- 403
= Net profit for year	396	(406)	19	1 037	27	703
Comprehensive income						
Translation adjustments foreign currency	(91)	6	(4)	(46)	56	7
Net gain on available for sale financial assets	0.050	0.023	0.015	31	50	(7)
= Comprehensive Income	305	(400)	15	1 022	133	703

Balance Sheets

Assets	2012	2011	2010	2009	2008	2007
Long term assets						
Long-term fixed assets						
Vessels and new build contracts	12 401	13 618	13 490	9 679	7 290	6 491
Capitalized periodic maintenance	246	235	252	177	202	131
Other tangible fixed assets	18	23	29	29	33	38
Total long-term fixed assets	12 665	13 876	13 771	9 885	7 525	6 660
Financial assets						
Investment in joint ventures	189	(6)				
Loans to ass. Comp. and JV	42	88				12
Investments in associated comp.	33	20	21	19	4	221
Investments in stocks and shares	5	5	4	3	1 083	960
Other financial assets	52	31	40	44		566
Other long term receivables	2	27	10	6	15	45
Pension funds	-	3	9	17	10	
Total financial asset	323	168	84	89	1 112	1 804
Total long term assets	12 988	14 044	13 855	9 974	8 637	8 464
Current assets						
Stock	73	60	59	39	19	26
Receivables						
Account receivables	518	700	522	466	497	510
Short term receivables	200	161	215	265	141	202
Other current financial assets	25	15	12	77	47	
Total receivables	743	876	749	808	685	712
Investments						
Marked based shares	0.394	0.344	0.321	0.306	17	60
Bank deposits and cash equivalent	807	646	872	1 445	830	1 053
Total current assets	1 623	1 582	1 681	2 293	1 551	1 851
Intangible fixed-assets						
Deferred tax assets	95	43	17	-	24	
Total Intangible fixed-assets	95	43	17	-	24	-
Assets for sale	-	5	13	-	-	-
Total Assets	14 707	15 673	15 566	12 266	10 213	10 315

Equity & Liabilities	2012	2011	2010	2009	2008	2007
Equity						
Restricted Equity						
Share capital [38.687.377 a 2,-]	77	77	75	75	75	75 588
Treasure shares	(0.011)	(0.051)	(0.380)	(0.415)	(0.223)	(0.232)
Other paid-in capital	112	112	112	112	112	112
Share premium reserve	1 654	1 654	1 541	1 541	-	-
Total restricted equity	1 843	1 843	1 728	1 728	187	187
Earned equity						
Other equity	2 863	2 634	2 836	2 883	3 494	3 494
Total earned equity	2 863	2 634	2 836	2 883	3 494	3 494
Minority interests	(42)	(61)	425	19	16	35
Total Equity	4 664	4 416	4 989	4 630	3 697	3 717
Liabilities						
Provisions						

Deferred tax	-	-	-	27	-	25
Taxes payable	-	40	77	-	215	357
Deferred income	-	-	-	8	-	20
Pension obligations	11	-	-	-	-	34
Other financial liabilities	51	52	32	10	68	47
Total provisions	62	92	109	45	283	453
Other long-term liabilities						
Other long-term loans	51	37	34	35	37	39
Debt to credit obligations	7 114	9 472	8 550	6 379	4 794	3 988
Total long-term liabilities	7 165	9 509	8 584	6 414	4 831	4 027
Current liabilities						
Account payable	187	257	311	162	167	136
Bank overdraft	65	102	103	100	439	410
Taxes payable	68	75	106	92	51	56
Accrued salaries and related taxes	46	59	50	50	41	43
Other current fin. liabilities/dividend	-	10	6	-	25	
Other current liabilities	392	275	286	206	206	133
Current interest bearing liabilities	2 057	878	1 022	566	473	1 340
Total current liabilities	2 815	1 656	1 884	1 176	1 402	2 117
Total liabilities	10 042	11 257	10 577	7 635	6 516	6 597
Total Equity and liabilities	14 707	15 673	15 566	12 266	10 213	10 314

Cash Flows

Group	2012	2011	2010	2009	2008	2007
Cash flow from operations						
Result before Tax	362	(399)	133	866	- 144	1 106
Taxes payable	(67)	(101)	(82)	(44)	- 46	(9)
Ordinary depreciation and write downs	585	919	639	729	521	437
Loss/gain long-term assets	(79)	18	(119)	(153)	275	(177)
Effect of change in pension assets	14	7	8	(7)	- 13	(9)
Changes in value of financial instruments	(55)	19	97	(157)		-
Interest income				(14)	- 56	(81)
Interest expense				254	315	222
Unrealized currency gain/loss	(115)	78	(26)	(260)	322	(248)
Change in short-term receivable/payable	113	(182)	85	146	63	(174)
Change in other accruals	88	8	99	(16)	- 127	(4)
Net cash flow operations (A)	848	366	833	1 344	1 110	1 063
Cash flow from investments						
Investment in tangible fixed assets	(614)	(1 248)	(2 983)	(886)	(1 108)	(1 571)
Payment of periodic maintenance	(178)	(150)	(268)	(121)	(175)	(107)
Sale of fixed assets	1 269	102	0.372	229	81	182
Payments of long-term receivables	71	(33)	(4)			-
Write-down of financial assets				(0.430)		-
Investment in other shares/interests	(185)	(1)	(1)	(12)	(75)	(1 080)
Realized shares and interests	2	-		31	61	216
Net cash flow from investments (B)	365	(1 330)	(3 256)	(759)	(1 216)	(2 360)
Cash flow from financing						
Payment to minority interests	(1)	(61)	(4)	(8)	(1)	(2)

Payment of dividend	(58)	(77)	(94)	(75)	(151)	(151)
Paid-in interest				16	58	81
Paid-out interest				(285)	(302)	(217)
Purchase/sale treasury shares	2	(2)	2	(8)	(1)	(16)
Change in restricted bank deposits					566	82
Paid-in long-term receivables				9	-	-
Payment of long-term re				-	(96)	(23)
Bank overdraft	(37)	(1)	2	(338)	29	410
Long-term debt	774	4 161	2 883	2 809	1 501	2 042
Repayment of long-term debt	(1 732)	(3 277)	(940)	(2 090)	(1 718)	(1 145)
Net cash flow from financing (C)	(1 052)	743	1 849	30	(115)	1 060
Net change in cash and cash equivalent (A+B+C)	161	(220)	(573)	615	(223)	(238)
Cash and cash equivalent 01.01	652	872	1 445	830	1 053	1 291
Cash and cash equivalent 31.12.	813	652	872	1 445	830	1 053

6.3.2.2 Reformulated Balance Sheets

Reformulation of Balance Sheet

Sum Operating Assets (In NOK 1000)	2012	2011	2010	2009	2008	2007
Vessels and new build contracts	12 4001	13 617	13 490	9 679	7 290	6 491
Investment in joint ventures	189	6	-	-	-	-
Investments in ass. Companies	33	20	21	19	4	221
Capitalized periodic maintenance	246	235	252	177	202	131
Assets for sale	-	5	12	-	-	-
Other tangible fixed assests	18	23	28	29	33	38
Deferred tax assets	95	43	17	-	24	-
Pension funds	-	3	9	17	10	-
Sum Long-Term Operating Assets	12 982	13 940	13 832	9 921	7 563	6 881
Deferred tax	-	-	-	27	-	25
Taxes payable	-	40	78	-	215	357
Pension obligations	11	-	-	-	-	4
Other long-term loans	51	36	34	35	37	39
Other financial liabilities	51	52	32	10	68	47
Sum Operating long-term liabilities	114	129	143	72	320	472
Net Operating Long-Term Assets	12 869	13 811	13 689	9 849	7 244	6 409
Stock	73	60	59	39	19	26
Short term recievables	200	161	216	265	141	202
Account recievables	518	700	522	466	497	510
Sum current operating Assets	791	921	797	771	658	738
Account payable	187	257	311	163	167	135
Bank overdraft	65	102	103	100	439	410
Taxes payable	68	75	106	92	51	56
Accrued salaries and related taxes	46	58	51	50	41	43
Deferred income	-	-	-	9	-	20
Other current liabilities	392	275	286	206	206	133
Sum Current Liabilities	758	768	856	619	904	798
Net Operating Current Assets	33	153	(59)	151	(247)	(60)
Net Operating Assets	12 902	13 964	13 630	10 000	6 997	6 349
Bank deposits and cash equivalent	807	646	872	1 445	830	1 053
Other financial assets(long-term)	52	31	40	44	-	566
Other current financial assets	26	15	12	77	47	-
Loans to ass. companies and jv	42	88	-	-	-	12
Investments in stocks and shares	5	5	5	3	1 083	960
Market based shares	-	-	-	-	17	60
Other long term receivables	2	27	10	6	15	45
Sum Non-Operating Assets	934	812	938	1 575	1 992	2 696
Common Shareholders' Equity	13 836	14 776	14 568	11 575	8 989	9 045
Debt to credit institutions/leasing oblig.	7 114	9 472	8 550	6 379	4 794	3 988
Total Restricted equity	1 843	1 843	1 729	1 729	187	187
Minority interest	(42)	(61)	425	19	16	36

Total Earned Equity	2 863	2 634	2 836	2 883	3 495	3 495
Other current financial liabilities/dividend	-	10	6	-	25	-
Current interest bearing liabilities	2 057	878	1 022	566	473	1 340
Net Equity and Interest-bearing Debt	13 836	14 776	14 568	11 575	8 989	9 045

Reformulated balance sheets divide assets into operating and financial assets.

7.5 Analysis of Credit Risk

S&P's Credit Rating System displays different credit ratings based on various factors.

Rating	Liquidity-Ratio lr1 (lg1)	Interest Coverage lc (rdg)	Equity Assets, percentage ep (ekp)	to	Return on Net Operating Assets Ndr
AAA	11.600	16.900		0.940	0.350
	8.900	11.600		0.895	0.308
AA	6.200	6.300		0.850	0.266
	4.600	4.825		0.755	0.216
A	3.000	3.350		0.660	0.166
	2.350	2.755		0.550	0.131
BBB	1.700	2.160		0.440	0.096
BB	1.450	1.690		0.380	0.082
	1.200	1.220		0.320	0.068
B	1.050	1.060		0.270	0.054
	0.900	0.900		0.220	0.040
CCC	0.750	0.485		0.175	0.026
	0.600	0.070		0.130	0.012
CC	0.550	-0.345		0.105	-0.002
	0.500	-0.760		0.080	-0.016
C	0.450	-1.170		0.030	-0.030
	0.400	-1.580		-0.020	-0.044
D	0.350	-1.995		-0.100	-0.058
	0.300	-2.410		-0.180	-0.072

Credit Ratings	Yearly Default Risk (pD)	Credit Premium Risk
AAA	0,0000	0,006
AA	0,0002	0,008
A	0,0008	0,010
BBB	0,0026	0,014
BB	0,0097	0,031
B	0,0493	0,044
CCC	0,1261	0,083
CC	0,2796	0,149
C	0,5099	0,214
D	0,8554	0,280

Different credit ratings and their correspondingly yearly default risks and credit risk premiums.

8. Forecasted Equations for Variables

Operating Income Growth

$$\text{Operating Income Growth (oig)}_t = \frac{OI_t - OI_{t-1}}{OI_{t-1}}$$

Operating Income to Net Operating Assets (OINOA)

$$\text{Operating Income to Net Operating Assets(oinoa)} = \frac{OI_t}{NOA_{t-1}}$$

$$(NOA_{t-1}) = \frac{OI_t}{oinoa_t}$$

Net Operating Margin (nom) and Result

$$nom = \frac{NOR_t}{OI_t}$$

$$\text{Net Operating Result (NOR)}_t = \text{Net Operating Margin (nom)} * OI_t$$

Financial Liabilities

$$\text{Financial Liability (FL)}_t = flr_t * \text{Net Operating Assets (NOA)}_t$$

Financial Assets

$$\text{Financial Assets}_t = far_t * \text{Net Operating Assets}_t$$

Net Financial Income

$$\text{Financial Income Rate (fir)}_t = \frac{\text{Net Financial Income (NFI)}_t}{\text{Financial Assets (FA)}_{t-1}}$$

Net Financial Costs

$$\text{Financial Cost Rate (fcr)}_t = \frac{\text{Net Financial Cost (NFC)}_t}{\text{Financial Liabilities (FL)}_{t-1}}$$

Operating Margin Calculation

Operating Margin	2012	2011	2010	2009	2008	2007	Average
Operating Income	3 289	2 968	2 597	2 497	2 143	2 113	
Operating Result	776	140	300	400	665	843	
Operating Margin	0,2359	0,0472	0,1155	0,1602	0,3103	0,3990	0,2113

Financial Liabilities Calculation

Financial Liabilities	2012	2011	2010	2009	2008	2007
Debt to credit institutions/leasing oblig.	7 114	9 472	8 550	6 379	4 794	3 988
Current interest bearing liabilities	2 057	878	1 022	566	473	1 340
Total Financial Liabilities	9 171	10 350	9 572	6 945	5 267	5 328

Financial Income Rate Calculation

Financial Income (in NOK 1 000 000)	2012	2011	2010	2009	2008	2007	Median
Net Financial Income	4	13	19	10	41	58	
Financial Assets	934	812	938	1 575	1 992	2 696	
Percent of Income to Financial Assets	0,005	0,016	0,021	0,006	0,020	0,022	0,0181

Here are some of the required calculations used in chapter 8. Forecasted Equations for Variables.

9. Cost of Equity

Calculation of beta using monthly closing prices for both Solstad and the OSE.

Beta	(euroinvestor.com)			
Date	Return Solstad (%)	Return OSEBX	Closing Price Solstad	Closing Price OSEBX
			136	446,46
1. februar 2007	-0,007	0,041	135	464,66
1. mars 2007	-0,007	-0,063	134	435,31
1. april 2007	0,097	0,063	147	462,85
1. mai 2007	0,099	0,032	161,5	477,61
1. juni 2007	-0,003	0,050	161	501,37
1. juli 2007	0,000	0,019	161	510,8
1. august 2007	-0,056	-0,051	152	484,83
1. september 2007	0,026	-0,020	156	475,31
1. oktober 2007	-0,077	0,049	144	498,42
1. november 2007	0,083	0,017	156	507,14
1. desember 2007	-0,058	-0,038	147	487,7
1. januar 2008	0,054	0,006	155	490,8
1. februar 2008	-0,148	-0,177	132	403,9
1. mars 2008	0,061	0,038	140	419,38
1. april 2008	-0,071	0,000	130	419,33
1. mai 2008	0,035	0,105	134,5	463,21
1. juni 2008	-0,022	0,073	131,5	497,11
1. juli 2008	-0,087	-0,084	120	455,15
1. august 2008	0,025	-0,095	123	412,06
1. september 2008	-0,065	0,013	115	417,26
1. oktober 2008	-0,235	-0,261	88	308,53
1. november 2008	-0,295	-0,177	62	253,86
1. desember 2008	-0,032	-0,201	60	202,75
1. januar 2009	-0,025	0,090	58,5	220,95
1. februar 2009	0,333	-0,019	78	216,85
1. mars 2009	-0,167	-0,051	65	205,84
1. april 2009	0,023	0,107	66,5	227,96
1. mai 2009	0,162	0,218	77,25	277,73
1. juni 2009	0,107	0,054	85,5	292,61
1. juli 2009	0,088	-0,037	93	281,72
1. august 2009	0,065	0,084	99	305,52
1. september 2009	-0,035	-0,025	95,5	297,97
1. oktober 2009	0,000	0,070	95,5	318,87
1. november 2009	0,131	0,041	108	331,98
1. desember 2009	-0,051	0,078	102,5	357,75
1. januar 2010	0,054	0,039	108	371,55
1. februar 2010	0,028	-0,021	111	363,89
1. mars 2010	-0,059	-0,011	104,5	359,86
1. april 2010	0,196	0,047	125	376,69
1. mai 2010	0,008	0,017	126	383,02
1. juni 2010	-0,087	-0,101	115	344,23
1. juli 2010	-0,061	-0,047	108	328,12
1. august 2010	0,111	0,092	120	358,41
1. september 2010	-0,033	-0,016	116	352,66
1. oktober 2010	-0,043	0,082	111	381,43
1. november 2010	-0,009	0,072	110	408,73
1. desember 2010	-0,050	-0,031	104,5	396,07
1. januar 2011	0,110	0,110	116	439,72
1. februar 2011	0,034	-0,022	120	430,24
1. mars 2011	0,000	0,037	120	446,16
1. april 2011	0,083	-0,002	130	445,41
1. mai 2011	-0,015	0,005	128	447,74
1. juni 2011	-0,063	-0,015	120	440,91
1. juli 2011	-0,042	-0,044	115	421,33

Solstad's beta is estimated by dividing the covariance between the market's (OSEBX)	-	Covariance:	1. august 2011	-0,061	-0,023	108	411,71
		1. september 2011	-0,093	-0,081	98	378,47	
		1. oktober 2011	-0,194	-0,080	79	348,28	
		1. november 2011	0,025	0,103	81	384,22	
		1. desember 2011	0,099	-0,009	89	380,85	
		0.0037	1. januar 2012	-0,090	0,011	81	384,95
		08359	1. februar 2012	0,235	0,032	100	397,36
		-	1. mars 2012	0,050	0,082	105	429,85
		Variance	1. april 2012	0,029	-0,008	108	426,61
		OSEBX:	1. mai 2012	0,009	-0,013	109	421,21
		X:	1. juni 2012	-0,172	-0,087	90,25	384,36
		0,0051	1. juli 2012	-0,047	0,059	86	407,09
		0301	1. august 2012	0,035	0,040	89	423,31
		-	1. september 2012	-0,045	0,028	85	435,22
		Beta:	1. oktober 2012	0,044	0,025	88,75	445,92
		0.727	1. november 2012	-0,124	-0,008	77,75	442,18
			1. desember 2012	0,158	0,000	90	442,09
			1. januar 2013	0,122	0,030	101	455,16
			1. februar 2013	0,050	0,024	106	466,02
			1. mars 2013	-0,009	0,015	105	473,07
			1. april 2013	-0,033	-0,004	101,5	471,22
			1. mai 2013	-0,034	0,019	98	480,02
			1. juni 2013	0,000	0,024	98	491,71
			1. juli 2013	-0,031	-0,047	95	468,77
			1. august 2013	0,011	0,057	96	495,41
			1. september 2013	0,068	0,003	102,5	496,78
			1. oktober 2013	0,102	0,010	113	501,82
			1. november 2013	0,044	0,061	118	532,29
	1. desember 2013	0,004	0,020	118,5	542,8		
	1. januar 2014	0,004	0,012	119	549,09		
	1. februar 2014	-0,017	-0,024	117	535,73		
	1. mars 2014	-0,043	0,037	112	555,5		
	Average Return	Monthly	0,01473	0,01643			

return and Solstad's return by OSEBX's variance in return. To calculate the covariance and variance, we used excel-formulas.

	2012	2013E	2014E	2015E	2016E	2017(T)E	Terminal(T+1)
Debt/Equity Ratio	1,97	1,87	1,77	1,68	1,60	1,52	1,44

The purpose of this is to show that the capital structure is changing in the coming years. Thus, the beta to equity is not a constant in the future.

Future Estimated Beta

$$\beta_{equity} = \beta_{noa} * \frac{Equity}{NOA} - \beta_{nfl} * \frac{NFL}{NOA}$$

This equation shows how to calculate the future Beta to equity, and by reformulation, calculating the required beta to NOA.

Net Operating Beta	2013	2014	2015	2016	2017	Terminal(T+1)
Beta to Equity (β_e)	0,727	0,701	0,674	0,649	0,626	0,604

Equity/NOA	0,362	0,375	0,390	0,405	0,420	0,435
Beta to Net Financial Liabilities (β_{nfl})	0,000	0,000	0,000	0,000	0,000	0,000
Net Financial Liability/NOA	0,711	0,625	0,610	0,595	0,580	0,565
Net Operating Beta (β_{no})	0,263	0,263	0,263	0,263	0,263	0,263

The table shows how we have calculated the beta to equity, which is based on both beta to noa and beta to financial liabilities. Beta to net financial liabilities is set to zero. Reason is explained in chapter 9, Cost of Equity. Beta to NOA is a constant. So when we found the beta to NOA in the first year, we could easily estimate the future beta to equity.

11. Sensitivity Analysis

Operating Income

Δ% Income Growth (Short-Term)	-30%	-20%	-10%	x	10%	20%	30%
Income Growth	0.07	0.08	0.09	0.10	0.11	0.12	0.13
Price per Share (IG) short-term	161	161	162	162	163	163	163
Δ% Price per Share	-0.84%	-0.56%	-0.28%	0.00%	0.28%	0.56%	0.84%

Δ% Income Growth (Long-Term)	-30%	-20%	-10%	x	10%	20%	30%
Income Growth	0.021	0.024	0.027	3%	0.033	0.036	0.039
Price per Share (IC) long-term	160	161	161	162	163	163	164
Δ% Price per Share	-1.29%	-0.86%	-0.43%	0.00%	0.43%	0.86%	1.29%

Operating Margin

Δ% Operating Margin (Short-Term)	-30%	-20%	-10%	x	10%	20%	30%
Operating Margin	0.18	0.20	0.23	0.25	0.28	0.30	0.33
Price per Share (om) short-term	156	158	160	162	165	166	169
Δ% Price per Share	-3.75%	-2.68%	-1.07%	0.00%	1.61%	2.68%	4.28%

Δ% Operating Margin (Long-Term)	-30%	-20%	-10%	x	10%	20%	30%
Operating Margin	0.14	0.16	0.18	20%	0.22	0.24	0.26
Price per Share (om) long-term	43	83	122	162	202	241	281
Δ% Price per Share	-73.26%	-48.84%	-24.42%	0.00%	24.41%	48.84%	73.26%

OINOA - Operating Income of Net Operating Assets

Δ% OINOA (Short-Term)	-30%	-20%	-10%	x	10%	20%	30%
OINOA	0.20	0.22	0.25	0.28	0.31	0.34	0.36
Price per Share (oinoa) short-term	156	158	160	162.0630	164	165	165
Δ% Price per Share	-3.76%	-2.57%	-1.13%	0.00%	0.91%	1.66%	2.09%

Δ% OINOA (Long-Term)	-30%	-20%	-10%	x	10%	20%	30%
OINOA	0.20276	0.23172	0.26069	0.28966	0.31862	0.34759	0.37655
Price per Share (oinoa) long-term	95	123	145	162	176	188	198
Δ% Price per Share	-41.46%	-24.19%	-10.75%	0.00%	8.79%	16.12%	22.33%

Risk-Free Interest Rate

Δ% Risk-Free Interest Rate (Short-Term)	-30%	-20%	-10%	x	10%	20%	30%
Risk-Free Interest Rate	0.01544	0.01765	0.01985	0.02206	0.02426	0.02647	0.02868
Price per Share (Rf) short-term	163	163	162	162	162	161	161
Δ% Price per Share	0.62%	0.41%	0.20%	0.00%	-0.20%	-0.41%	-0.61%

Δ% Risk-Free Interest Rate (Long-Term)	-30%	-20%	-10%	x	10%	20%	30%
Risk-Free Interest Rate	0.017	0.019	0.022	0.024	0.026	0.029	0.031
Price per Share (Rf) long-term	190	179	170	162	155	148	142
Δ% Price per Share	17.12%	10.75%	5.08%	0.00%	-4.57%	-8.72%	-12.48%

Financial Cost

Δ% Risk-Free Interest Rate (Short-Term)	-30%	-20%	-10%	x	10%	20%	30%
Risk-Free Interest Rate	0.02380	0.02720	0.03060	0.03400	0.03740	0.04080	0.04420
Price per Share (FC) short-term	164	164	163	162.0630	161	161	160
Δ% Price per Share	1.37%	0.91%	0.46%	0.00%	-0.46%	-0.91%	-1.37%

Δ% Risk-Free Interest Rate (Long-Term)	-30%	-20%	-10%	x	10%	20%	30%
Risk-Free Interest Rate	0.02730	0.03120	0.03510	0.03900	0.04290	0.04680	0.05070
Price per Share (FC) long-term	214	197	179	162	145	127	110
Δ% Price per Share	32.06%	21.37%	10.69%	0.00%	-10.69%	-21.37%	-32.06%

This is the calculations for the sensitivity analysis. It displays how increases/decreases of 10 %, 20 % and 30 % of the x-value increases/decreases the price per share.

12. Comparative Valuation

Comparative Valuation	P/E	P/B	EV (in NOK 1 000 000)	EBIDTA (in NOK 1 000 000)	EV/EBIDTA
Solstad	15,4	0,82	12 306	1 428	8,62
Farstad	12,5	0,77	11 627	1 306	8,90
DOF	22,9	0,79	26 547	1 998	13,29
Eidesvik	4,2	0,47	6 845	559	12,25
Average Comparables	13,75	0,7125			10,76

The different companies' P/E, P/B, EV and EBIDTA ratios were obtained using the Thomson Reuters version 5.1 database. The values should be on a leverage adjusted basis.