Master's Thesis

Valuation of Songa Offshore SE

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Songa Offshore SE, Executive Summary

Songa Offshore SE is a significant offshore driller operating on the Norwegian Continental Shelf, where they are represented by four rigs currently drilling on long-term contracts with Statoil. Moreover, they have three additional cold-stacked rigs offering flexibility should the market conditions improves. Recent years, the industry as a whole has faced solid headwinds emerging from the fall in oil price, culminating in challenging outlooks going forward.

SELL

Target Price: NOK 21.40

Share Data	
Ticker	SONG
Target	NOK 21.40
Price	NOK 31.30
Up/downside	-31.63%

Key Numbers	
Est. EV	$2,769,807,300
NIBD	$2,344,020,606
Est. Market Cap.	$425,786,693
No. of Shares	113,305,512

Key Ratios	2016	E2017
ROE	-6.82%	5.40%
ROIC	4.31%	5.70%

One aspect of Songa which stand out is their new and cost effective Cat D rigs which are contracted on high paying and long lasting engagements with Statoil. This contributes a significant amount of the recognized value reflected in the share price reviled in this thesis. This contract coverage has helped shield the company against the already observed downturn. Their strategy in later years has shifted to focus entirely on drilling of the Norwegian coast, with their operational rigs being harsh-condition mid-water semisubmersibles. The specifics of their rigs makes them well suited for drilling in tough artic conditions where most of the future drilling prospects in Norway are located. For Songa to utilize on these potentials, it is important to observe a rebalancing of the market, providing the drilling companies with higher day rates. The exact timing of such convergence is subject to low visibility, presenting upside potentials, but also noteworthy risk relative to our base case.

This thesis assessed whether the traded price of SONG as of February 24th 2017 was over-, under-, or correctly valued. Based on comprehensive strategic- and financial analysis, the authors conclude the share to be overvalued with a true value estimate of NOK21.40, ultimately generating a SELL recommendation to investors.

Financial Data USD '000	E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Operating Revenues	654,602	676,053	676,053	591,003	647,703	658,807	452,922	689,727
EBITDA	383,352	397,503	397,503	341,398	378,801	386,126	250,311	412,532
Equity/Invested Capital	28%	31%	35%	37%	41%	47%	48%	53%

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1 Introduction

1.1 Problem Statement

The objective of this paper is to find the true value of a common stock in Songa Offshore SE based upon research of trends and fundamental factors concerning the company going forward. The problem statement is as follow: "*What is the fundamental Equity value of Songa Offshore SE per 24.02.2017?"*. A conclusion of the problem statement will be conducted by solving for following sub-questions, covering different aspects of Songa Offshore as company.

Songa and Industry Characteristics:

- *What are the company specifics of Songa?*
- *What are the mechanisms and characteristics within the industry?*

Strategic and Financial Analysis:

- How are the global/industry market conditions and outlooks?
- *How is the financial performance and quality of Songa and peers?*
- What are potential competitive capabilities going forward?

Forecasting and Valuation:

- Which value drivers will affect Songa's performance going forward?
- What is the required returns toward investments in Songa?
- Which models to apply in finding the Equity value of Songa?
- How robust is the share price to changes in forecasts, budgeting and alternative scenarios?

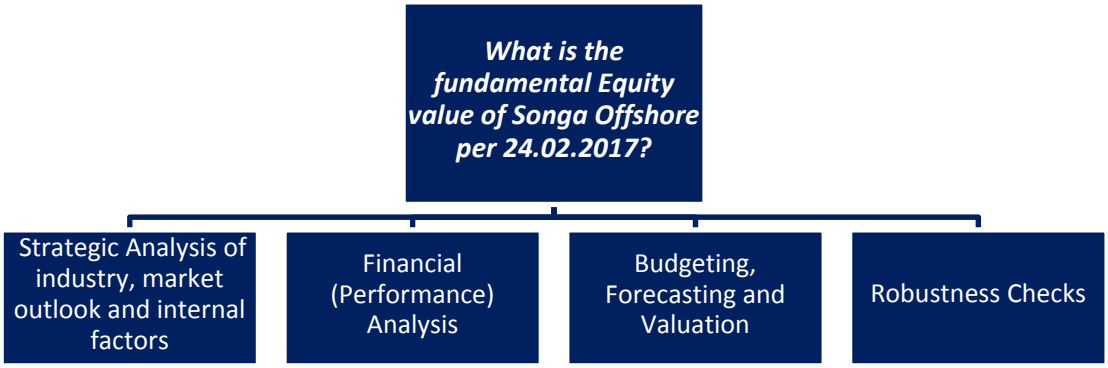


Figure 1-1: Own Production

1.2 General assumptions and limitations

- We assume the reader to have basic strategic, economic and financial knowledge regarding different theories. Effectively, the models and frameworks applied are only presented to some extent.
- Despite the high news-flow and market updates available, we have relied on events known and information available no later than the valuation date 24.02.2017, when the Q4 2016 report was published.
- Limited communication with Songa Offshore has resulted the thesis to mostly be based upon publicly available information.
- External analysis and findings concerning both the WTI Brent and Crude Brent has been used if constrained availability. This is justified based on similar drivers and high historical correlation.
- Annual report 2016 was published 27.04.2017 and has therefore not been used as basis for this valuation.
- Throughout this valuation, we apply theory presented by Petersen & Plenborg, Koller et. Al and Penman.

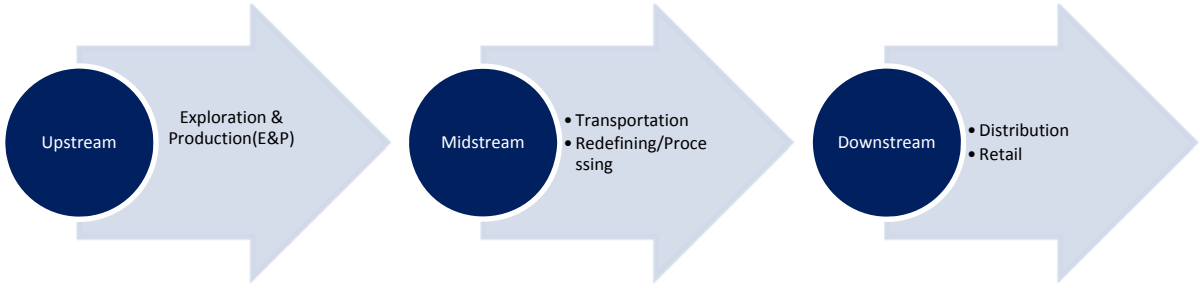
2 Offshore drilling industry and Songa Offshore

2.1 Description of the Industry

The drilling industry is an important part of the value chain within offshore oil. The value chain of fossil fuel is simply spoken the process of discovery, extraction, processing, distribution and consumption, were you have three general activity classifications:

- Upstream
- Midstream
- Downstream

Offshore drilling companies are a part of the upstream segment which include different exploration and production companies. The next step in the value chain are the midstream segment which are companies operating with refining, processing and transportation. The last step in the value chain are downstream companies, operating with distribution and retail. Drilling companies most commonly purchase and own a rig before the asset is chartered out to a petroleum operator with the purpose to drill and complete wells on fields they have been rewarded exploration and extraction rights to (Maersk Drilling, 2017).



2-1: Own Production

The history shows the drilling industry as cyclical with periods with booming demand, high utilization and day rates followed by oversupply, falling demand and decreasing day rates. As typical for cyclical industries, instead of balancing the supply in upcycles the tendency is to

observe high increases in new-build orders and vice versa in down cycles with increases in scrapping and decrease in contract agreements. The offshore drilling industry is described as highly competitive due to many participants and the possibility to move rig constructions overseas and also modify in terms of depth capabilities.

2.1.1 Segments and rig types

The offshore drilling industry is the discovery and development of oil and gas resources which lie underwater both of coasts, continents, lakes and inland seas (Offshore Energy Today, 2010). The industry can further be segmented by the different capacities of the rigs and/or geographical areas. Differences between rig types can be factors such as stability, mobility, depth capacity and size where the different offshore fields often demand different rig types.

Jack ups: A self-elevating rig, mobile and easy to re-locate. When positioned at desired location, it can lower steal constructions working as legs down to the seabed. The Jack ups is often applied on relative shore shallow waters with depths up to 120 meters.

Semi submersibles: A floating rig which obtains its buoyancy from ballasted, watertight pontoons located below the ocean surface and wave action. This feature makes the construction stable and less affected of the wave levels. These constructions have a higher drilling capacity compared to jack ups and can drill at water depths up to 4000 meters. They can be kept stable on its location by either a moored system or motors systems in elaboration with GPS, often referred to as dynamic positioning. Thus, these attributes make semi submersibles a desired choice on fields in rough seas such as the Norwegian continental shelf.

Drillships: Are customized ships capable to drill on extremely deep waters. Due to its ship construction, this is the most mobile rig type and a desired choice for assignments towards exploration drilling, and are capable to operate on waters depths up to 3600 meters. They are built with similar systems as the dynamically positioned semi submersibles, using motor and GPS systems to keep it position over the well (Diamond Offshore, 2017).

2.1.2 Norwegian continental shelf, floater market

The Norwegian Continental shelf (NCS) is the continental shelf of which Norway arises, this also includes Skagerrak, North Sea, Norwegian Sea, Barents Sea and Arctic Ocean. Norway's decision rights on the shelf are formulated by United nations and was proclaimed in 1963. The adventure on the NCS was set off by the discovery of the Ekofisk field in North Sea in 1969, one of the largest findings in history. This was followed by new discoveries where the current trend is that the explorations has started to increase in northern areas as the older fields are being fully extracted (Norwegian Petroleum Directorate, 2014).

In 2016, there was 80 producing fields at the Norwegian Continental shelf with 62 of the fields in North Sea, 16 in the Norwegian sea and 2 in the Barents Sea (Norwegian Petroleum Directorate, 2016). The general market outlook for the Norwegian continental shelf remains disappointing in the short term with a large number of rigs coming off contract and restricted new demand from operators. Also, many new builds have been canceled or currently in shipyards on delayed deliveries until the market demand increases. However, as a result of an aging fleet with over 40 % of the floaters in Norway being older than 20 years, it is expected higher activity on rig scrapping through the whole current down turn, a trend already observed through 2016 (Clarkson Platou, 2017). In general terms, offshore drilling companies is facing difficulties the coming years due to low contract coverage on their fleets, with some exceptions such as Songa Offshore and Odfjell Drilling which has bridged themselves on long term contracts through the whole expected down cycle. As a result of the last years' reorganization, Songa are today a specialized company where all their 7 rigs are in the mid-water, harsh-condition, floater segment at the Norwegian continental shelf. By ultimo 2016, the NCS floater market consisted of 30 units in total, a historically low number due to the current down cycle (Pareto Securities, 2017).

Overview NCS Flaters Ultimo 2016					
	Unit	Owner	Built	Type/Generation	Expiration
1	**Songa Enabler**	**Songa**	**2016**	6G	*31.06.2024*
2	**Songa Encourage**	**Songa**	**2016**	6G	*31.04.2024*
3	**Songa Endurance**	**Songa**	**2015**	6G	*31.12.2023*
4	**Songa Equinox**	**Songa**	**2015**	6G	*31.11.2023*
5	Scarabeo 8	Saipem	2012	6G	*31.10.2017*
6	Deepsea Stavanger	Odfjell	2010	6G	*31.10.2018*
7	Transocean Spitsberger	Transocean	2010	6G	*31.07.2017*
8	Deepsea Atlantic	Odfjell	2009	6G	*31.03.2019*
9	West Hercules	NADL	2008	6G	*Warm stacked*
10	Leiv Eirikson	Ocean Rig	2001	5G	*31.07.2017*
11	West Venture	NADL	2000	5G	*Cold stacked*
12	West Navigator	NADL	2000	5G	*Cold stacked*
13	COSL Promoter	COSL	2012	4G	*31.12.2019*
14	Island Innovator	Maracc	2012	4G	*31.04.2017*
15	COSL Innovator	COSL	2011	4G	*Warm stacked*
16	COSL Pioneer	COSL	2010	4G	*Warm stacked*
17	Stena Don	Stena	2001	4G	*Warm stacked*
18	Scarabeo 5	Saipem	1990	4G	*31.06.2017*
19	Transocean Arctic	Transocean	1986	4G	*31.08.2017*
20	West Alpha	NADL	1986	4G	*Warm stacked*
21	Polar Pioneer	Transocean	1985	4G	*Cold stacked*
22	**Songa Dee**	**Songa**	**1984**	4G	*Cold stacked*
23	Deepsea Bergen	Odfjell	1983	3G	*31.07.2017*
24	Transocean Searcher	Transocean	1983	3G	*Cold stacked*
25	Transocean winner	Transocean	1983	3G	*Cold stacked*
26	**Songa Delta**	**Songa**	**1980**	3G	*Cold stacked*
27	Bredford Dolphin	Fred. Olsen	1980	3G	*Cold stacked*
28	Borgland Dolphin	Fred. Olsen	1977	3G	*Warm stacked*
29	Bideford Dolphin	Fred. Olsen	1975	3G	*31.03.2017*
30	**Songa Trym**	SONGA	1976	2G	*Cold stacked*

Figure 2-2: Own Production/Pareto Securities - Rig Weekly

2.1.3 Rig rates and utilization

Two frequently used definitions within the drilling rig industry are the daily rig rate and utilization rate. The utilization rate is the relationship between the total number of rigs and those operating on contract.

The daily rig rate is the amount a rig owner gets in revenues from the operator for a day's operations of the drilling rig. The most common type of agreements within the industry are a flat fee for each contract, meaning that the implied rig rate is found by dividing the total fee on number of days. The rig rates deviate due to different types of rig constructions, locations, availability and more (Market realist, 2016).

The day rate is often derived from recent published contracts agreed upon, though daily rates are not a common standard, but subject of different measures relying on the data provider in terms of data samples (different generations, geographical areas, harsh/calm environment etc.), calculation techniques etc. An example may be how an implied day rate can be based upon worldwide semi-submersibles, or floaters only accounting for newer generations, which in both cases would could be representative for Songa's Cat D rigs. Despite these potential differences, it is often a high correlation and similar levels observed, thus being indicative of the market conditions for given rigs.

There are typically two different types of contracts within the drilling industry; *time chartering* and *bareboat chartering.* In time chartering agreements, the rig owner is the one exposed to operational risk, resulting in halted payments if the rig is out of order. The operator chartering the rig bears the market risk in form of payments in line with pre-agreed day rates. In bareboat chartering, the rig owner charters out only the physical asset, hence the operator is bearing both the operational and market risk (Stopford, 2009). The most common practice is the time chartering principle, which also Songa follows.

2.1.4 Stacking of rigs

Stacking of rigs is a mechanism used by drilling companies to balance the trade-off between operational costs occurring when the rigs are held active, and costs occurring by stacking and re-activating stacked rigs to start drilling again. A popular distinction within stacking of rigs are cold and warm stacking. Whether the rig owner chooses to cold or warm stack the rig depends

on differences in cost levels they are able obtain, and the expectations they have on time horizons and shifts in the market (Market Realist, 2016).

An important cost in addition to the accruing costs during the stacking period are the costs related to reactivating the rigs. A reactivation can be defined as the process of restoring the effectiveness and operational ability which often have been significantly corroded during stacking period.

2.1.5 The industry today

The industry has gone from boom to bust the last years as they have faced substantial challenges resulting from lower oil prices, where both the utilization rate and daily rig rate has met pressure from both the demand and supply side last years. Producers have firmly cut back on their supply-chain spending resulting in an evaporation through the whole chain and for the drilling industry a structural imbalance of global rig supply & demand. A required response has been to undertake substantial headcount reductions through efficiency programs, consolidations, refinancing, together with delayed delivery of new builds and stacking of existing rigs. The Brent crude oil has in the second half of 2016 moved sideways in a channel between $45/barrel and $55/barrel resulting in a fierce competition for the few tenders in the market.

2.2 Songa Offshore

2.2.1 Description and history

Songa offshore is a group of entities with Songa Offshore SE as the group parent. It is registered in Cyprus but listed at the Norwegian stock exchange (ticker: SONG) and operates currently as an International Midwater Drilling Contractor with full presence in the North Atlantic basin as Statoil's most trusted drilling services provider (Songa Offshore, 2017).

The company was founded in 2005, initiated by a consortium led by the Norwegian investor Arne Blystad, with the purchase in the secondhand market of Songa Venus and Songa Merkur, two semisubmersible rigs, and Songa Saturn, a drillship. In the subsequent years (2006-2008) Songa Offshore acquired the three semisubmersible rigs Dee, Delta and Trym together with an ultra-deep water rig called Eclipse in 2010-2011 which were sold in 2012 to Seadrill. Saturn, Merkur and Saturn were also sold, respectively in 2010 and 2012 (Songa offshore, 2017).

Songa's rigs, all classified under the same semisubmersibles segment, are all applicable for the drilling activities exploration and development. Another common characteristic is their floating mobility meaning that they can be relocated for new customers regarding of future demand. The semisubmersible rigs are also considered the most stable within the floating rig segment making them popular among the production companies with oil fields located in rough waters.

Timeline - Songa Offshore	
2005	• Founded and listed on the Norwegian OTC list • Songa Venus and Songa Mercur acquired from IPC • Songa Saturn acquired from GlobalSantafe
2006	• Listed on Oslo Børs in January • Songa Dee acquired from Stena • Songa Venus and Songa Mercus underwent upgrading
2007	• Songa Trym acquired from Odfjell Drilling
2008	• Songa Delta acquired from Odfjell Drilling • New corporate headquarters est. In Limassol, Cyprus
2009	• Songa Offshore redomiciled to Cyprus
2010	• USD 50 million investment in Deepwater Driller Ltd, the owner of UDW rig Songa Eclipse, giving Songa offshore a 31.25% stake • Songa Saturn sold
2011	• Increased ownership in Songa eclipse to 100 % • Awarded contracts for the two initial Cat D rigs with Statoil on 8 years tenors, to be constructed at DSME in South Korea
2012	• Awarded contracts for two additional Cat D rigs with Statoil in 8 years tenors, to be constructed at DSME in South Korea • Extensive upgrades of Dee, Delta and Trym • Eclipse sold
2013	• New management team and strengthening of the Board of Directors • Comprehensive refinancing to facilitate successful delivery of the Cat D rigs as well as to create a solid and sustainable long term financial platform
2014	• Sale of Mercus and Venus • Establishment of strategic Joint Venture of international operations with Opus Offshore
2015	• Delivery of the Cat D rigs Equinox, Endurance and Encourage from DSME • Equinox and Endurance commenced drilling under the long-term contract with Statoil at the Troll Field on the Norwegian Continental Shelf • Trym received a notice of cancellation of its drilling contract
2016	• Delivery of Enabler from DSME • Encourage and Enabler commenced drilling • Comprehensive refinancing

2-3, Own production/Songa Q4 2016 Report

2.2.2 The fleet today

The current fleet consists of 4 Cat D rigs and 3 Legacy rigs. The modern Cat D rigs built in 2015-2016 are classified as harsh environment rigs, thus designed for robust year-around drilling, completion, testing and intervention operations, such as the North Atlantic basin. It has the possibility to operate both with a moored and dynamically positioned set-up. Another opportunistic feature is the flexible rig design prepared for eventual deep water and arctic operations, activated by minor post upgrades.

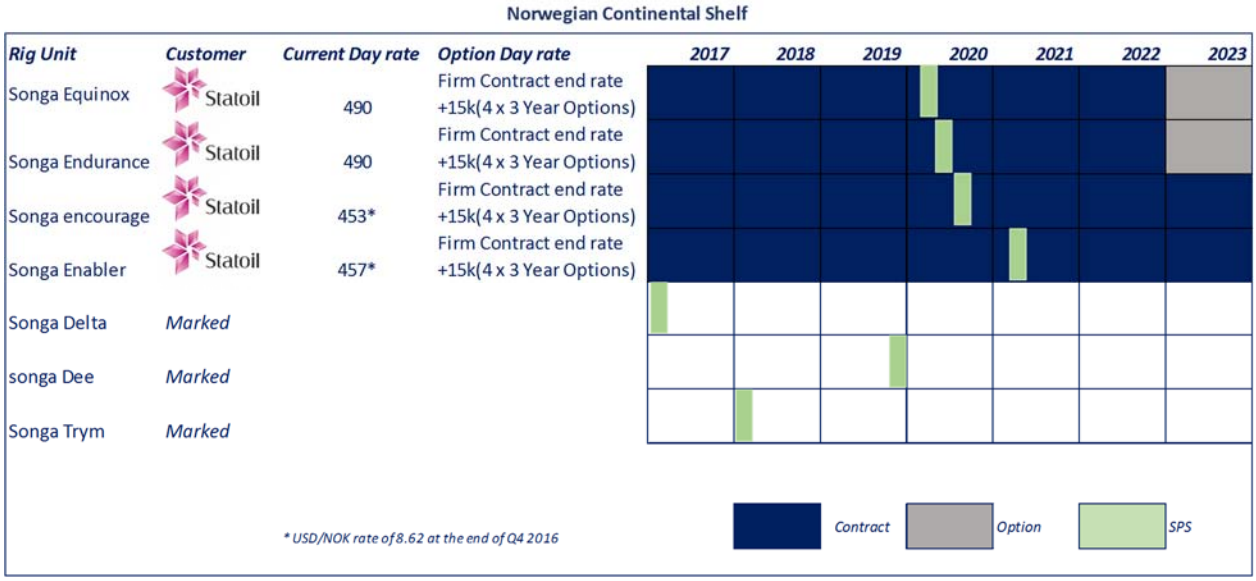


Figure 2-4: Own Production/Songa Offshore Q4 2016 Report

These 4 rigs are today Songa Offshores most important assets as they are chartered by Statoil on long-term contracts. The contract length for all the 4 Cat D rigs was originally for 8 years with options for 4x3 years per rig on top of that. However, Statoil exercised contractual rights to reduce the contract duration with the number of days each rig delayed, relative to the pre-agreed delivery window. Effectively, this reduced the contract length of Equinox by 347 days and Endurance by 184 days when the two rigs started its operations for Statoil in mid-2016. Likewise, the contractual length for Encourage by 132 days and Enabler by 118 days. By ultimo 2016 Equinox and Endurance were located at the field *Troll,* Encourage at *Heidrun,* while Enabler endured a transitory stay after its completion of a well at the *Snøhvit* field, and is expected to be relocated to the *Blåmann* well during 1 quarter 2017, with a suspension rate

amounting to $343 000 per day (75% of operational day rate). The four Cat D rigs had by end 2016 an industry leading contract backlog of £4.4bn, and an additional $7.7bn of options.

As the four Cat D rigs are almost identical, Songa can utilize similar equipment and upgrade

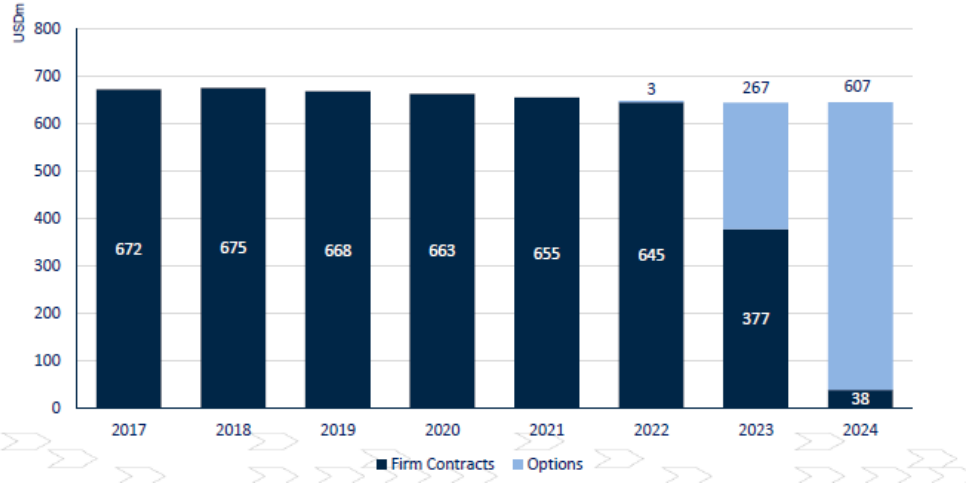


Figure 2-5: Own Production/Songa Offshore Q4 2016 Report

materials as well as apply similar understanding and experiences to them all. A result of this is a significant reduce operational expense level compared to its peers as well. The overall trend through 2016 was lower operational expenditures as Songa capitalized on economies of scale effects on the rigs.

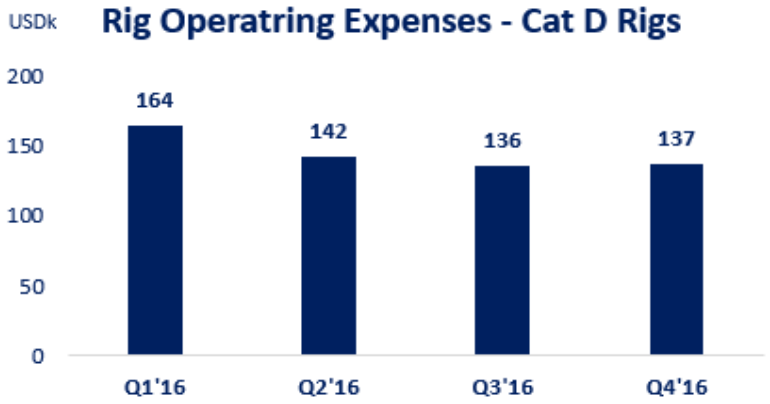


Figure 2-6: Own Production/Songa Offshore Q4 Report

The other three rigs, Dee, Trym and Delta are older constructions built in 70-80's but recently updated and modified to increase their expected lifetime. All three of them are currently cold

stacked at the *Skipavika Terminal* on the Norwegian west coast, with Delta being the most recent addition when it ended its contract with Statoil November 2016. However, the management are currently marketing the three rigs for new agreements giving the company an upside option if contracted.

Figure 2-5: Songa Offshore Q4 2016 Report

2.2.3 Structures and Shares

Figure 2-7 illustrates Songa Offshores financial structure represented as book values end of year 2016. Songa's main assets are the rigs which accounts for nearly all the non-current assets which again are over 90% off total assets. Due to the capital intensity associated with the

drilling industry, Songa is substantially geared through bank loan facilities and the bonds SONG05 and SONG04, resulting in a book debt-to-equity ratio equal 3.3.

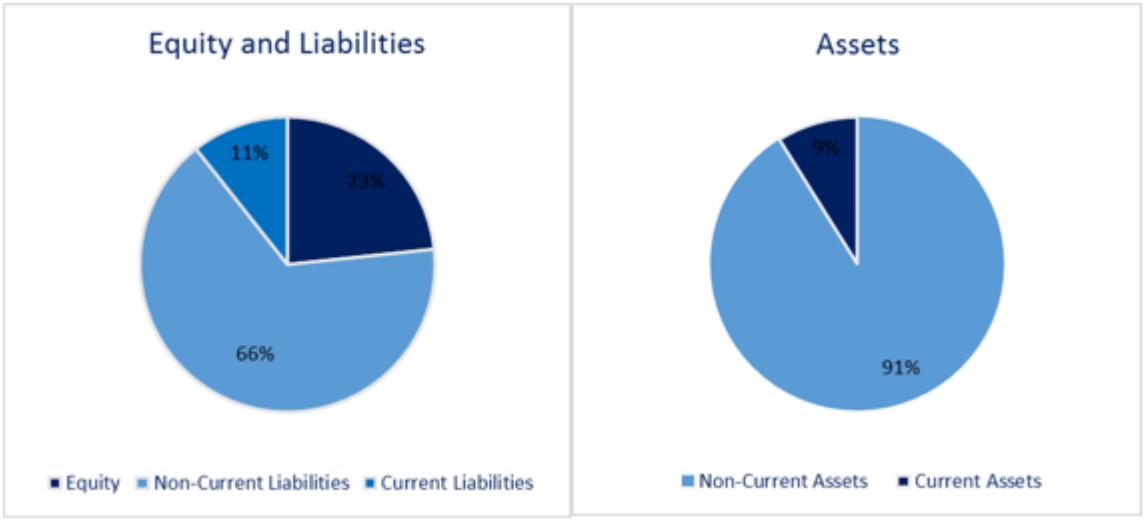


Figure 2-6: Own Production

The company's largest shareholder is Fredrik Wilhelm Mohn with a 44.41% stake as of 31.12.2016 through his investment company Perestroika AS and affiliates. Mr. Mohn also holds the seat as chairman at the board of directors. He played a crucial role under the re-structuring process during 2016 providing guarantees and dialog with the different bondholders.

2.2.4 The Songa re-structuring 2016

Similar to many companies in the offshore and oil supply industry in recent years, Songa Offshore went through a massive re-structuring process in 2016. The process was instrumental to ensure the company as a going concern. As observed in the industry, many of the bond holders was forced to take massive hair-cuts on their principal when converting it to equity. But in comparison to many other companies, Songa was in a bad position when negotiating with

the bond holders with less leverage on the banks and bondholders as the delivery of only two of four Cat D rigs had found place, and without the restructuring they would not have had enough cash on hands to complete the delivery of the two last Cat D rigs. This resulted in an unfavorable deal for the existing shareholders through a conversion from debt to equity of the SONG06 bond. See appendix for closer description of bonds and debt covenants.

2.2.5 Cat D Arbitration Case

In 2015 Songa offshore received a letter of notice concerning a filed arbitration case from the South-Korean rig supplier Daewoo shipbuilding & Marine engineering Co(DSME) related to the delivery of Songa Equinox and Songa Endurance. DSME holds Songa Offshore responsible for cost overruns and delays on the two rigs resulting in a claim amounting to $373M (Offshore Energy Today, 2015). The contracts were set up as so-called turnkey contracts, contrary to build-to-order contracts where the constructor builds on the desired specifications, giving the rig-builder (DSME) much freedom in design. Due to this turnkey feature, Songa find the claim strongly probable to not materialize in compensation, which is also backed by respectable law firms in UK and Norway. In 2016 Songa submitted a counterclaim against the shipbuilder amounting to $66M. The ongoing arbitration case is expected to carry on to 2018.

2.3 Peer group companies

A chosen peer should have the same underlying characteristics as the company being valued (Koller et al., 2010). These characteristics include, but are not limited to, production methodology, capital structure, and risk profile. We define Songa's main competitors in offshore drilling at the Norwegian shelf as: Odfjell Drilling (ODL), North Atlantic Drilling (NADL), Transocean (RIG) and Fred. Olsen Energy (FOE). All the chosen peers have semisubmersibles operating in Norway, similar to Songa. Transocean stands out against the other as they have a much larger fleet, in addition to having more diversified operations in respect to geographical

locations. As their risk profile, capital structure etc. are comparable in addition to their operations at the Norwegian Continental Shelf equals that of the other peers, they are included. All these competitors are publicly listed, which makes their data easily accessible.

Peer	Info	Key financials		Region	Fleet
ODFJELL DRILLING	Founded in Norway in 1973, they operate mobile offshore units in Norwegian and international waters.	**Revenue:** **Market Cap.:** **Share price:**	$ 657 million $ 426 million $ 1.73	Norway: 4 UK: 1 South America: 1 Malaysia: 1	**Semisubs:** 5 **Drill ships:** 2
NORTH ATLANTIC DRILLING	Founded in 2011 as a subsidiary of Seadrill Limited. Provides harsh enviroment offhsore drilling services mainly in Norway and the UK.	**Revenue:** **Market Cap.:** **Share price:**	$ 524 million $ 47 million $ 1,96	Norway: 6 UK: 1	**Semisubs:** 3 **Jack-ups:** 3 **Drillship:** 1
Fred. Olsen	Founded in 1997 as an amalgamation of all energy related activities affiliated to the Fred. Olsen companies.	**Revenue:** **Market Cap.:** **Share price:**	$ 825 million $ 161 million $ 2.41	Norway: 3 Stacked 5	**Semisubs:** 8
Transocean	Founded in1973, Transocean can trace its roots back to onshore drilling in Texas in the 1920s.	**Revenue:** **Market Cap.:** **Share price:**	$ 3,7 billion $ 5 billion $ 13,75	Norway: 3 UK: 5 Americas: 11 Asia: 8 Africa: 1 UAE: 1 Stacked: 29	**Semisubs:** 25 **Jack-ups:** 10 **Drillships:** 23

Figure 2-7: Own Production

3 Strategic analysis

3.1 A Customized Supply/Demand Model

We choose to take a closer look at the demand and supply within the rig market to better pinpoint external factors and trends possibly affecting Songa Offshore. The model is customized with inspiration from the Shipping market model to make it adequate for the drilling rig industry. The model is chosen as its breaks up, isolates and to some extent simplifies factors driving a complex rig industry and therefore provides a more specific understanding of the industry opposite to more general models such as the PESTEL framework.

3.1.1 Global Macro outlooks

The International Monetary fund expects a higher economic activity in 2017 relative to 2016. The growth is especially expected to be contributed from emerging markets and developing countries. The Global growth in 2016 was according the IMF 3.1%. For 2017 and 2018, the growth is expected to accelerate with projections amounting to 3.4% and 3.6% for 2017 and 2018. In a short-term view, there is undoubtedly significant deviations between the global growth and growth specifically in oil related industries. However, in the long term perspective, global growth will set the pace for the rig industry due to its demand after energy sources.

The international Energy agency forecasts an annual long-term global GDP growth rate to 2040 amounting to 3.4% based on figures from IMF and World Bank databases (IMF, 2017). Mckinsey Global Institute Analysis operates with a lower projected annual GDP growth to 2064 amounting to 2.1% (MGI: Global growth, 2015).

Fossil fuels is per today an instrumental source of global energy supply. In the long run however, it seems as a matter of *when,* more sustainable sources will take over and play a greater part as energy source. It's challenging to estimate the timing of such transmission as it is dependent on factors such as political engagement to force for a shift, together with fundamental progresses of efficiency within renewable energy will be decisive of such timing.

The world GDP growth is a good indicator of the demand of oil as fuel and energy source. As described in earlier paragraphs, OECD countries accounts for much of the total energy demand, while the non-OECD countries accounts for the largest growth. The International monetary fund(IMF) estimates a world GDP growth to 3.4% in 2017 and 3.6% in 2018, with a significant higher growth rate in Emerging markets compared to more advanced economies. (IMF, 2017)

Both Norwegian and international politicians have lately opened up for possible drilling in Arctic waters which currently are strongly restricted based on its controversy towards wildlife. All else being equal, this could potentially increase the demand after drilling platforms. However, such

plans are at an early stage, making it difficult to assess possible gains towards the drilling industry (Oilprice, 2017).

3.1.2 Rig Demand

The total rig demand is a function of numerous factors. But the most direct driver is the capital budget levels of E&P companies which again are highly correlated with the spot and forward price on crude oil. As a result of this, the starting point of the analysis of the rig demand is to decompose the oil price into its different drivers.

3.1.2.1 Oil Price

As the Brent Crude oil is the type extracted from the Norwegian Continental shelf, this is the most important entity to analyze. However, the oil market is a bundled interplay between the different oil types and are influenced by similar factors. The two most used benchmarks are the WTI crude oil and Brent crude oil which in general follows each other and are both considered as “sweet oils” meaning a low level of Sulphur and less costs of processing.

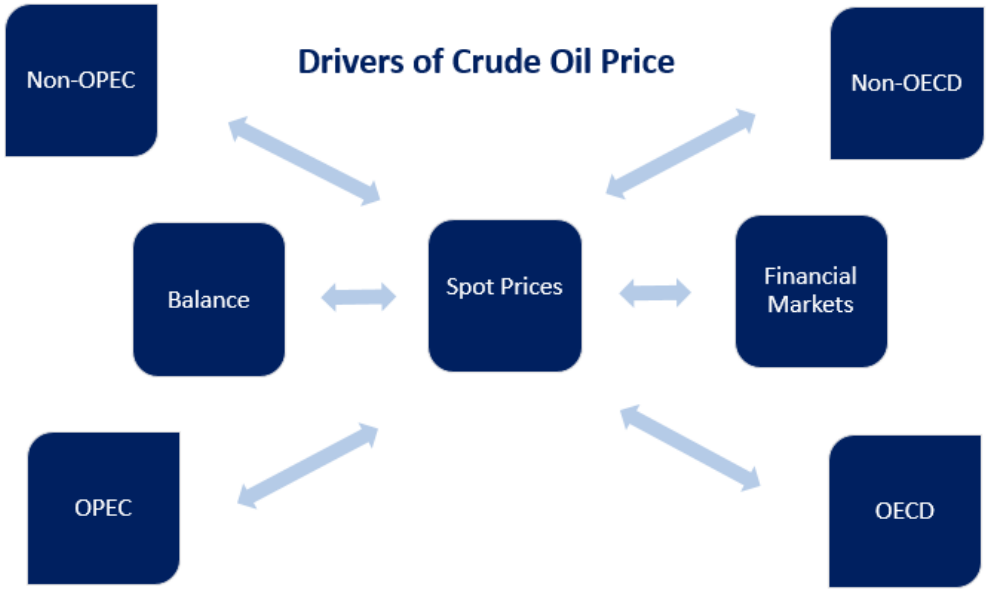


Figure 3-1: Own Production/Energy Information Administration(EIA)

The chart below shows the development between the two common oil benchmarks WTI and Brent. And as illustrated from 1978, they have very similar patterns and levels due to similar factors which affect the price.

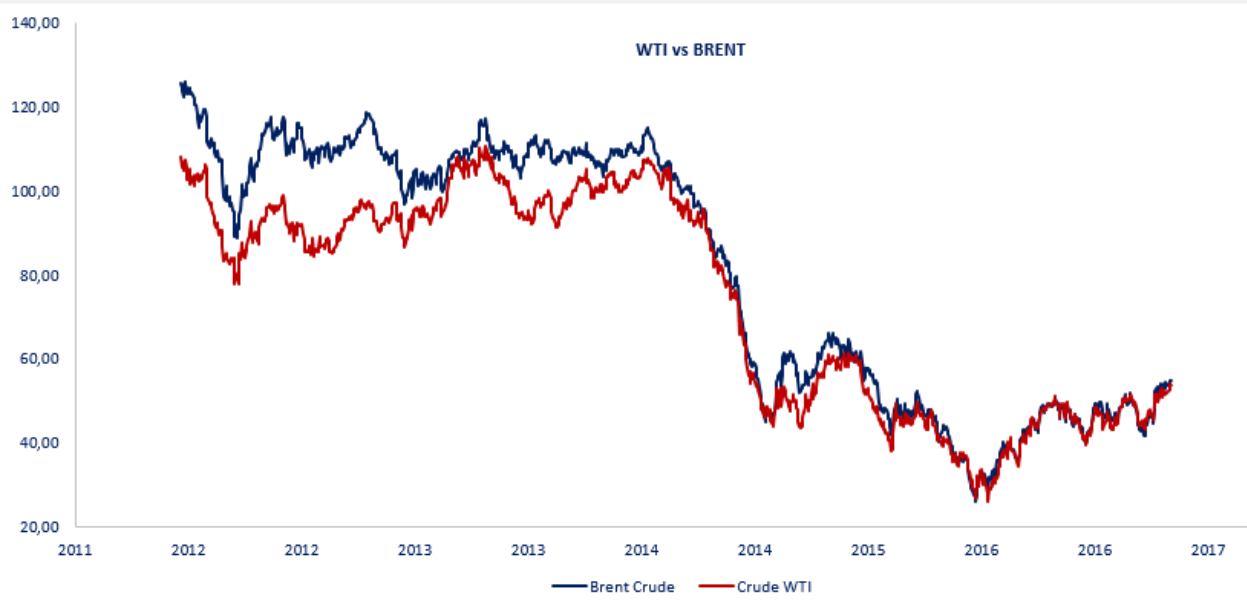


Figure 3-2: Own Production/Energy Information Administration(EIA)

Oil Demand

OECD

The organization for Economic Co-Operation and Development(OECD) stands for approximately 50 % of the world oil consumption. Despite the high volume consumed, the growth is significantly lower compared to the Non-OCED countries. From 2000-2010 there was observed a decline in OECD consumption while Non-OCED consumption increased with 40 % through the same decade. This intergovernmental economic organization has 35 members consisting of advanced countries such as United States and much of Europe which generally spoken, are mature economies demanding high levels of energy and fuels but with lower growth-rates.

A country's infrastructure and structural conditions are important factors determining the level of oil demand. A clear tendency is the higher vehicle-ownership per capita in developed countries, resulting in higher need of oil for transportation. Aa contrasting tendency is that

OECD countries tend to have higher taxes on fuel, and policies favoring new vehicles running on biofuels and renewables lowering the growth despite of high general economic growth. Also, OECD countries tend to have lower levels of subsidiaries towards the end-use prices on oil. Effectively, this generates a faster reaction in demand to price changes, nevertheless it is a solid barrier of lag between price changes and adjustments in a country's transportation and vehicle stock (EIA, 2017a). As seen in the chart below, the consumption growth from OECD countries is expected to be modest the coming years.

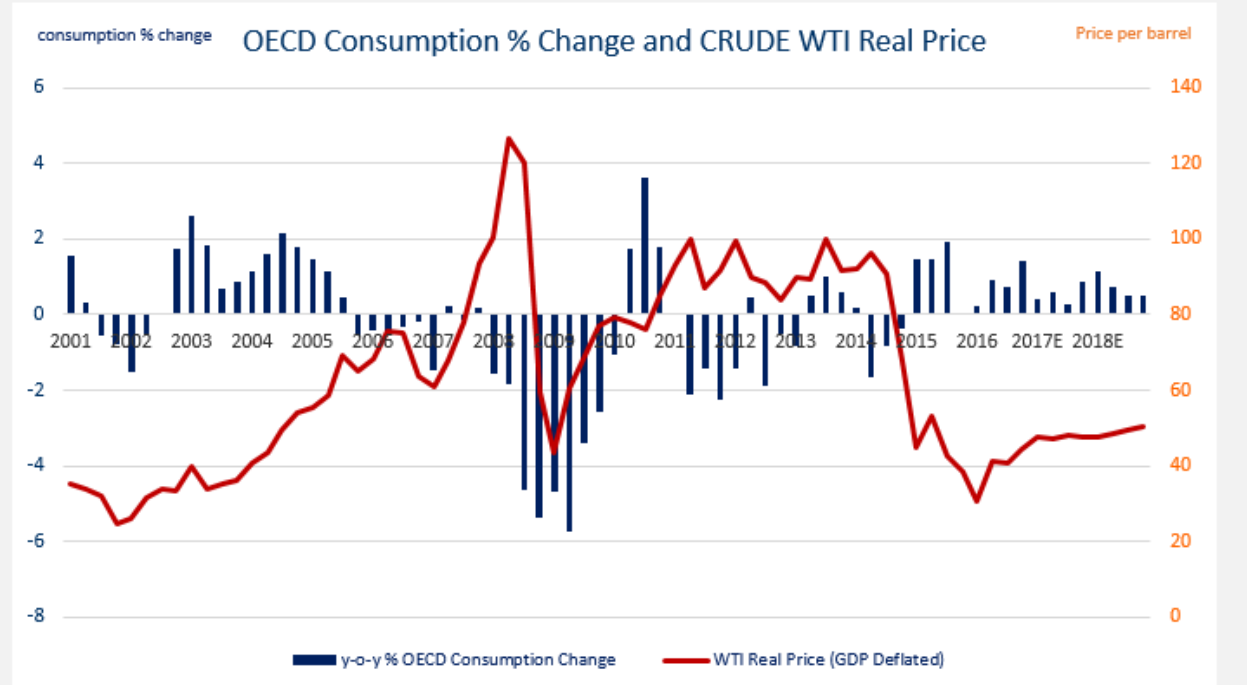


Figure 3-3: Own Production/Energy Information Administration(EIA)

Non-OECD

Opposite to OECD countries, high growth in the demand after fuels from Non-OPEC countries has been observed recent years. Large Non-OECD economies such as China, India and Saudi-

Arabia has accounted for the strongest growths seen latest years. This demand reflects the rapid growth in their general economies and the current and expected levels of economic growth will have a significant impact of the global oil demand and prices. The main drivers for such effects will be higher power generation, manufacturing process, larger transportation activity and increases in population.

Structural factors in developing countries also creates a stronger relationship between the economic growth and oil price. A greater portion of their economies tend to occur from manufacturing industries which are more energy intensive than service industries.

Changes in the outlook for future economic conditions can also impact current oil prices. As seen historically, progression in economic outlook has often been interpreted as a more tighten future oil market, thus resulting in expected future oil prices, higher inventories, lower supply and a raise in the current price level.

EIA is estimating all net increase in consumption to occur from Non-OECD countries the next 20

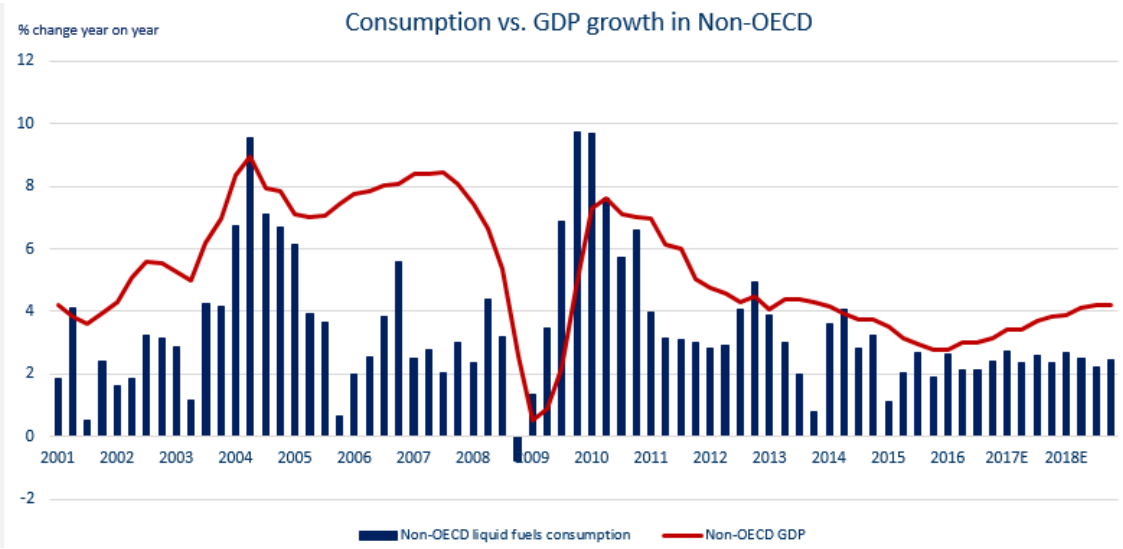


Figure 3-4: Own Production/Energy Information Administration(EIA)

years. However, the strong growth observed in countries such as China is not expecting to continue as the country is entering a more balanced growth path (EIA, 2017b).

Financial Markets

A significant part the oil markets are driven by financial players, trading non-physically quantities of oil in terms of e.g. futures and other derivatives towards oil. This part of the market is instrumental within price discovery thus influencing the oil prices.

The participants' motivation ranges greatly. From producers and airlines using derivatives to hedge some of their exposure to price changes, to players without primary interests in trading physical oil such as banks, hedge funds and money managers trying to profit on price changes. In a trade you find a buyer and seller, and typical non-commercial investors can add significant liquidity in the derivatives market by taking the other side of transactions with commercial players. On the other side, some concerns have also been raised towards non-commercial as investments and trading may consume all the liquidity and create strong price movements, especially when the momentum in the oil price is strong. Consequently, speculation from hedge funds and financial players may create significant movements in price not occurring from the physical demand and supply side.

3.1.3 Oil Supply

OPEC

Organization of the petroleum exporting countries (OPEC) is an organization consisting of 13 oil producing and exporting countries with the objective to coordinate and unify its members' petroleum policies through an actively managed production target aiming for efficient and regular supply to end consumers, stable revenues for the members, and a reasonable return on capital for petroleum investors. OPEC's influence of the crude oil price is significant as the total oil export from OPEC countries stands for approximately 60 % of the global petroleum traded. The significance of OPEC's impact on the crude oil price can be illustrated by how the price has changed in relation to OPEC's largest member, Saudi- Arabia and its production.

Another important aspect of OPEC and the crude oil price is the organizations management of total capacity. OPECs spare capacity, which is by the U.S. Energy Information Administration defined as possible production volume that can be ramped up and put into the markets within 30 days, is an indicator of the oil markets' ability to respond to potential crisis that may affect the oil supply. OPEC's spare capacity and the price of crude oil relates to each other as when the buffers are smaller, the risk of global events hitting the suppliers are more exposed, and the oil price tend to go up resulting from higher risk premiums in the price. (EIA, 2016).

After years with high OPEC production to the market resulting in low oil prices, OPEC has now promised to decrease its production, as the high production rate has been costly for many of the members. However, history has shown that OPEC does not always initiates promised reductions.

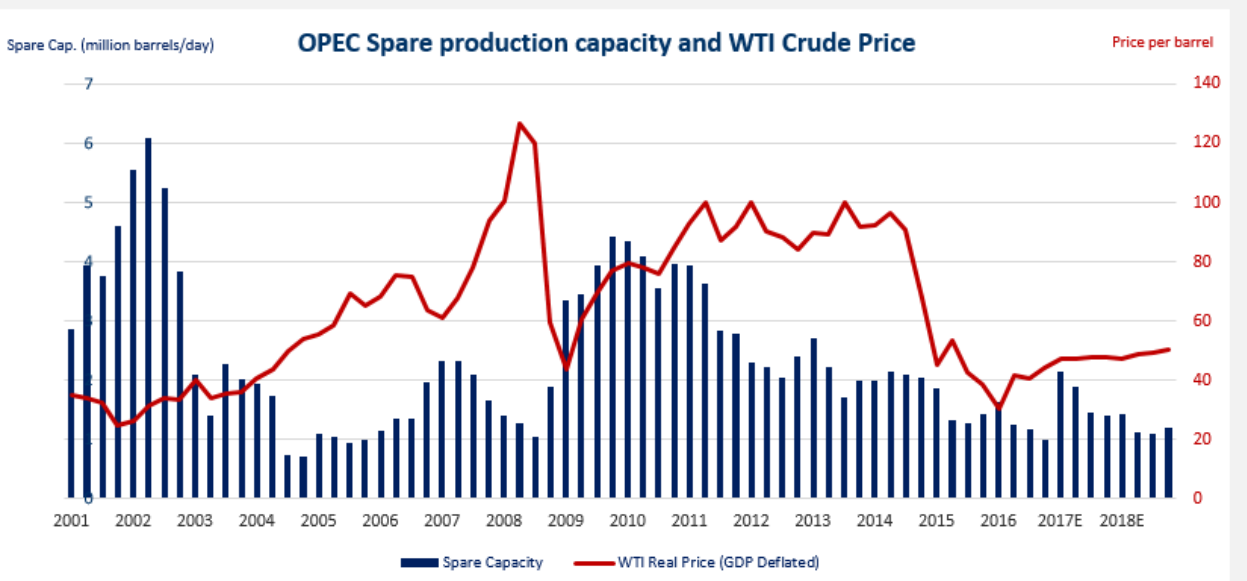


Figure 3-5: Own Production/ Energy Information Administration(EIA)

As the chart above illustrates, OPECs production levels and spare capacities have a strong relationship. EIA estimates relative low spare capacity levels through 2017 and 2018, which isolated may favor a higher oil price (EIA, 2017d).

Non-OPEC

Approximately 60 % of the current oil production in the world occurs from non-OPEC members. Important areas of production for non-OPEC members are North-America, Russia/former Soviet regions, and the North Sea. An important distinction between Non-OPEC producers from OPEC producers are how they are subject to individual policies regarding oil decisions, opposite to the centralized decisions taken in OPEC. Effectively, non-OPEC countries are in general to be considered as price takers, responding to changes in price instead of directly influencing the price through capacity management. Another difference is how oil producers within Non-OPEC countries mostly are investor-owned opposite to OPECs often government owned oil companies. A consequence of this is that non-OPEC production operates closer to full capacity and holds less spare capacity (EIA, 2017e).

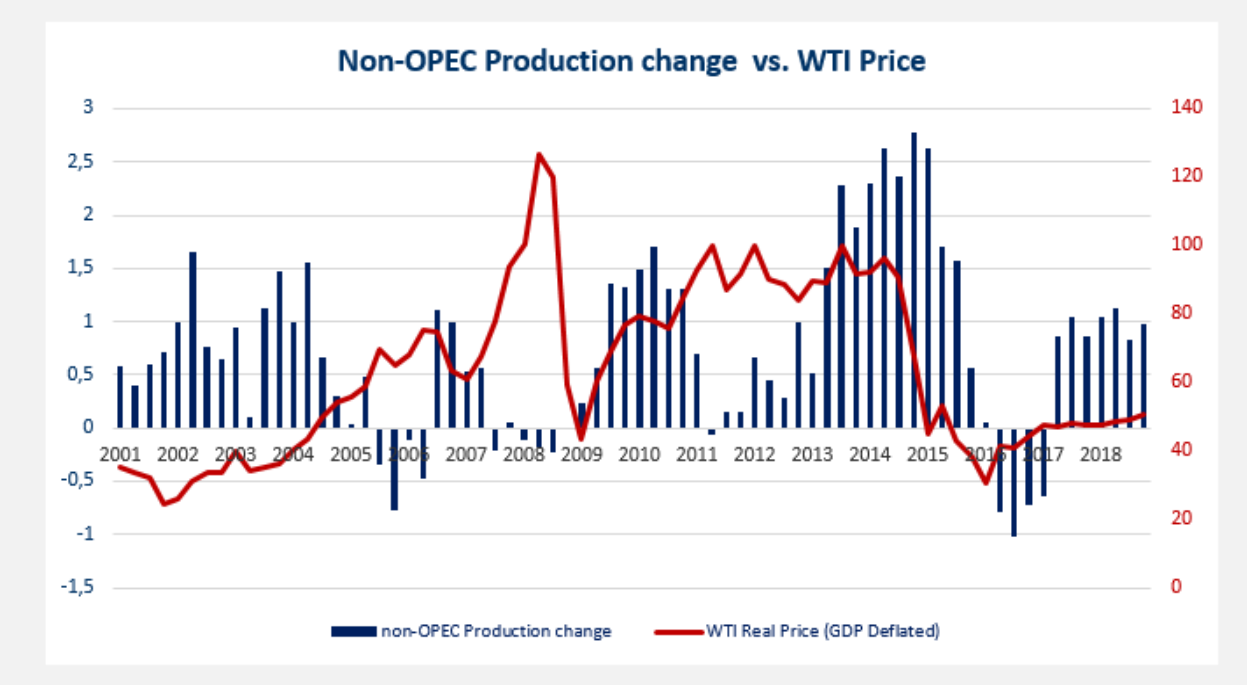


Figure 3-6: Own Production/Energy Information Administration(EIA)

Balance

In periods were production exceeds consumption, crude oil can be stored for future use, thus the oil inventories act as a balancing factor between the supply and demand. An example is how the inventories increased significantly during 2008-2009, when the demand after crude oil fell strongly. On the other hand, suppliers can choose to draw on their inventories during periods when the demand exceeds supply. As future supply and demand expectations are subject of high uncertainty, inventories are seen as an important precautionary.

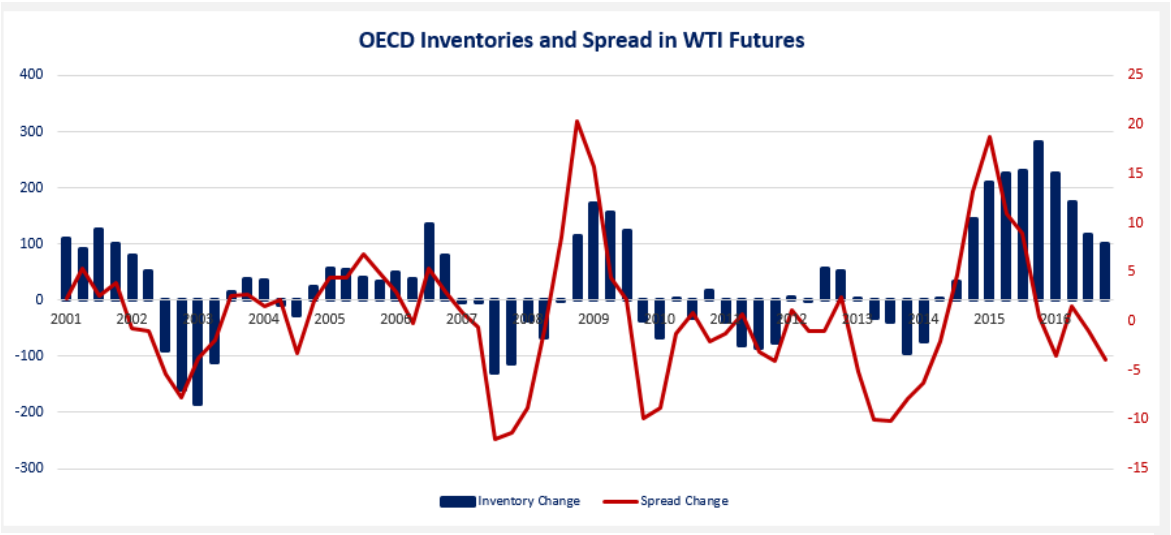


Figure 3-7: Own Production/Energy Information Administration(EIA)

The global oil inventory is strongly affected by the relationship between the price today and expected price in the future. If expectations in prices indicates a stronger future demand/lower future supply, future prices will rise and encourage the suppliers to build up inventories with delivery in the future. Contrariwise demand/supply expectations will be materialized in form of lower inventories (EIA, 2017f).

3.1.3.1 Summary Oil price

We have now seen numerous factors influencing shifts in the oil price. Due to this intricate interplay between the presented factors, the oil price is a difficult object to measure, even in a short-term basis. We expect to observe a shift in where the demand will originate (OECD/Non-

OECD). However, the long-term growth in total global demand will be the most important factor for Songa. Organizational production/inventory policies, financial markets may generate volatile oil prices which can rapidly change outlooks short and mid-term. Although, in a long-term perspective it is important to bear in mind that the drop in oil price the last years has not been caused by fundamental shifts in the total demand but mostly as a temporary supply shift initiated by OPEC on a strategic level. EIA has projected the Brent crude oil price up to 2050 illustrated in the chart below. Due to the long estimate period there is a lot of uncertainty to this projection, but it serves as an indicate in terms of level and direction going forward. There are many different hypotheses on the future direction of the price, where some of the scenarios also takes into account a change in the political environment in form of an increased focus on more sustainable energy sources in the long-term. The U.S. Energy Information Administration (EIA) predicts a substantial lower volatility and average Brent crude oil price of $55/barrel in 2017 and $57/barrel in 2018. (EIA, 2017g).

3.1.3.2 E&P budgeting

The petroleum operators in the Norwegian continental shelf are as described above, generally price takers. Therefore, both the current and expected future price on the Brent crude especially is important as this is the type extracted from the North Sea where Songa currently holds their focus.

The demand of rigs will be affected by the break-even oil price for the producers when calculating on their projects in terms of activity level. The break-even prices fluctuate substantially from field to field, as costs for extracting oil may differ greatly. This can occur from differences in the geological area, water depths, transport distance of output and technologies required.

The investment level on the Norwegian continental shelf has fallen dramatically the last few years, after record-high capital expenditures during 2014-2015. The current downturn has

disciplined the E&P companies in terms of substantial cost reductions. A resulting aspect to this is significantly lower break-even prices on the Johan Sverdrup field which is expected to start operations during 2019, Statoil expects best-in-class break-even prices as low as $25/barrel going forward. In relationship to expectations of stabilization and increase in the Brent crude prices the coming years together with more cost efficient operators, it is expected to observe a steady increase in the E&P company's capital budgeting the coming years (Norwegian Petroleum Directorate, 2017).

3.1.3.3 Summary Rig demand

We expect to observe an increase in the rig demand the coming years. But the expected volume of new contract agreements on rigs the coming years will still be limited, seen in a historic perspective. This is driven by a lower equilibrium of the oil price and lower E&P budgeting relative to recent years.

3.1.4 Rig Supply

The total supply of rigs can be divided into the different segments and rig classes described earlier. The main focus in this analysis will be the floater market as this is the classification of Songa's rigs.

3.1.5 New Builds

In addition to the rigs either warm- or cold-stacked there is also a significant number of new-builds currently held at the construction yards waiting to be assessed in the market when the conditions allow for this. According to Pareto, there is ultimo 2016 37 new builds in the floater segment ready to enter the market when needed (Pareto Securities, 2017).

3.1.6 Scrapping

So far in this down cycle 69 floaters have been scrapped (Pareto Securities, 2017), isolated this causes a decrease in the total supply and thus generating a positive effect for existing drilling suppliers. However, this has mainly been backed by the weak market outlooks which has forced many rig suppliers to cut costs deriving from holding rigs unchartered. As rigs are required to undergo special periodic services (SPS) in five year cycles, older rigs are prime candidates when scrapping options are revived. Hence, the process of scrapping rigs is accelerated as these special periodic services typically require CAPEX in the range of USD 25m-200m (SEB, 2016).

As seen from the chart below, the current age of the total floater fleet is, in a historic view, exceptionally high indicating a possibly higher scrapping rate going forward. A consensus in the market regarding the most likely scrapping candidates puts Songa Offshore together with Odfjell Drilling in a favorable position to replace Transocean and Fred Olsen Energy as the major rig players in the North Sea. (Nordea, 2016).

3.1.7 Second-hand market

The size of the second-hand market and its efficiency is difficult to assess. As a result of the downturn in the market, many rigs are currently valued to historically low Net Asset values (NAV). This combined with many of the rig companies' credit and liquidity challenges, some financially strong players have lately acquired rigs in the second-hand market as part of their asset-play. On the other hand, acquisitions in the second-hand market has historically been a solution to capture profits in booming markets with high demand where the lead time from order to delivery for new-builds has been too long. We believe that strong financial players who acquire rigs as part of their asset play will the next years be a factor increasing the supply, where for many distressed rig companies the alternative would be to scrap their assets.

3.1.8 Total Fleet

The Norwegian floater market was per ultimo 2016 consisting of 30 rigs. However, only 50% of the fleet were contracted, resulting in a historically low utilization rate. Similar patterns are observed when looking at the total floater market. Since the start of the current downturn, 71% of floaters are confirmed scrapped which is 22 % of the total fleet supply at the last peak (Pareto Securities, 2017). Globally, the current total floater fleet consist of 280 rigs in addition to 37 announced or started new-builds.

NCS floaters Ultimo 2016					
Age	**Rigs**	**Generation**	**Rigs**	**Contracted**	**Utilisation**
0-10Y	13	6th gen.	9	8	89%
11-20Y	4	5th gen.	3	1	33%
21-31Y	3	2-4 gen.	18	6	33%
31Y+	10				
Total	30		30	15	50%

Figure 3-8: Own Production/Pareto Securities - Rig weekly

A general trend is that the operators often chooses the newest generations for drilling contracts. As seen in the table below representing the total floater market and the Norwegian floater market we can see that the utilization rate of the 6th generation rigs has a significant higher utilization rate than the rest, at respectively 65 % and 89 %. However, the utilization rate between 5th generation rigs and 2-4th generation rigs does not currently follow this reasoning. According to Pareto Sec Analyst Bård Rosef, this occurs from the lately observed high scrapping rate on the older rigs compared to the 5th generation rigs. Also, the 5th generation rigs are often ousted by drilling ships in more calm seas, while semisubmersibles are preferred in harsh environment such as the Norwegian continental shelf. Hence, resulting in a relative higher

utilization rate for the 5th generation rigs than the 2-4th generation rigs operating in the Norwegian Sea compared to the total floater market.

Global Floater Market Overview Feb 2017							
	Currently Contracted	Warm Stacked	Cold Stacked	Current Supply	Remaining Newbuilds	Total Supply	*Confirmed Scrapped*
6tg gen	85	33	13	131	31	162	*0*
5th gen	12	2	27	41	3	44	*4*
2-4th gen	44	30	34	108	3	111	*67*
Total Current Fleet	**141**	**65**	**74**	**280**	**37**	**317**	***71***

Figure 3-9: Own Production/Pareto Securities – Rig weekly

3.1.9 Summary rig supply

The lower oil prices observed has changed the rig sector. We believe that the total rig supply is reflecting activity levels which were observed when E&P budgeting were higher thus an excessive total rig fleet lagging from earlier market conditions will influence the supply. However, opposite forces in form of scrapping and lower new-builds levels will work as a catalyst in bringing the amount of rigs down to more balanced levels, thus lowering the supply relative to demand (Market Realist, 2016).

Despite an almost non-existing visible demand at the moment, the current activity level in the floating rig universe seems unsustainably low with a working utilization of 47% and Nordea Markets estimates at least 215 floaters to be needed to meet required offshore oil production by 2020, implying an increase in contracted rigs of 52 % from today. The total floater backlog today amount to 34 rigs, equivalent to 16 % of the estimated rig demand in 2020, implying a vast volume of contract agreements going forward with the newest rigs, especially in the Norwegian market, first to be contracted. Finally, we find importance in observing a continuation of scrapping for the supply to reach more sustainable levels.

3.1.10 Summary of rig Supply/Demand and Equilibrium

Through the application of our modified Shipping Market model we have established opinions concerning the supply and demand within the rig industry on short-, mid- and long-term.

We believe that on short term the E&P spending will increase and consequently generate a re-allocation from the uncontracted fleet to the contracted. However, there will still be an immense supply overhang resulting in utilization and daily rig rates not much higher than the ones observed today, arising from the continued imbalance. We therefore expect continued pressure on the rig owners which again will hold up the scrapping level towards more sustainable levels, where older generations will be selected first.

Our mid-term view is that the head-wind facing the Rig industry will ease to some extent due to a better market balance resulting from scrapping and higher E&P spending. This will again improve the utilization rate and increase rig rates from the levels observed today. Moreover, it is expected to see the newest generation rigs to be contracted first, especially at the Norwegian Continental shelf.

In a long-term perspective, the demand of petroleum as a fundamental energy source combined with growth in Non-OECD countries will require the industry to continue its operations in decades to come. However, as is the nature of the rig industry, large cyclical fluctuations will create large changes in industry profitability from period to period.

3.2 Porters five

In 1979 Michael E. Porter wrote an article making the point that industries level of competitiveness relates to five forces. These forces shape every industry and supplies the author with a framework to identify the weaknesses and strengths of an industry. (Harvard Business Review, 2011)

3.2.1 Threat of New Entrants

This force is defined as the barriers met when trying to enter an industry, recognized in the cost of both time and money required to become a participant. Successful new entrants will always claim market shares, in cases where the market growth is below the share claimed by the new entrant, they will steal from the incumbents. In the case of the offshore drilling industry it is natural to assume that this threat is relatively low, as construction of rigs are highly capital intensive and time consuming, the rigs costs hundreds of millions and construction takes years. In addition, the value created by operating cash flows will not be generated until the drilling is ready to commence. Mature incumbents in the industry might also increase their R&D costs over a time to hopefully develop new barriers to overcome for the newcomers. The big IOC's (integrated oil and gas companies) also has advantages due to economics of scale. The volatility experienced in the oil and gas prices also plays a part in making barriers for new entrants. This acts as a barrier by making the desperately needed earnings in the first stages of their operations, needed to fund ongoing operations, much more uncertain, and this might make investors lose interest in the project. Geopolitical uncertainties will also affect new entrants as most oil and gas reserves in the world are located in parts of the world with a high probability of conflicts and even wars. To ensure safe and effective work in those parts of the world often demands an established network of contacts to help contract negotiations and to be even considered as a potential contract recipient.

However hard these barriers are to overcome, some will always have the resources required. A recent and relevant example of this is a group of Norwegian investors, led by Tor Olav Trøim and Fredrik Halvorsen, who at the end of 2016 started a new rig company called Borr Drilling with the strategy of buying rigs in the now favorable second hand market. In the course of a few days they collected equity worth $155 million used to buy two rigs form the defaulted Hercules Offshore at $130 million. This entrance can off course be attributed to the market situation, but is still an important reminder that someone always has the recourses required if they find the marked situation favorable.

Another aspect of the barrier to new entrants is the current player's reaction to the newcomer. As drilling contracts are issued as tender offers mature players with available capacity might want to shut the newcomers offer down by underselling their own offer to the degree that the newcomer can't afford to continue the search for operations, although this is highly unlikely in today's market situation, as rates are too low for lowballing.

Threat of new entrants in the industry: Low

3.2.2 Power of Suppliers

This force argues that suppliers with too much power over prices will affect the competitiveness of the industry by shrinking the profitability of the participants.

Suppliers to the offshore drilling industry can be separated in three categories:

- Rig building shipyards
- Suppliers of parts and technology
- Labor

The cyclical nature of the drilling industry also spills over to the new-build market for rigs. Downturns in the drilling industry has brought down the demand of rigs affecting suppliers bargaining power negatively in later years. The demand for rigs has also sees a shift towards the second hand market, as the increased supply causes prices to fall making this segment more financial favorable. An argument towards increased bargaining power for the suppliers is that the new-build demand is shifting towards more technical demanding and highly specified semisubmersible rigs. These sort of rigs are usually more time consuming to build in addition to being more challenging from a construction point of view. This helps fill the suppliers order book, and gives them some of their power back. The fact that there are so few shipyards building rigs helps increases their bargaining power, as the second hand market is the only substitute.

Equipment and technology used by the industry are extremely specialized and high competence is required in the development stage. There are few if any substitutes, and replicating will be immense costly resulting in a high bargaining power of the suppliers of tech and parts.

Labor demand had increased with the historical increase in operations, and together with strong Norwegian worker unions resulted in high wages in the offshore industry operating off the Norwegian coast. The later years` downturn in the profits seen in the market has caused cost cutting to be central throughout the industry. This has led to temporary layoffs and dismissals, making wage negotiations and attracting higher qualified work base easier for the offshore companies, decreasing the barging power of the laborers.

On account of the above, we view the bargaining power of the suppliers of this industry to be moderate, with no apparent development for the foreseen future. Since the suppliers are almost as exposed to the oil price as the drilling companies, their bargaining power will not increase until the industry recovers to the market conditions more like the experienced historical levels.

Bargaining power of suppliers: Moderate

3.2.3 Threat of Substitutes

The threat of substitutes relates to the possibility that your customers finds another product or service which supplies them with a product or service fulfilling their needs.

There are really no clear direct substitutes for the offshore drilling segment, as drilling rigs are the only way of extract oil from beneath the sea floor. Though there are other ways to obtain oil, mainly onshore drilling such as shale oil. Most of the commercial shale oil production is located in areas from Texas to North Dakota. The historic costs of extraction and producing this type of oil has been high compared to its peers and was for a long time considered as unprofitable. However, the break-even costs have fallen rapidly through the last decade which

have increased its competitiveness towards the other oil types. We believe that the increased competitive climate will put pressure on the oil price going forward, resulting in an increased pressure on rig rates as well. This combined with findings of large onshore deposits in the US, and a new president with high ambitions of raising the American economy with little or no regard to environmental concerns increase the probability of a surge in the output from onshore oil production in USA. The onshore oil production normally emits vast amount of pollution, especially through what is known as flaring (burning of unwanted natural gasses extracted with the oil on the drill site). This was something Obama sought to reduce, which now is more likely not to be regulated to the same extent. The past 10 years, almost all increase in total oil production has come from onshore production (from around 60 million barrels a day to over 70 million barrels a day), with offshore outputs staying relatively stable (25-30 million barrels a day, and 27 as of 2015). This makes onshore drilling a valid substitute for offshore drilling, though the productivity is not expected to reach levels where it will outperform offshore drilling to the degree were it is no longer feasible (EIA, Renewable Energy Outlook 2016).

There are multiple alternative sources of energy besides oil, including coal, nuclear, hydrogen, biofuels, and other renewable sources like wind and solar. The collective powers of governments across the world are edging a shift towards renewable energy sources through tax and other incentives. As discussed prior, this will most likely cause renewable sources to be a better substitute or even superior in the future, capping the growth of the fossil energy industry. A shift like this will demand high amount of R&D investments in renewable energy plants and distribution channels, making the probability of renewable substitutes dominating the global energy market within the next decades marginal. Wind, solar and bioenergy-based renewables is expected to increase their combined share of the global energy market from todays 6% to 20% by 2040. The investments necessary for reaching this level is projected to $19.2 trillion through 2040, which accounts for 63% of the investments in new power plants, with fossil-fueled ones for almost a quarter and nuclear for the remainder (EIA, Renewable Energy Outlook 2016).

It's important to bear in mind that even the most ambitious estimates of reduction in carbon-emissions acknowledges the necessity of ongoing oil and gas excavations and production in the foreseeable future to meet the future energy demands, as the anticipated decline in demand is less than the decline in output of existing oilfields.

En masse, the threat of substitutes is considered low in the projected period. However, this threat increases as the perspective lengthen.

Threat of substitutes: Low

3.2.4 Bargaining Power of the Buyers

Powerful customers might capture value by forcing prices down, demanding more in respect to quality or services, or generally playing the industry participants against one another (Harvard Business Review, 2011).

The buyers of offshore drilling companies' services are the owners and operators of oilfields, in Songa's case this is limited to the Norwegian shelf, as they have shifted focus of their operations to solely focus on the Norwegian shelf. The main oilfield operator on the Norwegian shelf is Statoil, which as of now are Songa's only costumer. This might be seen as risky, but bearing in mind that Songa's CAT-D rigs is a collaboration project with Statoil and therefore viewed as a sort of prestige project for Statoil, there is little risk associated with them terminating their contracts ahead of time. Another aspect of risk associated with a small customer base is the increased effect default on payments has on the company. The probability of the conservative managed and government influenced Statoil defaulting on its payments is almost non-existing. Statoil is the main operator on the Norwegian shelf, but not the only one, also Aker BP, ConocoPhillips, and Norwegian Shell among others own and operate fields.

The homogenous characteristics of the services offered by the drilling companies increase the bargaining power of the buyers, although the contractual nature of the industry lowers the

bargaining power once the contracts are signed, as termination is costly and new mobilization is time consuming. In times when the industry's utilization rate is high, the bargaining power of the rig owners increase, though within the current downturn endured by the industry, the vast amount of idle rigs makes the drilling industry a buyers marked.

Bargaining power of the buyers: high

3.2.5 Competitiveness in the industry

As any industry with a potentially enormous profits, this is a highly competitive industry. The downturns in later years has only contributed to the competitiveness of the industry, and the fight for profits and survival has never been more challenging for even the biggest long-lived companies.

The distribution of drilling contracts is normally based on specifics required of the rig, such as drilling depth, age and location of the rig in addition to the track record and experience of the rig crew, as well as the relationship between the field operator and drilling company. As most rigs differ manly at their operational depth level and age, which have implications for their profitability, companies now end up competing on price rather than the explicit service they offer within their segment (depth and environmental durability).

The capital intensive nature of the industry combined with high exit barriers contributes to increased competitiveness in the industry. All in all, we determine this industry as highly competitive. This mainly reflect the present situation, where it is still recovering from the downturn. In a more long-term view, we expect the competitiveness to somewhat decrease as the industry moves further out of the downturn.

Competitiveness in the industry: high

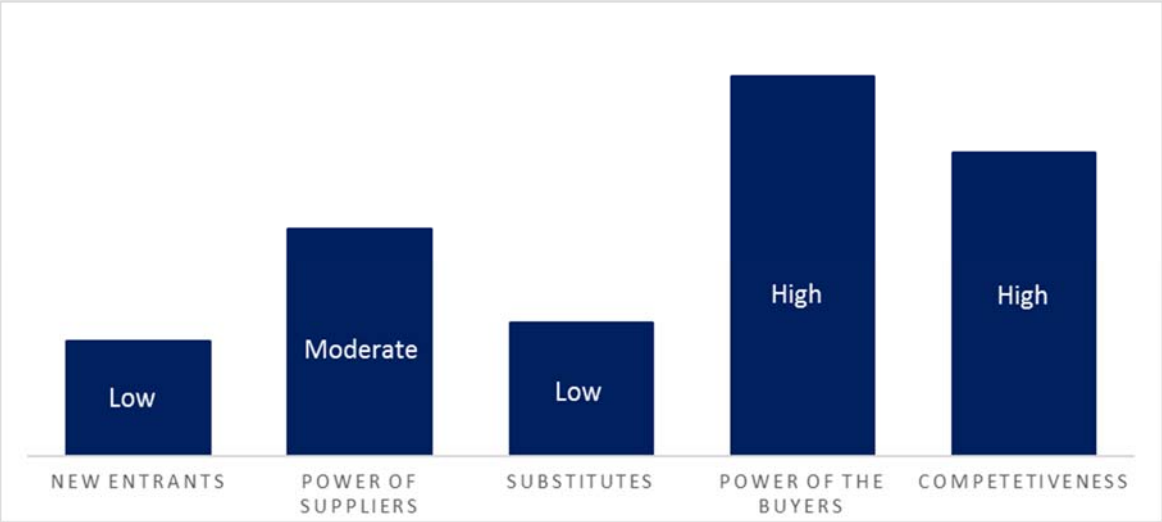


Figure 3-10: Own Production

3.3 Internal analysis

We also want to assess possible internal factors which can be interpreted as weaknesses or strengths relative to the industry. The reasoning behind such an analysis is to better understand how assets or capabilities Songa possess can create value going forward, both short and long term.

3.3.1 Fleet

Songa's rig fleet is the assets driving the revenues obtained. As described in section 2.2.2, the fleet consists of both the modern Cat D rigs and the older legacy rigs, all with capabilities in the mid-water segment. The operational strength provided by the CAT D rigs has already materialized in the earlier presented favorable contracts with Statoil. This is also illustrated by significantly higher utilization rate per ultimo 2016 on the 6th generation rigs (89%) relative to older generations (see section 3.1.8).

As the rigs can with only minor upgrades be capable of operating in the ultra-deep water segment, we find this flexibility in the rigs valuable based on the expectations of higher activity levels in deeper sea depths going forward. This was a strategic play done by the Songa management when the assets were acquired. The CAPEX of the modern rigs has also provided in lower OPEX levels for the company relative to general OPEX levels to older rig generations. Opposite, the market has revealed the old legacy rigs to be less competitive due to its age and limited capabilities.

As of 2016, there were nine 6th gen. semisubmersibles available at the NCS. Of these nine, Songa's four Cat D rigs are the youngest (1-2 years old) while the others range from 3 to 9 years old. Based on these facts we conclude that the rigs should be seen as rare as of now, providing Songa with an advantage in relation to average fleet age, also after the original contracts expires in '23. However, as larger discrete investments are a part of the rig industry, we find it difficult to see this advantage to be sustained in the long run. Older rigs are being rolled of the total fleet and replaced by newer constructions when the drilling companies find it the profitable. Due to this industry characteristic, newer generations will enter the market detreating the competitiveness of the Cat D rigs. Ultimately, a strive to acquire the most competitive rigs are a natural development of the industry. However, the exact timing is dependent on the trade-off between expected income on current rigs and CAPEX of new-builds.

3.3.2 Geographical Location

Songa Offshore moved its legal entity from Norway to Cyprus in 2009 making them subject to a corporate taxation regime beneficial relative to the Norwegian. Such tax motivated actions are something we find quite common, e.g. the competitor North Atlantic Drilling Company is subject of the Bermudian zero corporate-taxation regime (World tax, 2017).

Songa's focus on the Norwegian Continental shelf provides them with a leaner operational focus, stronger possibility to build up local know-how and long-term relationships with

operators holding rights to the NCS oil fields. We find these two aspects financially and strategically valuable going forward for Songa. However, such geographical concentration is also observed among competitors, where Odfjell Drilling and North Atlantic Drilling Company also has either a strong or total focus towards the Norwegian Continental shelf. We also believe that differences in geographical focus may differ related to individual corporate strategies and market views, but such strategies might change quite easily if the rig companies find it more profitable.

3.3.3 The management:

CEO Bjørnar Iversen had worked 17 years in the offshore drilling industry prior to joining Songa, the last seven of these he spent in charge of the strategic cooperation between his former employer Odfjell and Statoil. Through this cooperation he established close ties with Songa's main customer (and as of now, only), which in combination with his personal knowledge of the CAT-D project, and his experience made him an excellent candidate for the position of CEO when Songa were restructuring in 2013. This restructuring was driven by Fredrik W. Mohn, sole owner of Songa's prime owner, Perestroika AS which also holds the position of chairman. We believe that without the intervention and involvement of Mr. Mohn, Songa would not exist today.

Although the involvement of the CEO and chairman has been crucial for making Songa what it is today, the argumentation of this being a unique asset for the company is harder to make. There are little if any evidence that the competing company's management teams are preforming to a degree inferior to Songa. The owners of the peers operating at the NCS are some of Norway's most prominent investors and families, thus this resource is viewed as valuable, but cannot be considered as rare or costly to replicate.

3.3.4 The reputation/relationship:

Songa's ongoing prestige project with Statoil serves as a testament to the relationship between the corporations. Drilling contracts are awarded based mainly on the price, specifics of the rigs offered, relationship, and track record of the drilling companies, and although the relationship will serve as a secondary measure to the more quantifiable characteristics of the appliers, it might be the grain that tips the scale in your favor. Thus, a good relationship with the dominating customer in Songa's geographical operating segment could be key to securing a desirable revenue stream in the future. Songa's operational performances while drilling on their ongoing contracts has demonstrated their efficiency and ability to perform as expected. This has further advertised their professionalism, keeping up with their reputation.

Even though we asses Songa's reputation and relationship as valuable for the ongoing operations of the company, supporting a claim for it to be superior of its peers is difficult, as their peers regularly are awarded contracts, hence it cannot be claimed that this is rare. Although it may be hard to imitate for new players, it shouldn't cripple the mature players.

VRIO Summary					
	Valuable	Rare	Hard to Imitate	Supported by the Organization	Competetive Advantage
Fleet	*YES*	*YES*	*NO*	*YES*	***Temporary Competetive Advantage***
Geographic Location	*YES*	*NO*	*NO*	*YES*	***Parity***
Management/Board	*YES*	*NO*	*NO*	*YES*	***Parity***
Repuation	*YES*	*NO*	*NO*	*YES*	***Parity***

Figure 3-11: Own Production

4 Financial analysis

Analyzing past and present financial data is a major part of a valuation. The forecasted performances estimated to derive the future cash flows used to calculate the value of Songa

are based on past and present performances, supplemented by our strategic findings and assessments. The financial analysis also allows for evaluation of future risk and potential related to the company.

4.1 Reorganizing of financial statements

The financial statements presented by companies are not the best suited for financial analysis. The balance sheet offers no divide between operating and non-operating assets, and the income statement puts no weight to weather the earnings arises from core operations or from financing activities. Reformulating financial statements allows for solid evaluations of operating performance and value (Koller, T., Goedhart, M.H., Wessels, D., Thomas, E., 2010). This is done by categorizing the items in the statements as either operating, non-operating or sources of financing. As financial structure and performances are according to theory replicable, making the true source of a company's value is the value generated from their core operations.

Songa's auditor, PWC states in the latest yearly rapport that the consolidated statements give a true and fair value of the financial positions of the Group as at 31. December 2015, and its financial performances and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and the requirements of the Cyprus Companies Law, Cap. 113. (Songa Annual Report 2015). This has been the case throughout the historical period analyzed in this paper. We assume this also be the case going forward. Songa's peers all abide by the same regulations, except for NADL, which is regulated by US GAAP. This might induce some differences in their accounting policies and published statements (EY, 2013) Hence, we will be careful when comparing financials where this might incuse noise.

The key numbers to arrive at with the reorganizing of the financial statement are **invested capital** and **NOPAT** (net operating profit after taxes), where the latter represents the profit generated by the core operations without any non-operating gains or financing expenses,

available to all investors. This is in contrast to the net profit communicated in the original income statement which is purely for equity holders. NOPAT should, if calculated correctly, reflect the profit generated from the invested capital found in the reformulated balance sheet in order to correctly compute the ROIC of the company. A typical error will be gains included in NOPAT generated by non-operating assets not included in invested capital. The invested capital represents the total investor capital required to fund operations, without regard to how the capital is financed (Koller et al., 2010). Through calculations with these numbers we get both ROIC (return on invested capital) and FCF (free cash flow).

$$\text{ROIC} = \frac{\text{NOPAT}}{\text{Invested capital}}$$

In the following sub-chapters, we briefly introduce those accounting lines we find the most critical to discuss.

4.1.1 Analytic Income Statement

As stated above, the mission with reorganizing the income statement is to separate the net profit generated by operations. This is done by separating any expenses (and income) that has to do with financing, and their according tax shield.

4.1.1.1 Operating revenue

All the revenue generated by the company stems from their drilling activities, however the item "other revenues" is not possible to forecast, and therefor classified as non-recurring.

4.1.1.2 Operational lease

Operational assets which are leased do not show their true value the financial statements. Only the financial commitments appear as an operating expense in the income statement. A

recommendation of including these in the analytical statements is to value them as debt financed assets owned by the company (Koller et al., 2010). By doing this we show their depreciations and financing costs in the income statement, their value should appear as assets and their financing as liabilities in the balance sheet. By not including these "hidden values" the analysis and interpretation of key numbers and multiples will not reflect the true values.

$$\text{Lease Value}_{t-1} = \frac{\text{Rental expense}_t}{k_d + \frac{1}{\text{Asset Life}}}$$

4.1.1.3 Operating expenses

Reimbursed expenses are expenses whereby the Group, according to the relevant provisions of client contracts, assumes the risk and pay for the expenses, and then recharge these expenses to clients in accordance with the relevant provisions of the contracts. They are therefore included as an operating expense in the reorganized income statement.

4.1.1.4 Impairment

While depreciations are planned and recurring, impairments are write-offs that only occur when a company recognizes overvalued assets in their balance sheet. This mainly reflect value drops of their rigs as they get reclassified as older versions. Even though this cost in non-recurring and difficult to predict, the nature of the industry makes them appear on a regular basis. Hence, they are included in the analytical income statement.

4.1.1.5 Non-recurring items

Other gains and loss are listed as an operational gain/loss in the income statement communicated through the company's yearly report, but as they are non-recurring and not available for forecasting they are listed as non-recurring items.

4.1.2 Analytic Balance Sheet

Invested capital can be derived in different ways, but must yield the same amount. The operating method takes operating assets minus operating liabilities, while the financing method combines net interest bearing debt and equity (and their equivalents). Operating liabilities are included as non-interest bearing loans, and reduces the financing need of the operating assets.

4.1.2.1 Other liabilities

Songa classifies accrued expenses, employee costs and some interests as well as withheld tax as other liabilities. This is all relatively small items which all accrue from operations, and therefore is considered as operating liabilities in this paper.

4.1.2.2 Cash and cash equivalents

Is normally separated in two categories, operating cash which is cash used in the ongoing operations of the company, and excess cash. Most companies do not disclose their operational cash needs, and a clear divide between the two is therefore hard to find. An examination of working capital based on the cash holdings of the S&P 500 nonfinancial companies between 1993 and 2000 showed the companies with the smallest cash holdings having about 2 % of their sales in cash holdings, making 2 % a sort of proxy (Koller, 2010). On account of this being quite insignificant number in addition to the proxy not being more scientific than it is, this paper will consider all cash (not restricted) to be excess, and therefore a financial asset.

4.1.2.3 Deferred tax

Without detailed information surrounding the origin of the deferred taxes there is no way to separate them into operational and financial. In most cases the deferred tax is related to the operations, even though they may originate from financial activities (Petersen, C. and Plenborg, T., 2012). The deferred taxes will in this paper be classified as operational.

4.1.2.4 Derivative financial assets

The groups revenue is mainly in USD, while their costs are in USD and NOK. This exposes the group to currency risk it seeks to manage by the use of financial derivative financial instruments. The group does not enter into or trade financial instruments, including derivate financial instruments, for speculative purposes. Although this indicates this should be classified as operating assets and liabilities, one can argue that the efficiency of the hedge is a measure of the financial performances of the company's management, and profit/loss caused by this are financial gains/losses. All derivative financial instruments are therefore classified as financial assets.

4.2 Profitability analysis

Through the profitability analysis we aim to evaluate the company's survivability and its ability to ensure a satisfactory level of return to its shareholders (Petersen and Plenborg, 2012). The focus of the profitability analysis is historical trend and by analyzing this, we attempt to acquire an insight to support our assessment of future performances. To ensure the comparability of the company and its peers all number has been converted to USD with appropriate end of year exchange rates.

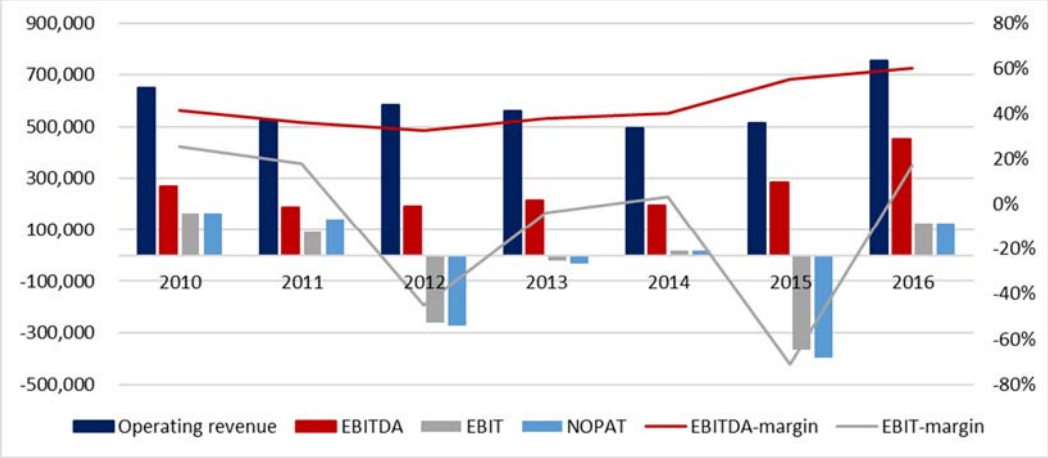


Figure 4-1: Own Production/ Annual report 2010-2015 and Q4 2016

Above is an historical trend of some of Songa's key income numbers the last seven years. It is clear that Songa has endured some rough years. This trend has been turned around the last years, in respect to EBITDA, while EBIT and NOPAT are showing signs of recovery in 2016. The compounded annual growth rate (CAGR) of Songa's revenues shows a decline of -5.3% from 2010 to 2014, while the same shows an increase of 15.0% from 2014 to 2016.

ROE which measures shareholders return on equity is the most used profitability measure, and for shareholders it is the go to measure for assessing their return on investment. Although it is the most common, ROE has shortcomings. As it does not separate between profit generated by operations and financing activities, it is not as robust measure for peer-group and trend analysis. ROIC is the overall profitability measure for a company's core operations, and by subtracting the weighted average cost of capital (WACC) one can measure whether the company is able to generate "super profits" in the form of economic value added (EVA).

4.2.1 Structure of profitability analysis

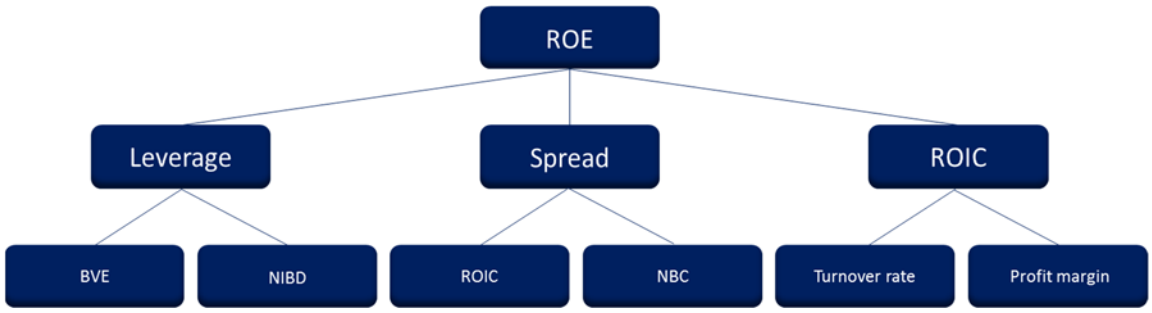


Figure 4-2: Own Production/Petersen&Plenborg

4.2.1.1 Return on invested capital (ROIC)

As stated earlier, ROIC is a good measure of the profitability of a company's core operations, and is the preferred analytical measure of performance. ROIC can be estimated both post and pretax, were both methods have their advantages and disadvantages. On one hand a pretax ROIC and profit margin shows a more precise operational result, as noise caused by different tax rates will have effect on the assessment of the key numbers. On the other hand, tax manipulation or optimization can be a sign of good management, and therefore has a value for the company. Songa's move from Norway to Cyprus was if not solely, at least highly motivated by tax optimization purposes. We will use after-tax ROIC, which is derived through the bellow formula.

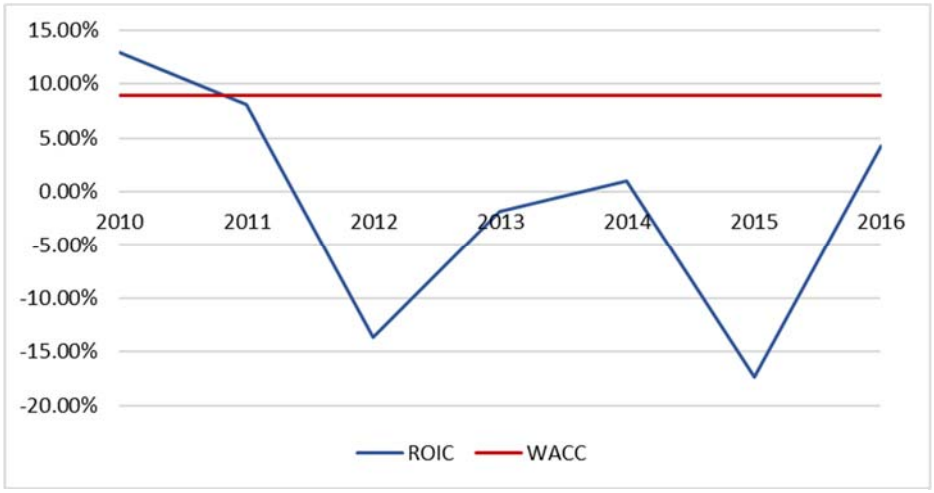
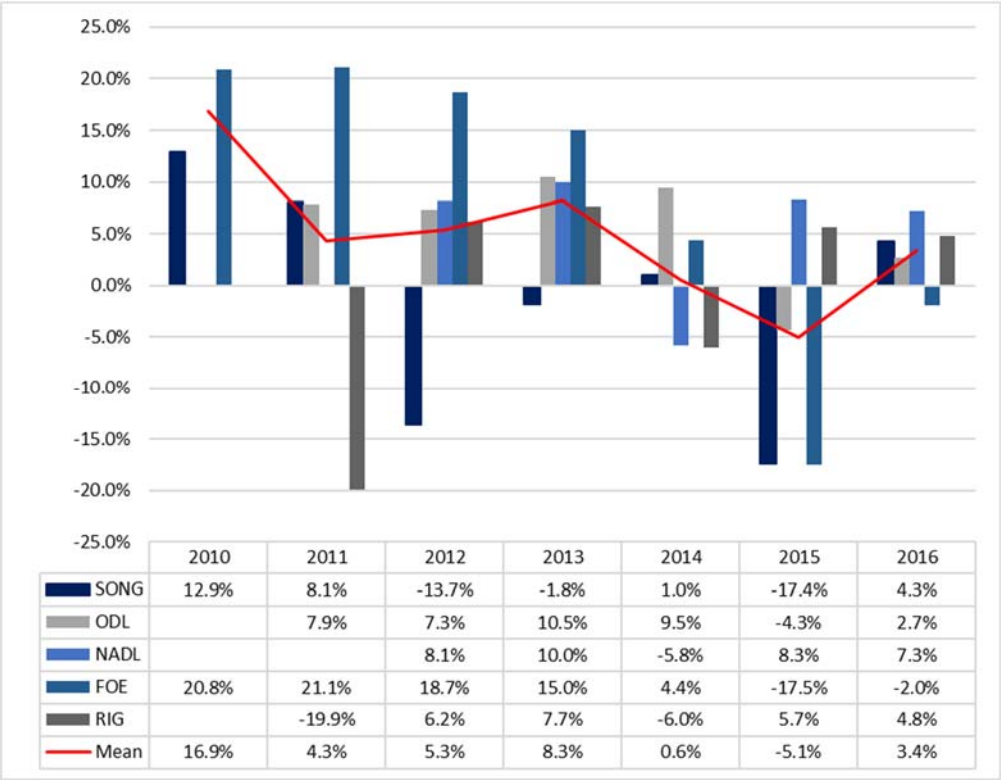


Figure 4-3: Own Production/Annual Reports

Above is Songa's historical ROIC show in combination with the WACC calculated in section to illustrate their ability to generate positive EVA. From a valuation perspective, a higher rate of return will lead, *ceteris paribus,* to a higher estimated value and potentially lower the company's borrowing cost (Petersen & Plenborg, 2012). The figure below graphs the historic ROIC of Songa and its peers the last seven years. Bearing in mind Songa's WACC of 8,93%, the below contributes to the argument of declining markets, which have still to recover. Though there are signs of it, a recovery will almost certainly not bring the industry back to the previous glory days.



	2010	2011	2012	2013	2014	2015	2016
SONG	12.9%	8.1%	-13.7%	-1.8%	1.0%	-17.4%	4.3%
ODL		7.9%	7.3%	10.5%	9.5%	-4.3%	2.7%
NADL			8.1%	10.0%	-5.8%	8.3%	7.3%
FOE	20.8%	21.1%	18.7%	15.0%	4.4%	-17.5%	-2.0%
RIG		-19.9%	6.2%	7.7%	-6.0%	5.7%	4.8%
Mean	16.9%	4.3%	5.3%	8.3%	0.6%	-5.1%	3.4%

Figure 4-4: Own Production/ Annual Reports

Although ROIC is the preferred measurement for operating profitability, it does not explain if the profitability is caused by an improved profit margin or by an improved capital utilization (Petersen & Plenborg, 2012). One can decompose ROIC in a different matter to better understanding how it is driven.

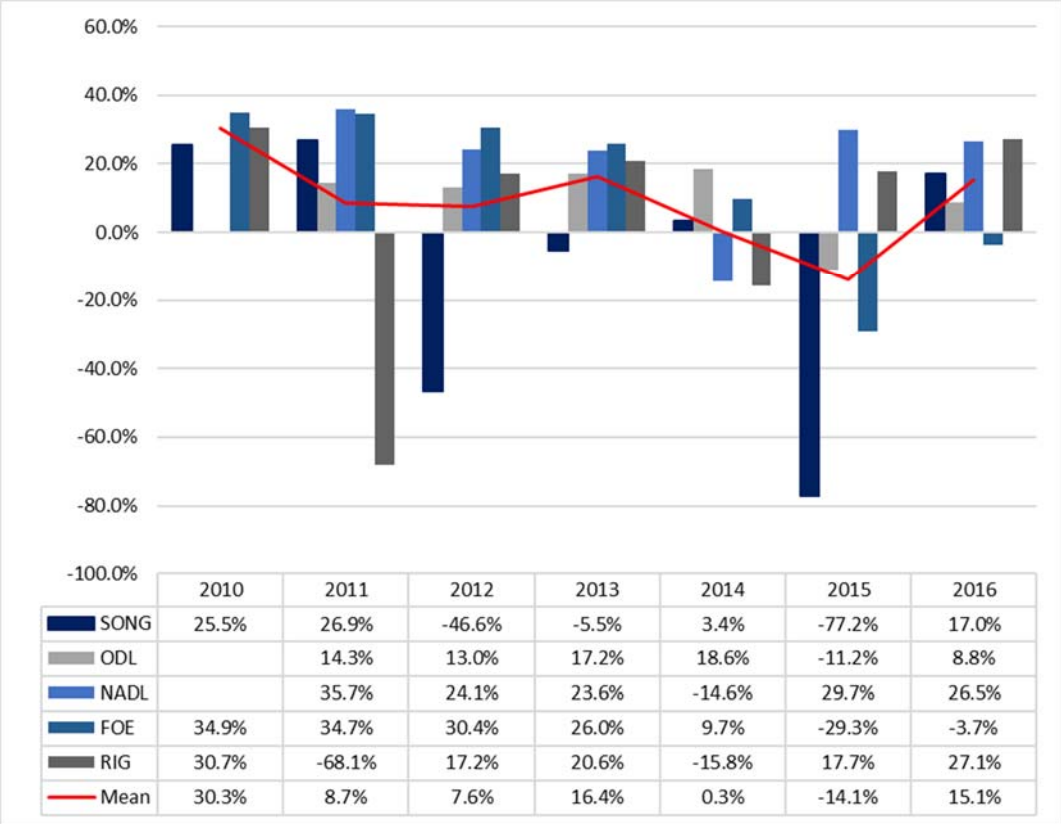
$$ROIC = Profit\ margin\ \times Turnover\ rate\ of\ invested\ capital$$

4.2.1.2 *Profit margin*

The profit margin offer insight in the relationship between revenue and operating expenses, and shows at what percentage operating profit is represented in the net revenues. Profit margin can be calculated as bellow:

$$Profit\ margin = \frac{NOPAT}{Net\ revenues}$$

In the figure below, the profit margin of Songa and its peers are displayed.



	2010	2011	2012	2013	2014	2015	2016
SONG	25.5%	26.9%	-46.6%	-5.5%	3.4%	-77.2%	17.0%
ODL		14.3%	13.0%	17.2%	18.6%	-11.2%	8.8%
NADL		35.7%	24.1%	23.6%	-14.6%	29.7%	26.5%
FOE	34.9%	34.7%	30.4%	26.0%	9.7%	-29.3%	-3.7%
RIG	30.7%	-68.1%	17.2%	20.6%	-15.8%	17.7%	27.1%
Mean	30.3%	8.7%	7.6%	16.4%	0.3%	-14.1%	15.1%

Figure 4-5: Own Production/Annual reports

Within the historical period analyzed, Songa display two years which shows particular bad results in respect to profit margin, namely 2012 and 2015 caused by large impairment losses.

This becomes clearer when one looks at the common size set up of the income statement, shown with some selected key lines below:

Common size income statement							
	2010	2011	2012	2013	2014	2015	2016
Operating revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Rig operating expenses	-25.0%	-26.2%	-26.0%	-19.2%	-13.5%	-9.8%	-12.0%
Employee benfit expenses	-25.4%	-28.2%	-30.6%	-30.4%	-30.4%	-19.8%	-20.4%
General and administrative expenses	-7.3%	-8.5%	-9.5%	-10.7%	-9.8%	-8.7%	-5.1%
EBITDA	41.3%	36.1%	32.8%	38.0%	40.0%	55.2%	60.1%
Total depreciation and impairment	-15.6%	-18.2%	-77.8%	-41.6%	-36.6%	-126.3%	-43.1%
NOPAT	25.5%	26.9%	-46.6%	-5.5%	3.4%	-77.2%	17.0%
Net financial expenses	-5.5%	-2.1%	-6.7%	-14.9%	-15.0%	-13.0%	-23.3%
Profit for the year	28.9%	23.8%	-52.2%	-28.3%	-11.5%	-91.5%	-6.2%

Figur 4-6:Own production/annual report

In 2012, Songa endured a sharp incline in its impairment loss. This loss of over $300M stems from two episodes. Firstly, Songa treated its rig Eclipse as an asset held for sale, as it was to be sold to Seadrill in the beginning of 2013. This classification resulted in an impairment loss of USD 115.5 million in 2012, being the difference between carrying amount of the rig including net deferred mobilization expenses and the net selling price of the rig. Secondly, the two rigs Delta and Trym were written down a total of USD 214.5 million due to them being through Special Periodic Services (SPS) and client upgrades. The investments made in relation with this totaled approximately USD 450 million, but a corresponding increase in the market value of the rigs was not seen. As such, the two rigs have been written down to the highest recoverable amount (market value or value in use), which in both cases were the value in use (Annual report 2012). In 2015 the company recognized impairment loss of USD 521.0 million due to declining day rates and reduced recoverable amount of their older rigs (Annual report 2015). Also Transocean's profit margin of - 68.1% in 2011, as well as Fred. Olsen Energy's of -29,3% in 2015 are due to impairment loss. Although Songa has experienced negative net profit every year since 2011, its NOPAT is nearly back at its 2011 level with USD 127 million to USD 140 million in 2011.

As well as the industry as a whole, Songa has focused on cutting operating expenses the later years. This comes to show in the graph below, where the main operating expenses and EBITDA as percentage of revenues is displayed as they have developed over the years:

Here it is quite clear that Songa's focus on cost cutting is beginning to show results, as all their

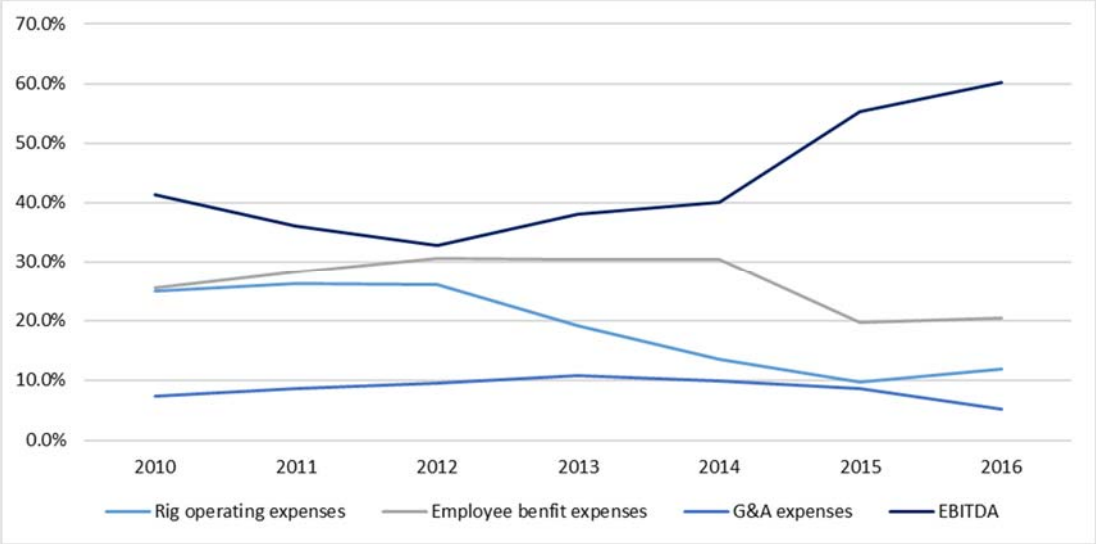


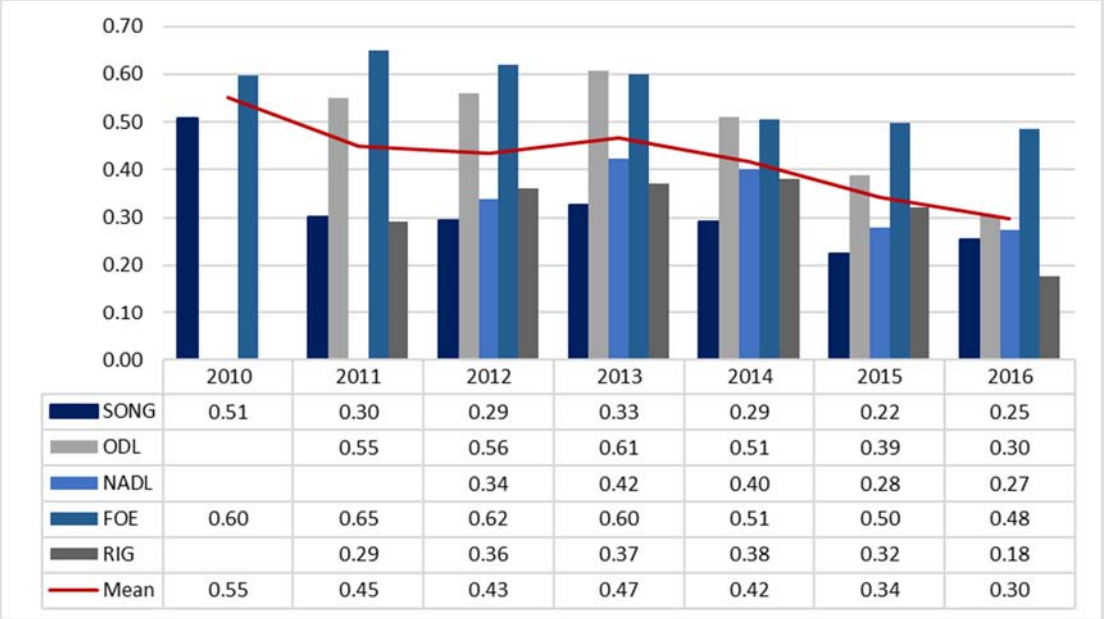
Figure 4-7: Own Production/Annual reports

major operational expenses has decreased in percentage of revenues. And as a result of this, we see an increased EBITDA-margin.

4.2.1.3 Turnover rate of invested capital

The turnover rate of invested capital portrays a company's ability to utilize its invested capital (Petersen & Plenborg, 2012) The turnover rate of invested capital can be calculated in the following way:

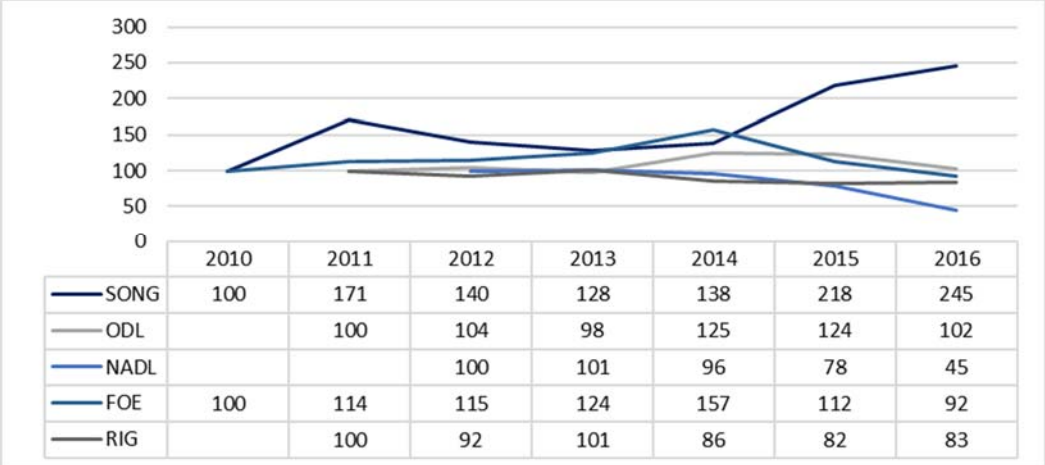
$$Turnover\ rate\ of\ invested\ capital = \frac{Net\ revenue}{Invested\ capital}$$



	2010	2011	2012	2013	2014	2015	2016
SONG	0.51	0.30	0.29	0.33	0.29	0.22	0.25
ODL		0.55	0.56	0.61	0.51	0.39	0.30
NADL			0.34	0.42	0.40	0.28	0.27
FOE	0.60	0.65	0.62	0.60	0.51	0.50	0.48
RIG		0.29	0.36	0.37	0.38	0.32	0.18
Mean	0.55	0.45	0.43	0.47	0.42	0.34	0.30

Figure 4-8: Own Production/Annual reports

The offshore drilling industry require massive investments in fixed assets and as a result the turnover rate of invested capital for Songa and its peers are relatively low. Throughout the period assessed in this paper, Songa has historically been underperforming in relation to its peers. This has turned around in 2016, and while all the peers have decreased its turnover rate, Songa has improved theirs in relation to its 2015 numbers. This is contributable to Songa's increased revenues, as their invested capital also increased from 2015 to 2016. This becomes clearer when looking at the indexed invested capital of Songa and its peers.



	2010	2011	2012	2013	2014	2015	2016
SONG	100	171	140	128	138	218	245
ODL		100	104	98	125	124	102
NADL			100	101	96	78	45
FOE	100	114	115	124	157	112	92
RIG		100	92	101	86	82	83

Figure 4-9: Own Production/Annual Reports

As shown above, Songa is the only company in this group which increased their invested capital with a substantial amount in this period, as their peers either held their invested capital relatively stable or reduced it. Songa's increase relates to the CAT-D rigs now all being fully operational and capitalized in their balance sheet. In the table below this comes to show, where some selected key balance sheet items are presented as a percentage of the invested capital.

Reformulated balance sheet (common size)	2010	2011	2012	2013	2014	2015	2016
Assets							
Rigs, machinery and equipment	92.1%	84.7%	76.3%	62.9%	60.0%	70.3%	98.3%
New-builds	-	10.7%	28.2%	35.6%	41.2%	31.1%	-
Total operating non-current asset	96.7%	100.1%	110.5%	102.2%	104.5%	102.3%	99.2%
Total equity	81.3%	52.6%	52.7%	66.1%	58.4%	20.5%	25.5%
NIBD	18.7%	47.4%	47.3%	33.9%	41.6%	79.5%	74.5%
Invested capital	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Figure 4-10: Own Production/Annual reports

To better understand the above numbers, the indexed balance sheet offers insight to each items development over time.

Reformulated balance sheet (indexed)							
	2010	2011	2012	2013	2014	2015	2016
Assets							
Rigs, machinery and equipment	100	157	116	87	90	166	262
New-builds	-	100	216	248	312	371	-
Total operating non-current asset	100	177	160	135	149	230	252
Total equity	100	111	91	104	99	55	77
NIBD	100	434	355	232	308	928	980
Invested capital	**100**	**171**	**140**	**128**	**138**	**218**	**245**

Figure 4-11:Own production/Annual reports

From the above it is evident that the two major impairment losses (in 2012 and 2015) endured by the company consumed parts of their equity. In 2015 the company also issued new debt, increasing their bank loans with over 300%, in respect to 2014, originating in the financing of the CAT-D rigs. This made Songa go from being mostly equity financed in 2010, to a high level of leverage the later years.

4.2.1.4 Return on equity (ROE)

Return of equity captures the combined operational and financial performance of a company. As described earlier, this is in some cases a shortcoming, but might also offer an insight to the managerial performance of the company. When a company do not utilize their leverage optimally, they are not earning optimal returns for their shareholders. By optimizing their leverage ratio, they might increase the ROE making the company more attractive for equity investors. But on the other hand, a too ambitious leverage ratio will increase the risk of the company. This will again make investors demand a higher rate of return for their investment, as well as making debt financing more challenging and increase the cost of it.

The following factors affect the level and trend in ROE:

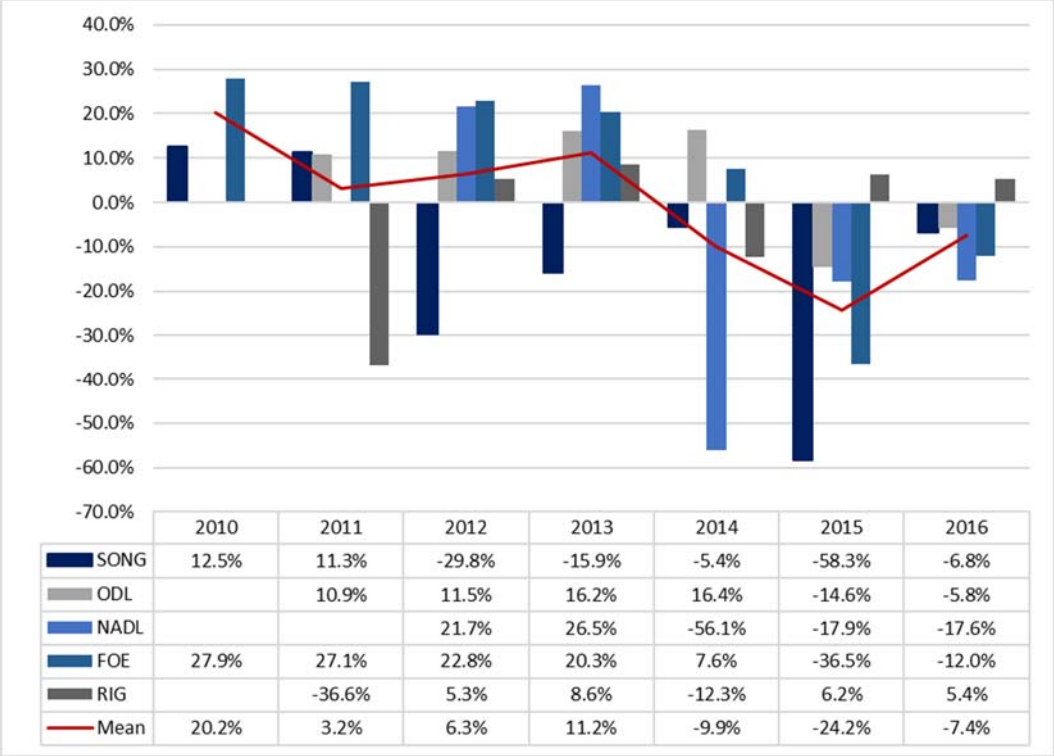
- Operating profitability
- Net borrowing interest rate after tax
- Financial leverage

This can be shown by a relationship, which always applies:

$$\mathrm{ROE} = \mathrm{ROIC} + (\mathrm{ROIC} - \mathrm{NBC}) * \frac{\mathrm{NIBD}}{\mathrm{BVE}}$$

In the above equation,

- NBC (net borrowing costs) is the effective borrowing cost net of tax, and is derived by dividing net financial expenses after tax with net interest-bearing debt, multiplied by 100. This rate is almost certainly not the actual interest rate the company pays on its debt. First, NBC will be affected by the difference between deposit and lending rates. Second, other financial items such as currency gains and losses on securities are included in the net financials. Thus, NBC should be interpreted with care.
  NIBD/BVE is the leverage ratio of a company, and stands for net interest-bearing debt (NIBD) and book value of equity (BVE). (Petersen & Plenborg, 2012)



	2010	2011	2012	2013	2014	2015	2016
SONG	12.5%	11.3%	-29.8%	-15.9%	-5.4%	-58.3%	-6.8%
ODL		10.9%	11.5%	16.2%	16.4%	-14.6%	-5.8%
NADL			21.7%	26.5%	-56.1%	-17.9%	-17.6%
FOE	27.9%	27.1%	22.8%	20.3%	7.6%	-36.5%	-12.0%
RIG		-36.6%	5.3%	8.6%	-12.3%	6.2%	5.4%
Mean	20.2%	3.2%	6.3%	11.2%	-9.9%	-24.2%	-7.4%

Figure 4-12: Own Production/Annual Reports

In the table and graph of ROE above its clear how Songa's equity owners in recent years has suffered with their company. While most of their peers put forth steady returns right up to 2014, Songa has failed to return profits since 2012. These historic numbers certainly display the restructuring process Songa has endured to their management, strategy, and fleet. 2016 might show some signs this starting to pay off, placing Songa close to their most relatable peer, Odfjell.

The one stabile performer through this downturn has been Transocean. However, their operations are far more diversified, supplemented by a size multiple times that of the other peers, makes them the least comparable peer.

4.2.1.5 Spread, leverage and financial gearing effect on ROE

For a more comprehensive investigation of ROE, decomposition of the financial gearing effect supplies more insight. The relationship between a company's ROIC and their NBC is referred to as spread, or "the interest margin". If a company has a positive spread they will benefit from increased leverage, from a shareholder point of view, and vice versa. By combining the spread with the leverage of a company, one can determine the effect of their financial gearing (Petersen&Plenborg, 2012), shown below:

$$\text{Financial gearing effect} = (\text{ROIC} - \text{NBC}) * \frac{\text{NIBD}}{\text{BVE}}$$

Spread (ROIC - NBC)							
	2010	2011	2012	2013	2014	2015	2016
SONG	-1.8%	5.5%	-17.9%	-20.3%	-10.5%	-22.3%	-3.4%
ODL		3.5%	5.4%	8.3%	7.7%	-7.8%	-5.3%
NADL			5.0%	6.2%	-13.9%	-5.1%	-6.6%
FOE	15.6%	15.5%	10.3%	12.5%	4.8%	-19.6%	-11.4%
RIG		-27.4%	-1.6%	1.9%	-11.7%	1.1%	1.6%
Financial leverage							
SONG	**0.23**	**0.58**	**0.90**	**0.69**	**0.61**	**1.84**	**3.32**
ODL		0.86	0.79	0.69	0.90	1.31	1.60
NADL			2.69	2.67	3.61	5.10	3.75
FOE	0.45	0.38	0.39	0.43	0.68	0.97	0.87
RIG		0.61	0.55	0.51	0.54	0.47	0.36
Financial gearing effect							
SONG	**-0.4%**	**3.2%**	**-16.1%**	**-14.1%**	**-6.4%**	**-40.9%**	**-11.1%**
ODL		3.0%	4.2%	5.7%	7.0%	-10.2%	-8.5%
NADL			13.5%	16.5%	-50.2%	-26.1%	-24.9%
FOE	7.0%	5.9%	4.1%	5.3%	3.2%	-19.0%	-10.0%
RIG		-16.7%	-0.9%	1.0%	-6.2%	0.5%	0.6%
Mean	3.3%	-1.1%	1.0%	2.9%	-10.5%	-19.2%	-10.8%

Figure 4-13: Own production/Annual reports

From the above, it becomes clear how high leverage catalyzes the negative spread of companies, as the two highest leveraged firms have the most negative effect of gearing the last years, namely Songa and NADL. Form their leverage ratio, its apparent how Songa's restructuring has changed the business in more ways than improved returns last year. Without their extensive backlog, Songa's leverage ratio combined with the uncertainty still present in

the industry at some level, could prove unmanageable. The negative spread shown by most of the selected companies later years indicates that the companies have taken additional debt out of necessity, as the cost of debt exceeds that of their returns.

4.3 Risk analysis

As a perquisite for the valuation of Songa, we choose to analyze Songa's liquidity risk, financial health and solvency risk to better understand sensitivity and risk to capital changes. As these measures often are theoretically oriented in terms of satisfactory levels, and industry norms may vary greatly we choose to base our risk assessment of Songa relative to chosen peers. The ratios rely on backward looking data from annual reports, thus might be a shortcoming in predicting future periods.

4.3.1 Liquidity analysis – Short term

We choose to examine Songa's liquidity management and ability to meet short-term obligations with its liquid assets. The risk is reflected in the relationship between the amount of current liabilities to current assets which can be assumed to be converted to cash in a short term perspective.

A typical balance sheet has current assets consisting of cash and cash equivalents, short-term investments, receivables, prepaid expenses and inventories. Depending on the industry/market conditions, inventories often are the most illiquid as it can have a substantial lag until converted to cash. Typical current liabilities found in a balance sheet are the items trade payables, accrued liabilities and short-term debt where generally all items are considered as close to its cash value (Koller et.al, 2010).

The current ratio measures short-term liquidity – the company's ability to turn its services into cash and how well the company is set to meet short-term liabilities with its balanced short-term assets (*Petersen & Plenborg, 2012).*

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liablities}$$

From a theoretical point of view, a company with a current Ratio below 1 implies that the company would not be able to meet its obligations if all was due at once. However, in practice a company can often take on new financing to avoid bankruptcy. A higher current ratio is preferred in general and the acceptable level will depend on the industry.

The quick ratio follows much of the same logic as the current ratio but is more conservative as the inventories are not considered as a liquid asset. Effectively, the quick ratio shows how well the current and most liquid assets is able to cover the short-term liabilities.

$$Quick\ Ratio = \frac{Current\ Assets - Inventories}{Current\ Liabilities}$$

Resulting from the nature of the drilling industry, Songa and its peers has either insignificant levels or non-existing inventories excluding any concerns of the level of liquidity in inventories. Resulting from this we will only take a closer look at the current ratio.

Current Ratio	2010	2011	2012	2013	2014	2015	2016
Songa	**1,58**	**0,93**	**1,05**	**1,45**	**0,85**	**0,66**	**0,83**
Odfjell		1,96	1,16	1,21	1,05	0,48	0,98
NADL		0,68	0,90	0,89	0,86	0,63	0,14
Transocean		1,36	1,58	1,91	1,55	1,79	2,57
Fred. Olsen Energy	1,66	2,05	0,87	0,65	0,79	1,34	7,12
Average	1,62	1,40	1,11	1,22	1,02	0,98	2,33
Median	1,62	1,36	1,05	1,21	0,86	0,66	0,98

Figure 4-14: Own Production/Annual Reports

As seen in the table above, the current ratio has trended downwards, both for peers and Songa. We assess the Songa's current ratio to be healthy when comparing towards industry metrics, despite the fact that Songa has a current ratio below 1 ultimo 2016. This is backed by the stable cash inflows generated from the operating legacy rigs.

4.3.2 Solvency analysis – Long-term

This analysis is conducted as a step to assess long-term risk arising from gearing levels and financial resources to cover possible losses.

4.3.2.1 Solvency ratio

We choose to take a closer look at Songa's solvency ratio compared to peers. Generally speaking, lower solvency ratio represents a higher long-term liquidity risk, but as with the other ratios in this chapter, it is important to assess the ratio relative to industry/peers.

$$Solvency\ Ratio = \frac{Equity}{(Total\ Liabilities + Equity)}$$

Solvency Ratio	2010	2011	2012	2013	2014	2015	2016
Songa	**0,67**	**0,47**	**0,35**	**0,44**	**0,45**	**0,18**	**0,23**
Odfjell		0,38	0,41	0,41	0,36	0,34	0,32
NADL		0,15	0,21	0,23	0,13	0,14	0,13
Transocean		0,45	0,46	0,51	0,49	0,56	0,59
Fred. Olsen Energy	0,51	0,54	0,48	0,47	0,38	0,38	0,45
Average	0,59	0,40	0,38	0,41	0,36	0,32	0,34
Median	0,59	0,45	0,41	0,44	0,38	0,34	0,32

Figure 4-15: Own Production/Annual reports

The table above illustrates how the fraction of assets financed through debt is higher for Songa compared to peers. An important factor de-risking the high debt fraction is the industry-leading contracts with Statoil. However, it's of high importance that the Songa management are

disciplined with available cash flows going forward, as we believe it's essential that a great amount of available cash occurring from the contracts is used to repay on the debt.

4.3.2.2 Interest Coverage Ratio

The interest coverage ratio is EBITDA over interest expense. The goal is to understand the company's ability to pay the interest on its outstanding debt with its EBITDA, which often are seen as a simplified proxy of cash flows from operations. The Interest Coverage ratio together with size are the two most important factors in terms of credit rating (Koller et al., 2010). This will be elaborated in depth when discussing the cost of debt.

$$Interest\ Coverage\ Ratio = \frac{EBITDA}{Interest\ Expenses}$$

Interest Coverage Ratio	2010	2011	2012	2013	2014	2015	2016
Songa	**9,03**	**16,06**	**5,00**	**2,54**	**5,86**	**13,62**	**3,86**
Odfjell		4,18	5,12	9,91	8,83	0,71	3,90
NADL	6,75	7,92	7,08	6,31	6,22	4,33	4,53
Transocean	6,59	-5,88	3,77	5,70	-0,45	5,39	4,95
Fred. Olsen Energy	8,59	6,47	8,10	7,10	4,21	5,53	8,81
Average	7,74	5,75	5,81	6,31	4,93	5,92	5,21
Median	7,67	6,47	5,12	6,31	5,86	5,39	4,53

Figure 4-16:Own production/Annual reports

5 S.W.O.T Summary

SWOT	
Strengths	**Weaknesses**
• Bridged through downcycle with long-term contracts • Competetive Cat D rigs also after '23 • Cat D rigs capable of operating in UDW segment by minor upgrades	• Highly leveraged, restricting potential investments next years • Legacy rigs stacked with low competetivness • None Sustained Competetive advantages discovered
Opportunities	**Threats**
• Potential upside if Legacy fleet gets contracted • If market balances faster, the additional options may be exercised by statoil	• Exposed to policies (E.g. OPEC) affecting oil price unfavourably • Expected shift in more sustainable energy sources, long-term

Figure 5-1: Own Production

6 Forecast

6.1.1 Forecast of day rates

The future day rates will play an instrumental role in assessing whether the current options Statoil hold will be exercised after '22/'23. If the options are being fully exercised, this would increase Songa's backlog by approximately $7.7bn going forward after current contract lengths. As of this potential, we attempt to create a forecast on the development for day rates within the floaters segment based on historical observations, in the absence of a better tool yielding quantitative interpretations. As argued for in the strategic analysis, the day rates are influenced by several factors and market mechanisms making the forecast subject of uncertainty.

Professors Kaiser and Snyder (Louisiana State University, Center for Energy Studies) presents in their 2012 article "*Empirical relations characterize rig day rates*" findings of autoregressive models best forecasting day rates within the jack-ups and floaters segment. They conclude with

a 24-month moving average on oil price as the best predictor for day rates for floaters. Shortly speaking, 24-month proved to be the best measure as relative shorter averages and rapid movements in the oil price often did not affect the day rates. A sound understanding of the 24-month average lag is due to time needed for oil operators to re-estimate their potential projects, time for chartering with its project-specific features and contracts covering oil price volatility. Their best-fit model presented below yielded according to the authors of the article a R^2=0.93, considered as satisfactory.

As the Kaiser/Snyder model's significance is built upon data between 2000-2010 and with a global data sample of floaters contained by 1718 semi-submersibles and 244 drill ships from ranging generations, this may create deviations from actual day rate obtained specifically with the Cat-D rigs. However, we believe the model's output will work as a reliable decision foundation upon the potential options.

$$Ln(Average\ Day\ rate, Floaters) = 6.8 + 1.4 * Ln(Moving\ Average\ Oil\ Price\ last\ 24\ months)$$

By regressing monthly Crude oil estimates based on the equation above, the model forecasts annualized average day rates to $361 000 and $344 000, respectively in '22 and '23. Despite the high uncertainty in the modelled predictions we chose to use this as our best estimates going forward.

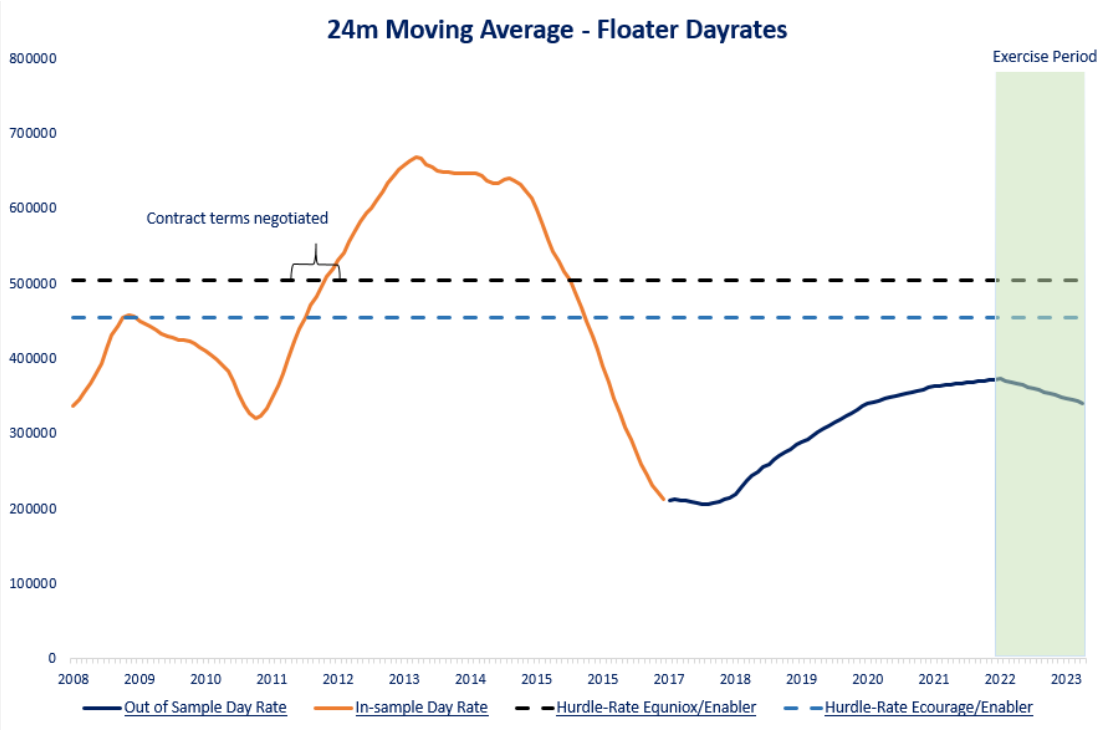


Figure 6-1: Own Production/Bloomberg

6.1.2 Expected outcome of CAT-D Options

The specific contract terms were agreed upon back in 2011-2012 on the 4 different rigs. The market was then significantly stronger which enabled Songa to lock in higher fixed rates on both the underlying contracts and additional options. Despite the expectations of a more balanced supply-demand relationship derived in the strategic analysis, thus higher rates, we predict according to the modelled rates that they are not sufficient high relative to the contractual option rates. Hence, we conclude that Statoil will not exercise the options on the CAT D rigs as they have the possibility to charter new rigs in the market at lower rates.

Option Exercise			
Rig Unit	Customer	2022	2023
Songa Equinox	Statoil	NO	
Songa Endurance	Statoil		NO
Songa encourage	Statoil		NO
Songa Enabler	Statoil		NO
Implied Day rate		361.000	344.000

Figure 6-2: Own Production

6.1.3 Estimated decision on Legacy Rigs

Songa Trym has a scheduled SPS in first half of 2018. The Songa management has described this rig as the most likely scrapping candidate due to its high age and significant upgrade costs required if chartered following both the SPS and reactivation of the rig.

Reactivating of rigs range typically from $5M to $50M depending on factors as rig age and condition, among others (Sam Pannunnzio, 2017). The legacy rigs are of the oldest generations still in the market which indicates a relative high reactivating cost within the cost range presented above.

With the SPS done last year on Deepsea Bergen(Odfjell) amounting to $50M we estimate a potential upfront cost (SPS + Reactivation) approximated to $75-$100M which would require a new contract to be closed within short time. As Songa Trym is the only 2nd Generation rig left in the NCS floater market, making it less desired by the operators, we agree with the Songa Management, in the likely outcome of observing this rig to be stacked within short time during this market down-turn.

In regards if the two other legacy rigs, Delta and Dee, we expect both to be kept in the balance-sheet going forward through the CAT-D covered Contract period, as they are of 3rd generation

they still offer competition to the other rigs in the NCS market. However, this expectation is subject of uncertainty.

6.2 Pro Forma Statement

The strategic and financial analysis conducted earlier will play a fundamental part in deciding the forecast of Songa's accounting data going forward. In general, younger companies will require a longer explicit forecast horizon relative to mature companies with close to long-term growth rates. We will divide our forecast into two different sections, the period '17 - '23, where the contracted rigs yield incomes of high certainty. The strategic analysis has provided us with information making us bearish in regards to new contracts for the currently stacked rigs. Thereafter follows a period from the end of '23 where Songa again will be exposed to the current market conditions and daily rig rates in terms of if the options will be exercised by Statoil.

The fixed contracts on the Cat D rigs shields the company against volatility in the day rates prevailing in the market. Possible risks related to the expected contracted revenues are counterparty risk, described in earlier sections, in terms of terminations or default on payments from the sole counterpart, Statoil. However, we find this highly unlikely based on Statoil's financial strength and the fact that they have not used any cancellation rights earlier in this down cycle.

Finally, an important assumption taken is that we do not expect the ongoing arbitration claim from the rig builder DSME presented in earlier section to be merited. This is based upon the low probabilities indicated by independent parts of the case going through. As of this this will not be taken into account in the forecast.

6.2.1 Income Statement

6.2.1.1 Revenues

$$Revenues = Dayrate * 365 * Operational\ Effeciency$$

The revenues for the contracted rigs will be determined by the above equation, where the day rate are contractually set. We estimate an aggregated utilization rate for the CAT-D rigs based on theoretical contract coverage less of planned SPS, which often offsets the rigs operation with approximately 80 days, (Annual report 2015), and less other known incidents occurred in 2017. In addition, we lower total expected operational efficiency by 2% for the specific forecast horizon. However, in 2017 we set this to 1% based upon less uncertainty. This should account for minor unpredictable events such as the working strike in the North Sea during 2016. We support the high expected rates on operational efficiency by already proven rates from CAT-D in 2016 (See appendix for individually assessed rates). Ultimately, the rates illustrated in the

Aggregated Utilization rate Forecast							
	2017E	2018E	2019E	2020E	2021E	2022E	2023E
	Agg. Coverage	Agg. Coverage	Agg. Coverage	Agg. Coverage	Agg. Coverage	Agg. Coverage	Agg. Coverage
Visible Total Coverage	96%	100%	100%	88%	96%	98%	91%
Uncertainty	-1%	-2%	-2%	-2%	-2%	-2%	-2%
Forecasted Opperational Efficiency	***95%***	***98%***	***98%***	***86%***	***94%***	***96%***	***89%***

Figure 6-3: Own Production

table is the utilization rate obtained from the theoretical potential in terms of days a year. The forecasted 2023 rate is a function of contracts expiring and expectations of the Cat D being assigned new ones due to its competitiveness stated in the strategic analysis.

$$Forecasted\ "Utilization"\ rate = Visible\ Forecast\ per\ 2017 - Unpredictable\ events$$

6.2.1.2 Rig Operating Expenses

From previous analysis we have revealed how the industry downturn has forced the industry to challenge their cost levels and that this has yielded lower operational expenses on average. This is also clearly observable in Songa's historical figures in terms of operating rig expenses relative to operating revenues, where rig operating expenses in2016 was 12% of operating revenues, and with a CAGR equal to -15% for the period 2010-2016.

As a result of the permanent increase in cost efficiency we find the last year's figures the most representative when going forward, this is also backed by the more cost efficient CAT-D rigs. However, we find it less likely to see a significant continuation of such cost efficiencies in our forecasts due to the levels we have reached, thus we estimate rig operating expenses as the average on rig operating expenses/income relationship between 2014-2016 which is 11%.

6.2.1.3 Employee expenses

The employee expenses are often referred to with the rig operating expenses as total operating expenses. These expenses have due to its cost type historically changed quite linearly to operating revenues as most of this expenses are related to employees at the operating rigs. Since 2010, this expense has fluctuated between 20%-30% of revenues where it the latest years has been in the lower range. We assume a linear relationship going forward with expectations of employee expenses to be the average from 2015-2016, namely 20% of revenues.

6.2.1.4 General and administrative expenses

General and administrative expenses can be divided into expenses occurring from legal and consulting fees, and expenses relating to offices and travelling. As expected, these costs have been relative stable through historical years, fluctuating between $40-$60M. We find this expense somewhat stable, hence forecasting general and administrative cost to the 2010-2016 average going forward.

6.2.2 Depreciation and Impairments

6.2.2.1 Depreciation

The depreciation rate has historically fluctuated around 6-11% of RM&E. However, we find the composition of the total fleet observed latest years as the most representative going forward. On basis of this, we find it reasonable to average the depreciation of belonging fleet seen the

two last years as proxy, thus a depreciation amounting to 6.4% of RM&E will be applied going forward in the forecast.

6.2.2.2 Impairment

Songa has been forced to take significant write-downs last couple of years resulting from the harsh market conditions. As of this, we expect much of these costs to have already been recognized. Going forward we expect to see Songa capitalize the scheduled SPS on the CAT D rigs in '21-'22. The question being if it's probable to observe write-downs on these SPS capitalizations. Derived from the strategic analysis, we expect to observe higher day rates, and utilization rates, especially for the newer generations (including CAT D rigs) resulting from the high scrapping levels the years before. We therefore forecast no write-downs from impairment tests on the SPS's.

6.2.3 Operational Tax

We choose to apply a flat tax rate equal to 12,5 % when forecasting operational tax on EBIT. This is based on the corporate tax policy which Songa is subject of in Cyprus. Moreover, we apply the same tax rate on net financial expenses. This is clearly an assumption and we acknowledge that the actual tax from year to year may deviate from our forecasts. However, we feel confident making such assumption based on it being supported as sufficient. (Petersen&Plenborg, 2012)

6.2.4 Net Financial Expenses before Tax

We forecast the net financial expenses before tax as net interest bearing cost(NBC) multiplied with NIBD start of year (Petersen&Plenborg, 2012). Due to the current, higher level of NIBD we ultimately predict a higher level of financial expenses going forward. We arrive at the net financial expenses after tax by adjusting for the tax shield achieved with the tax rate at 10 % augmented for in above section.

6.3 Balance sheet

The forecast will only account the most central items as we not necessarily find value-added by estimating all the items presented in Songa's balance sheet. Thus, some of these minor items will be a function of the central items.

6.3.1 Operating non-current Assets

The main driver in the Operating assets will be the development in rigs, machinery, and equipment, thus our main focus will be on this item.

6.3.1.1 Rigs, machinery and equipment

The rigs, machinery, and equipment has increased significantly last years due to the acquired CAT D rigs. When forecasting rigs, machinery, and equipment, which historically has been close to all of Songa's operational assets, it is important to understand the investment policy within the industry. Some theories suggest to link level of tangible and intangible assets as a linear relationship to revenues. This is based upon the rationality that a raise in assets will yield a similar raise in revenues. We choose to deviate from that practice as we find the nature of investments within the rig industry as more discrete, meaning larger investments in form of new constructions some years, followed up by years with lower levels driven by only smaller upgrades and preservations. We believe that the amount recognized in the balance 2016 ultimo is above average due to the new CAPEX related to the CAT-D rigs.

Common practice in the industry, including Songa, is to capitalize 100% of the regulatory instructed SPS for the rigs and then write down potential differences commenced from impairment testing. The size of the SPS required depends greatly on rig type and other factors reliant on the individual rig's condition. After recommendations from CFO in Songa, Jan Rune

Steinsland, we choose to use the SPS on Odfjel's Deepsea Bergen last year ($50M) as proxy for the potential SPS's for the stacked legacy rigs, which are similar type and generation as Deepsea Bergen. Further, we will use $25M as proxy for SPS's on the modern CAT D rigs.

We expect no major capital expenditures during '17 - '23 in form of new rigs, based on Songa's current financials and upcoming debt commitments. Also, we believe that the management will prioritize finding contracts on the already stacked rigs.

6.3.2 Net Working Capital

The net working capital are per def. from the analytical statements current operating assets net of current operating liabilities. In general, this is a small fraction of total invested capital for Songa resulting from the nature of its operations where the non-current assets (rigs) play the contributory part.

It is recommended to forecast net working capital based as a percentage of sales. We observe that the current operating assets in % to sales has historically been relative stable while there has been some more volatility in the current operating liabilities (Petersen & Plenborg, 2012). We will use the 2016 NWC level in relation to revenues when forecasting coming years.

6.4 Terminal period

In addition to the explicit forecast period, we calculate the terminal period as we concluded in earlier analysis that none of the potential options will be exercised. The theoretical justification of the terminal calculation is to quantify the value created with the assumption of the company operating into infinity. As of this assumption, it is instrumental to find representative levels for the long term development. We have earlier assessed changes in drilling industry's revenues as more discrete in terms of binary outcomes of either being contracted or not, and our strategic findings indicate that Songa will not outperform the industry in the long run.

An assumption applied to the terminal period is similar level of rigs, machinery, and equipment as per today, implying a diversified portfolio of 7 older and newer rigs. This assumption is set in lack of outspoken growth objectives by the company.

The Cat-D contracts have bridged Songa through the latest downturn but after contracts expires Songa will again be exposed to the market conditions. Despite the current contract coverage, Songa's total utilization rate is only expected to be 67% (with Trym assumed Scrapped). Based on this, we chose not to carry on with the approximation of a smoothed continuation from the last explicit forecast year ('23) often proposed in theory (Petersen&Plenborg, 2012). Presented in earlier section, the ultimo 2016 floaters utilization rate at the Norwegian Continental shelf was historically low, amounting to 50 %. Due to the cyclical features in the drilling industry, we attempt to derive a proxy for mid-cycle day rate and utilization level for the industry, being representative for the terminal calculation. We find this approach the as the best alternative despite the natural volatilities occurring from the industry cycles. The representative rates are conducted through historical utilization and day-rate data. More specifically, we average globally, quarterly utilization rates for semisubmersibles (1500-5000 ft.) between 2003 Q1-2016 Q4 and get an average equal to 75%, which we believe are satisfactory as proxy for the mid-cycle, industry-average utilization rate, long-term.

Similar approach is done when estimating a day-rate representing a mid-cycle, industry average day rate for floaters. We derive a day rate applicable for the assumed diversified rig portfolio by averaging 4 different datasets extracted from Bloomberg (see appendix) containing quarterly day-rates over the past ten years for different segments within the floaters market (see appendix). By going back 10 years we feel confident in capturing whole cyclical day rate effects, thus the average found is assumed to represent a mid-cycle day rate. The estimated day rate is set to $370 000.

As a function of the '17-'23 forecast, we estimate a NIBD/Invested capital ratio in the terminal year amounting to 48%, close to the 50% assumed as an appropriate long-term level. This

necessitate our estimates of available net profit going to equity capital instead of being paid out to shareholders in any form.

6.4.1 Perpetual growth rate

The determination of the long-term growth rate is often subject of uncertainty due to the time perspective and impact in the terminal value. Historically observed, overpaying for a stock is often associated with paying too much for the given growth expectations.

We found earlier in the strategic analysis long-term forecasts on global growth rates amounting to 2.1% and 3.4%. As the growth rate theoretically represents perpetual growth for a company in steady-state, we find it hard to assess such growth rates to the rig industry, given the arguments about challenges related to shifts in energy sources in earlier analysis. Further, it is evident that oil as energy source cannot be sustained to infinity. Finally, from the strategic and financial analysis it seems difficult to outperform industry averages due to homogeneous nature of the market conditions in the long-run. Based on these expectations, we find it difficult to assess a long-term growth rate equal to the global, forecasted growth rates (2.1%-3.4%), or to observe a growth rate in Songa higher than the industry. We choose therefore to apply a perpetual growth rate equal to 1% in our fundamental valuation.

7 Cost of Capital

The Cost of Capital prices the risk taken when an investor commits to a company's cash flows, effectively operating as a hurdle rate for the risk the investor is willing to bear. The required return is in general built up by two parts, the risk free component and the risk premiums which justifies for the risk exposed to.

7.1 Weighted Average Cost of Capital

The straight forward interpretation of WACC is that the weighted average cost of capital is the average after-tax cost of debt and equity (Koller et al., 2010) required from investors relative to the fraction of equity and debt. The (1-Tc) term incorporates the value added from potential tax shields when financing is done with debt.

$$WACC = \frac{E}{EV} * Re + \frac{NIBD}{EV} * Rd * (1 - Tc)$$

E = Market Value Equity

NIBD = Net Interest-Bearing Debt

EV = Enterprise Value (NIBD+E)

Re = Required return on Equity

Rd = Required return on Debt

Tc = Corporate Tax rate

(Petersen&Plenborg, 2012)

7.2 Cost of Equity Capital

We choose to find the required return on equity by applying the Capital asset price model(CAPM). Academic standards have for decades proclaimed the CAPM as the prevailing model for calculating cost of capital and is also often applied in the market in favor of other models.

$$Re = rf + \beta * (rm - rf)$$

The variables in the CAPM model are the risk-free rate, beta and the market premium illustrated by the market return net of the risk-free rate. The CAPM only compensates for the systematic risk(β) resulting from the model's assumption to the model that the investor is fully diversified against unsystematic risk.

7.2.1 Risk-free interest rate

This term in the CAPM is representing the required return yielding from a risk-free investment. From a theoretically point of view, such risk free investment within the CAPM model would ideally be a zero-beta investment. However, in practice the return on top-tier government

	USBD10Y
High	5,138%
Low	1,404%
Average	**2,788%**

Figure 7-1: Own Production

bonds are often used an acceptable proxy of a risk-free investment. Another theoretically best-practice is to use bonds with equal durations as the cash-flows discounted meaning on-going updates of the WACC. The terminal value in the DCF model will be assumed to be constant and we find it more practically to apply one long 10-30 years to maturity government bond. Moreover, by using a zero coupon bond, reinvestment risk is excluded. As Songa's revenues are in USD we choose to use American government bonds as a proxy for risk-free rate as this is seen as an appropriate practice (Koller et al., 2010). We find the risk-free assumption towards the US treasury bond as fulfilled on behalf of the "Aaa" rating from Moody's. A bond with the longest time to maturity would best match the fundamental valuation in terms of the infinite horizon. However, 30 YTM bonds includes liquidity premiums, thus we find the use of 10 YTM bond as most suitable. In a historical perspective, government bonds yields have the latest years been above average volatile, as a result of this we chose to average the 10Y US government bond over 10 years ending up with a risk-free rate equal to 2,788%.

7.2.2 Beta – Systematic Risk

The beta in CAPM compensates the investor for the risk taken in terms of movements in the investment relative to the total market.

$$\beta i = \frac{Cov(i,m)}{Var(m)}$$

The beta cannot be directly observed (Koller et al., 2010) and we chose to estimate the beta used in CAPM through a process consisting of regression analysis, robustness checks towards industry averages (Asawath Damodaran, 2017) and potential smoothing techniques.

The measurement period when calculating beta is not subject of a common standard, however researchers have confirmed a length of 5 years as suitable (Koller et al 2010, page 251). More specifically, we calculate the beta by regressing Songa's share price on Morgan Stanley Capital International World Index and Morgan Stanley Capital International Europe Index, which are broad equity benchmarks respectively for the World and Europe. The data used is on monthly data points over a 5-years period as of 24.02.2017, as daily and weekly returns lead to systematic bias according to Kotler et. Al. The Norwegian stock exchange (OSEBX) were Songa is currently listed is considered to have an overweight of companies exposed to oil price similar to Songa, thus being a biased market proxy. We fist calculated rolling betas to take into account potential changes and or structural breaks in the Songa stock (risk), something a static calculation not would assess.

We derive an equity beta estimate equal to 1,59 after an equally weighted average between MSCI world, MSCI Europe and Damodaran's industry average. We also considered a simple-smoothing technique defined by Marshall Blume (Koller et al., 2010) under the belief of mean

Source	β
Rolling Beta Est. MSCI World	1,91
Rolling Beta Est. MSCI Eur.	1,48
Industry Beta(Damodaran)	1,38

Figure 7-2: Own Production

reversion in matured industries. However, we find this is not representative for the drilling industry in the long-run as alternative energy sources may increase going forward.

7.2.3 Market risk premium

In the CAPM equation, the market risk premium is the difference between the return from the market portfolio and the risk-free rate. In theory, the market portfolio represents a weighted average of all possible assets (Koller et al., 2010). In practice, a broad index or similar is considered to be an appropriate proxy for this.

The market premium can be derived through either an ex-ante or ex-post approach (Petersen&Plenborg, 2012). The ex-post approach conducts the calculation on the historical difference between the market return and risk-free return, often going as long as 100 years back in time. Therefore, you effectively assume the historical results as a plausible factor in describing the market premium going forward when using this approach. The ex-ante approach derives to an implicit market premium by using e.g. earning forecast consensus from investment banking analysts. However, these Implied market premiums may initially be influenced by ex-post results.

Aswath Damodaran, professor at Stern School of Business regularly publishes ex post research on market premiums divided into countries. We assess some of these findings together with ex-ante approaches, as we find this to better account for risk factors investors faces and thus requires a price for. As a result of globally traded equities and local risks facing investors, it may be theoretically difficult to point out a single data point accounting for the universal risk premium. As a result of this we choose to find our risk premium used in the CAPM as a weighted average by different sources presented below. According to Damodaran, the appropriate premium in Norway is 5,69% which equals the premium he estimates for mature equity markets in general.

KPMG estimates an implied risk premium amounting to 6% in developed markets consisting of the markets STOXX 50, S&P 500, FTSE, STOXX 600 and AEX (See appendix for closer descriptions of the markets). PWC on the other hand has through an extensive 2016 survey observed a risk premium equal to 5.0% used by financial analysts. According to Koller et. Al, historical risk premiums has fluctuated between 4,5%-5,5%. We choose to operate with a risk premium equal to 5.5% and believe this estimate to be reasonable due to the above mentioned.

Risk premiums			
Source	***Market***	***Type***	***MRP***
KPMG	*Europe*	*Research*	*6,0%*
PWC	*Norway*	*Survey*	*5,5%*
Academica	*Global*	*Research*	*4.5%-5.5%*
Estimate			***5,5%***

Figure 7-3: Own Production

As a result of the previous steps above we end up with an equity Cost of capital estimated to 11.5%.

Component	Estimate
Rf	0,027885
Beta	1,589753
Premium	0,055
CAPM	11,5%

Figure 7-4: Own Production

7.2.4 Cost of Debt Capital

The largest part of the interest-bearing debt structure in Songa is mainly consisting of secured debt facilities issued to finance the CAT-D rigs with the rigs itself as collateral. A significant part of the debt is also the three bonds issued by the same financing purpose. Theory offers several applications in how required return from debt can be assessed depending on a firm's type of debt and features. We chose to find a satisfactory cost of debt by estimating a synthetic rating for Songa, and then use this rating to arrive at a default spread and cost of debt. A creation of synthetic credit ratings is well-applied by credit analysts when they are not covered by the

rating agencies. We choose to follow Damodaran's framework when assessing a synthetic credit rating to Songa by using Songa's Interest Coverage Ratio calculated earlier to determine the credit rating (Damodaran, 2017). The framework is created on Standard and Poor's historical ratings on covered small cap firms and their belonging interest coverage ratio.

	2010	2011	2012	2013	2014	2015	2016
Interest Coverage Ratio	7,425	16,031	4,839	2,552	5,893	13,744	3,861
Implied Credit Rating	*A*	*AAA*	*A-*	*B+*	*A-*	*AAA*	*BB+*

Figure 7-5: Own Production/Annual reports/Damodaran

As we can see from the table above, Songa's implied credit rating has changed from ultimo 2010 to ultimo 2016. We choose to go forward with the credit rating ultimo 2016, *BB+,* instead of choosing one of the higher ratings from earlier years. Qualitative arguments for this is the current counterparty risk arising from having only Statoil as rig charterer, leverage level and vulnerability to current industry fundamentals.

After assessing the synthetic credit rating, we include the risk-free rate derived in earlier chapter and a default spread related to the credit rating. The after tax Cost of debt is estimated to 6.2%.

Synthetic Rating	Risk-Free Rate	Default Spread	Cost of Debt	Tax Rate	After-Tax Cost of Debt
BB+	2,79%	4,25%	7,04%	12,5%	6,2%

Figure 7-6: Own Production

7.2.5 Capital Structure

Songa's gearing policy does not follow any target ratio and their only aim is to ensure a continuing of a "*going concern"* together with maximizing the stakeholders return by balancing the capital structures through different corporate action alternatives. As the WACC is a requirement in relationship to *alternative* investments and that changes in capital structure by e.g. repayments of debt and share repurchases has to be done to market values, it is important to use market values of equity and debt in favor of book values (Koller et al., 2010). However, in Songa's case, not all the securities are publicly traded thus complicating this. Ultimately we

choose to use the book values of the NIBD in our WACC calculation and justifies it by the great amount of non-tradeable bank loan/facilities which are secured in Songa's assets.

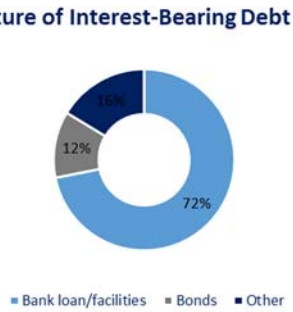


Figure 7-7: Own production/annual reports

Songa's capital structure has historically changed significantly year to year with high NIBD levels the two latest years resulting from the debt financed CAT-D rigs.

	2010	2011	2012	2013	2014	2015	2016	Average
NIBD	232.996	1.014.755	1.414.495	655.656	598.725	2.065.789	2.218.817	
Invested Capital	1.275.397	2.168.443	2.361.488	1.736.210	1.634.493	2.638.896	3.019.989	
NIBD/Invested Capital	18,3%	46,8%	59,9%	37,8%	36,6%	78,3%	73,5%	**50,2%**

Figure 7-8: Own production/Annual reports

As presented in the table above, the average NIBD/Invested Capital (2010-2016) is 50%, which we believe are a reasonable to assume as target of the capital structure going forward with our WACC. This is justified by current levels of NIBD is above average resulting from relative new CAPEX through debt, and that significant lower levels will breach debt covenants (waived until 2018) limiting the book value of equity to fall below 25 % and leverage ratio maximum 5.25x. A capital structure close to 50% is also what is being forecasted at the end of the explicit period in the pro forma chapter.

7.3 WACC

After the steps above we estimate the weighted average cost of capital to 8.93%, which will be applied in further calculations

Financing	Proportion of Invested Capital	Cost Of Capital	Contribution to Weighted Average
Debt	50%	6,2%	3,08%
Equity	50%	11,5%	5,77%
		WACC	8,85%

Figure 7-9: Own production/annual reports

8 Valuation

When conducting the fundamental valuation of the Songa share, we choose to rely on finding the Present value with the discounted cash flow (DCF) approach in form of the free cash flow for firm (FCFF), giving the enterprise value, as well as the excess return approach in form of the Economic Value Added (EVA) model, which also estimates the enterprise value. Both these approaches are derived from the Dividend Discount model, and under certain theoretical conditions yields identical values (Petersen&Plenborg, 2012).

After estimating the Enterprise value, we find the equity value by subtracting the NIBD. The reasoning of why we choose to apply two models which theoretically yields the same value is due to the two models' different characteristics and illustration of value creation. The reason of why we choose to apply Enterprise value models is due to the beneficial robustness to different levels in financial gearing in WACC relative to the Equity-based models and Cost of Equity.

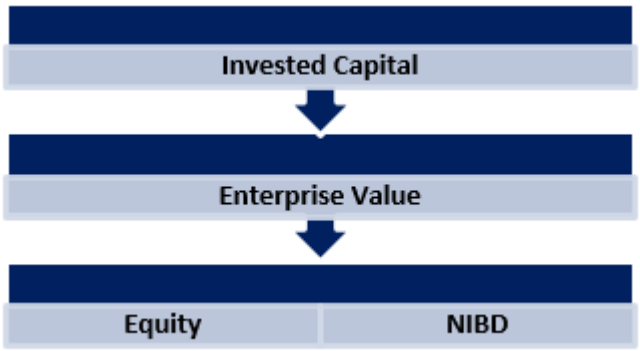


Figure 8-1: Own Production/Petersen&Plenborg

8.1.1 Fundamental share price with the Discounted Cash flow approach – FCFF

The FCFF model assumes the enterprise value to be the presented value of future free cash flows. Effectively of this assumption, the company values depend on the free cash flows and the WACC used for discounting. Below is the formula for a two-staged FCFF model representing the explicit forecast horizon and the terminal period.

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

Resulting from the pro forma statements, WACC and long-term growth rate in previous chapters we find estimated FCFF for the explicit forecast horizon and terminal period, for then using the WACC and perpetual growth in estimating the fundamental value of Songa's share price today.

$$FCFF = NOPAT + Depreciaton \pm \Delta NWC - CAPEX$$

The table above illustrates the estimated share price as of NOK 21.4 per 24.02.2017 based on our fundamental findings and expectations. The FCFF model yields the enterprise value, we then find the equity value by subtracting the current value of NIBD. The share price in NOK is then found by dividing on outstanding shares and converting it to NOK by the NOK/USD per 24.02.2017.

FCFF MODEL

USD '000		E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Discount factor		*0,918*	*0,843*	*0,774*	*0,710*	*0,652*	*0,599*	*0,549*	
NOPAT		*174.988*	*191.511*	*195.546*	*150.385*	*186.941*	*197.081*	*81.876*	*222.449*
Depreciation		*183.366*	*178.633*	*174.022*	*169.530*	*165.154*	*160.891*	*156.738*	*158.305*
Δ NWC		*3.313*	*-722*	*-*	*2.861*	*-1.907*	*-373*	*6.925*	*-152*
Investments		*-75.976*	*-100.872*	*-98.269*	*-95.732*	*-93.261*	*-90.854*	*-88.508*	*-184.055*
FCFF		**285.692**	**268.550**	**271.299**	**227.043**	**256.927**	**266.745**	**157.031**	**196.546**
PV FCFF		**262.271**	**226.324**	**209.897**	**161.257**	**167.522**	**159.665**	**86.288**	
SUM PV FCFF	1.273.225								
Terminal Period	2.478.517								
PV Terminal Period	1.361.944								
Estimated EV	2.635.169								
NIBD	2.344.021								
Estimated Value of Equity	291.149								
Estimated Share price USD	2,57								
Estimated Share price NOK	**21,4**								

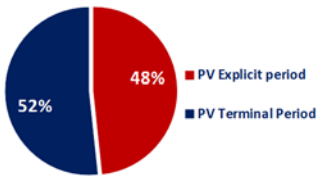


Figure 8-2: Own Production

The explicit forecast horizon accounts for 52% of the estimated Enterprise value while the terminal period accounts for 48%. A result of this is that the estimated share price is significantly exposed to the expectations set in the terminal period, also after the impact of the terminal period is reduced by the time length of the explicit forecast horizon.

8.1.2 Fundamental share price with the Excess return approach – Economic Value Added

We also perform a valuation with the EVA model to support the result in FCFF. The result is based upon the same pro forma statement as the one applied for the FCFF and yields the same share price found in the FCFF model. The value-added from also using this model is explicit illustration of when a company is traded above/below the booked value of Invested Capital. More specifically, when the present value of the expected EVA is negative, then the market value of invested Capital is below the invested capital in the books. Opposite, when the present value of EVA is positive, then the market value of invested capital is above the book value.

Another way to interpret the EVA is the spread between WACC and ROIC. By this, the Enterprise value is the initial Invested Capital net of present value of future EVA.

$$Enterprise\ value_0 = Invested\ Capital_0 + \sum_{t=1}^{n} \frac{EVA_t}{(1+WACC)^t} + \frac{EVA_{n+1}}{WACC - g} * \frac{1}{(1+WACC)^n}$$

$$EVA = NOPAT_t - WACC * Invested\ Capital_{t-1}$$

The forecast of the economic value added can be seen in the table above. We calculate the PV of EVA in the explicit forecast horizon to be -$448 645'. Ultimately this could be interpreted as the return on invested capital not being sufficient relative to the required return on invested

EVA MODEL									
USD '000		E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Discount factor		0,918	0,843	0,774	0,710	0,652	0,599	0,549	
Invested Capital Primo		3.145.193	3.034.489	2.957.450	2.881.696	2.805.038	2.735.052	2.665.388	2.590.234
NOPAT		174.988	191.511	195.546	150.385	186.941	197.081	81.876	222.449
Cost Of Capital(WACC=8.93%)		280.866	270.980	264.100	257.335	250.490	244.240	238.019	231.308
Economic Value Added		**-105.878**	**-79.469**	**-68.554**	**-106.951**	**-63.548**	**-47.159**	**-156.143**	**-8.859**
PV Economic Value Added		**-97.198**	**-66.973**	**-53.039**	**-75.962**	**-41.435**	**-28.228**	**-85.800**	
SUM PV Economic Value added	-448.635								
Terminal Period	-111.717								
PV Terminal Period	-61.388								
Invested Capital Primo '17	3.145.193								
Estimated EV	2.635.169								
NIBD	2.344.021								
Estimated Value of Equity	291.149								
Estimated Share price USD	2,57								
Estimated Share price NOK	**21,4**								

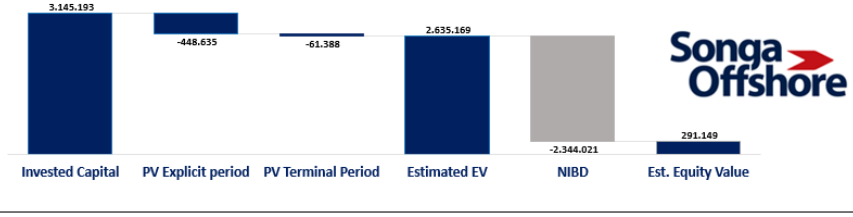


Figure 8-3: Own Production

capital. A sound explanation is that we estimate to observe none of the legacy rigs to be assigned contracts until '23, thus yielding none return despite of being a part of Songa's invested Capital. The present value of the EVA in terminal period is also estimated to yield a marginally negative figure. Thus resulting in a lower estimated EV relative to the value found in the balance, and after subtracting the NIBD we derive to an estimated share price to NOK 21.4, as presented above.

8.2 Relative valuation approach

The essence of multiple based valuations is to assess whether the stock of a company is traded at a premium or discount, in relation to its peers. Multiple based valuations rely on the relative pricing of peers' metrics and are widely used by investors due to their low level of complexity and quickness, although thorough multiple based valuations are quite complex and time consuming (Petersen & Plenborg, 2012). Another disadvantage associated with multiple valuations is that they are static and only offers insight to the ratio at a chosen time. We will rely on multiple valuation to supplement our fundamental valuation. As with other valuation approaches and analysis, the importance of using comparable peers is crucial. The multiple analysis will focus on the harmonic mean and median of the peers. The reason behind choosing harmonic mean over arithmetic mean is that it awards each data point equal weight, while arithmetic mean attributes greater weight to the outliers of the sample (Petersen&Plenborg, 2012).

8.2.1 Enterprise multiples

Multiples calculating the Enterprise value rely on performance metrics not affected by capital structure. Hence, this approach present ratios which have favorable characteristics for peer comparisons with large differences in capital structure. Most enterprise value based multiples divide the enterprise value of a firm by a key number from the income statement. The ones we will analyze are: EV/sales and EV/EBITDA, which are the most applied multiples for this industry. The EV/sales multiple Is not the best standalone measure as it does not take profitability into consideration, but it still supplies analysts with a measure of the companies' ability to generate revenues in relation to their value. EV/EBITDA is the most used of the enterprise value based multiples, as it presents a satisfactory and comparable measure of profitability, close to that of cash flows from operations. It supposedly overcomes problems tied to accounting differences, but this is only partly true. While it removes noise caused by

alternate depreciation practices, deferred tax, and so on, it does not correct for revenue and cost recognition issues, pension accounting, etc.

8.2.2 Equity multiples

The two most commonly used equity based multiples are P/E and P/B, which relates the market value of equity to earnings and book value of equity, respectively. The market value of equity for Songa and its peers are the closing price as of 24.02.2017, while earnings and book value are gathered from annual or quarter reports with numbers as of 31.12.2016. The formulas for the two multiples are show below:

$$\frac{P}{E} = \frac{ROE-g}{r_E-g} \qquad \frac{P}{B} = \frac{ROE-g}{r_E-g} * \frac{1}{ROE}$$

As negative earnings have been normal for Songa and its peer the later years, P/E is not a good valuation measure and we will focus on P/B in this paper. P/B is suitable when analyzing companies where tangible assets are the prime source of value creation, this further argues the use of this multiple for our analysis.

For perfect use of enterprise multiple analysis, all companies included should possess the same characteristics in form of operations, accounting policies and outlook. For equity based multiple analysis, the companies should have comparable growth rates, WACC, and profitability. All criteria for perfect multiple analysis are rarely all met and this further argues for the use of

	EV/Sales		***EV/EBITDA***		***P/B***
	2016	FY1	2016	FY1	2016
ODL	2.41	2.85	5.55	8.44	0.48
NADL	2.04	5.53	3.54	12.57	0.12
FOE	1.02	2.71	1.69	6.61	0.19
RIG	2.77	3.31	5.08	7.60	0.32
Harmonic Mean	1.78	3.33	3.20	8.32	0.21
Median	2.23	3.08	4.31	8.02	0.25

Figure 8-4: Own Production/Annual reports

multiple valuations as an alternative valuation, to be viewed in combination with a more fundamental valuation. We acknowledge the imperfections of our multiple analysis, and interpretation is done with caution.

In the above table, FY1 is calculated using the latest enterprise value using the current market capitalization consolidated and the latest interim values for the company against the latest consensus forecasted sales/EBITDA/EBIT one year forward (Data sources: Datastream, IBES, Worldscope.).

Songa´s EV/sales multiple lies above all peers in 2016, and is only passed by NADL in the forecasted one year ahead multiples. This suggests that Songa is currently overpriced or that the market values Songa´s prospects as better than their peers. This supports the current situation where Songa stands out with long-term contracts yielding high day rates. The EV/EBITDA tells the same story when looking at the 2016 numbers, although the forecasted multiples place Songa below their peers.

The equity based multiple, namely the price/book ratio is below 1, meaning that either investors believe Songa's equity to be overvalued, or they earn returns below the cost of its capital. But the fact that they are above all their peers supports the scenario where Songa´s long-term high yielding contracts makes the market believes more in their future earnings than that of their peers.

By applying the harmonic mean of the multiples above to Songa´s respective numbers we get the implied share price of Songa.

	EV/sales	EV/EBITDA	P/B
Implied share price	11.89	62.11	12.59

Figure 8-5: Own production/Annual Reports/Datastream

The estimation of implied share price is calculated using forecasted one year ahead multiples for the enterprise based multiples, and as of 2016 when calculating the price/book ratio. This is done as a valuation based on forward looking information yield on average more accurate value estimates (Petersen & Plenborg, 2012).

Based on the multiples the share price of Songa should be as deviating as 11.89 and 62.11. Although our fundamental valuation yields a price in the interval of the multiples, this result serves as a testament to the unpredictable nature of multiple based valuations. The widely inconsistent results cause us to focus on the findings of our fundamental valuation.

8.3 Sensitivity analysis

The legitimacy of the fundamental valuation conducted above is restricted by the several parameters set earlier. As of this, we choose to conduct a sensitivity analysis to examine and better understand how changes in some central variables, possibly biased by subjectivity, affect the implied valuation. We conduct the analysis on basis of different intervals regarding the WACC and potential directions of growth-rate in the terminal period within the FCFF-model to

Terminal Growth \ Terminal WACC	6,5%	7,0%	8,0%	8,9%	9,5%	10,0%	11,0%
-1,0%	27,1	20,5	9,5	1,2	0,0	0,0	0,0
-0,5%	34,7	27,1	14,7	5,5	0,7	0,0	0,0
0,0%	43,4	34,7	20,5	10,2	4,9	0,7	0,0
0,5%	53,6	43,4	27,1	15,5	9,5	4,9	0,0
1,0%	65,6	53,6	34,7	21,4	14,7	9,5	0,7
1,5%	80,1	65,6	43,4	28,1	20,5	14,7	4,9
2,0%	97,7	80,1	53,6	35,8	27,1	20,5	9,5
2,5%	119,8	97,7	65,6	44,8	34,7	27,1	14,7
3,0%	148,1	119,8	80,1	55,2	43,4	34,7	20,5

Figure 8-6: Own Production

see how it may affect the predicted share price. The reasoning for this is the potential uncertainties within the WACC calculation and also our assumption of 1% growth in our base case. The upward boundary of the terminal growth rate is set as earlier discussed projections of long term global growth rates. We also examine how negative growth rates would affect the share price.

The figure above illustrates different scenarios with changes in the growth rate and WACC applied in the terminal value. As expected, changed assumptions in these two variables could potentially change the estimated share price significantly. The largest deviations are logically found in the corners as of the largest changes in the variables used in the base-cased share price. Yet illustrated in the box outside the base-case there is also significant sensitivity on relative small changes the two variables which arguably also could have been used as sound assumptions. However, with most scenarios in this box, the direction of the fundamental share price communicates the same direction as base-case share price.

Other variables with significant uncertainty in its nature is the long-term day rate and utilization rate we base our terminal period on. As a result, we also set up an analysis to see how sensitive changes in these two variables may influence the estimate of our share price.

The analysis conducted of the day-rate and utilization rate applied in the terminal year also implies certain sensitivity with change in the two decisive variables. The day-rate applied in the terminal forecast was based upon averaged historical day-rates. Due to the long time period between today and the terminal year, together with the assumption taken in the use of

Terminal Day Rate / $	Terminal Utilization Rate						
	73%	74%	75%	76%	77%	78%	79%
330	0,0	0,0	0,0	0,0	1,6	4,0	6,4
340	0,0	0,0	2,3	4,7	7,2	9,7	12,2
350	2,6	5,2	7,7	10,3	12,9	15,4	18,0
360	8,0	10,6	13,2	15,8	18,5	21,1	23,7
370	13,3	16,0	18,7	21,4	24,1	26,8	29,5
380	18,6	21,4	24,2	27,0	29,7	32,5	35,3
390	24,0	26,8	29,7	32,5	35,4	38,2	41,1
400	29,3	32,2	35,1	38,1	41,0	43,9	46,8
410	34,6	37,6	40,6	43,6	46,6	49,6	52,6

Figure 8-7: Own production

backward-looking data defining future expected rate, there is absolute significant uncertainty to the base case estimate.

Holding the originally applied day-rate equal, changes of the utilization rate between 73% and 79% changes the share price estimate from NOK 13.33 to 29.5. Contrary, by holding the utilization rate equal, terminal day-rate between USD 330K – USD 410K changes the share price estimate between NOK 0.00 to NOK 43.60.

8.4 Scenario analysis

In addition to what we find as most probable in the fundamental valuation executed above, we choose to present two possible scenarios which undeniably could be argued as reasonable as base case if the valuation where conducted by others. The scenarios will take a *bullish* and a *bearish* direction relative to one applied, with some specific actions on impacting income and expenses. The rest of the accounting items will be assumed to follow the reasoning done in the base case, mostly as a function of the revenues. Despite the presentation of alternative cases we want to emphasize our subjective credence in the base-case.

Alternative Scenarios		
	Revenues	**Costs**
Scenario 1 (Bull)	• Higher scrapping activity among competitors putting the market faster towards balance • Songa Dee and Songa Delta Contracted • 5% Higher mid-cycle day rate after '23	• Reactivating costs trigged from Contracts in '18 • Related costs from SPS in '18/'19
Scenario 2 (Bear)	• 5 % lower mid-cycle day rate after '23	• Low diversification in rig portfolio increases rig costs

Figure 8-8: Own production

8.4.1 Bullish Case

A scenario which could potentially increase the value of the Songa share is if some of the Legacy rigs receives contract despite the challenging outlooks, on a short-term basis. The Songa management are continuously working on promoting the rigs to operators. The bullish case will assume that Songa Dee and Songa Delta will get contracted during 2017 on the prevailing market conditions with commenced start from 2018 until 2023, while Songa Trym rig still will be converted to metal in a scrapping process. In January 2017 there was two contracts agreed upon with revealed day rate on direct peers to Dee and Delta. Bidford (3rd generation, Fred Olsen Energy) and Deepsea Bergen (3rd generation, Odfjel Drilling) both semi-submersibles were charted to the Norwegian Continental Shelf on an average day rate amounting to $150K (See appendix). This will be used as proxy for contracted day rate to Dee and Delta. Also, we assume a 5% higher day rate from the one applied in the terminal period in our base case.

The two cold-stacked rigs being contracted would trigger reactivating costs. Derived from discussions in earlier chapter, we forecast a reactivating cost to USD40M for each rig. Another factor triggered by eventual contracts are the scheduled SPS to be conducted before operational start in 2018 for Delta and 2019 for Dee. By using the proxy SPSs also mentioned earlier of $50M together with the industry practice, we forecast $50M to be initially being capitalized before half of this being expensed through impairments for both rigs in respectively 2018 and 2019 due to the long-term prospects of the rigs together with market conditions. With the expectations set, we derive to a share price amounting to NOK 35.9 through the FCFF model, a potential upside of NOK 14.5 per share or 67% from our basis price, in such case yielding a strong buy recommendation relative to our price estimate and traded share price as of 24.02.2017.

8.4.2 Bearish Case

The homogeneous CAT D rigs can be argued to create positive synergies in form of applying experiences and know-how occurring at one rig to another. Contrary, this also gives higher

exposure to Songa if weaknesses to the rigs are revealed going forward. The bearish case will therefore examine what 2% points higher rig operational expense level relative to revenues will affect the share price. Together with the unfavorable development in these costs we also use a 5% lower day rate obtained in the terminal period, relative to the base case. By applying the FCFF model, we predict a share price equal to NOK 6.8 if the bear scenario should emerge. Compared to our basis estimate this would imply a downside of NOK 14.6 or 68%, ultimately yielding a sell recommendation relative to both our fundamental estimate and traded price as of 24.02.2017.

8.5 Robustness checks

8.5.1 Monte-Carlo simulation

Despite our beliefs in the base case presented earlier we chose to run a Monte-Carlo simulation on assumed influential variables on the derived share price. By using a Monte-Carlo simulation we can run a large amount of simulations on chosen variables and distribution affecting the share price calculated in the FCFF model.

The input variables we choose to base our Monte-Carlo simulation upon are those we find the most probable sensitive to assumption and subjectivity while also affecting the share price in a significant amount. Based upon these criterions we choose the variables *WACC*, *utilization rate* and *day rate* used in the terminal period, as well as the *perpetual growth rate* on 100 000 simulations with the assumption of triangular distribution, giving us the opportunity to set out

Monte Carlo Simulation	
Variable	**Simulation Range**
Terminal Day rate	± 10 % from basis
Terminal Utilization	± 10 % from basis
Explicit forecast WACC	± 2%point from basis
Terminal WACC	± 2%point from basis
Perpetual Growth	± 1%point from basis

fixed ranges on the variables we test for. The ranges set for the different variables are presented in the table below.

We define the simulation range on the day rate and utilization in terminal period ±10% which gives the range 68%-84% for the utilization rate and 333-407 for the day rate. By these ranges we feel more confident in catching some of the uncertainty related to the estimates. Also, we define the range for the WACC used in forecast and terminal period ±2 percentage points from basis WACC applied. The perpetual growth variable is being simulated in the range between 0-2,1%, where the upside boundary represents the long-term growth rate, forecasted by Mckinsey Institute.

Monte Carlo Simulation	
Statistic	**Values**
Trials	100.000
Base Case	21,4
Mean	21,9
Median	20,3
Standard Deviation	18,8
Variance	354,7
Skewness	0,491
Kurtosis	3,3
Min	-33,3
Max	127,4

Figure 8-10: Own Production/ Crystal Ball

Oracle Crystal Ball was used in executing the Monte-Carlo simulation. The 100 000 simulation yielded a mean amounting to share price NOK 21.9, close to our estimated share price of 21,4. However, an important notice is that the applied software filters out outliers when averaging the simulation results, as there was significant spread between the results with minimum result of -33.3 and maximum of 127.4. The upwards skewness also indicates a potentially too high mean. The median, which takes outliers into account, also yields an estimated share price to NOK 20.3, close to the one found in the fundamental valuation. However, the standard

deviation of 18.8 weakens the Monte Carlo estimates. From the applied Monte-Carlo simulation, we also tested the probability of the value of a Songa share to be over what we found in the fundamental valuation, NOK24.1. According to the simulation is this probability 47.6%, effectively also indicating a higher probability of the share price being lower than the base case. To sum up the simulation, we still find the share price derived in the fundamental valuation chapter as valid, this is being supported by Monte Carlo simulation despite the high standard deviation which illustrates the uncertainties with the given variables, something we as a whole are well describing to the industry as a whole going forward.

8.5.2 Analyst Consensus

Finally, we also briefly compare our estimated share price of NOK 21.4 against equity research departments, covering Songa Offshore Se. The different target prices presented in the table below are all on basis after Songa published their Q4 2016 report.

Investment Bank	Target Price	
Clarksons Platou	42	*Buy*
SwedBank	38	*Buy*
Pareto Securities	31	*Hold*
DnB Markets	10	*Sell*
Our Estimate	21,4	*Sell*

Figure 8-11: Own Production/Equity Research reports

There is a significant spread between the different investment banks target prices, which effectively yields different recommendations of the Songa Equity. Compared to our estimated share price, it is only DnB Markets which also holds a sell recommendation on the Songa Share with a target price only NOK 10, considerably lower than our estimate. Clarksons Platou and Swedbank holds a target price in the range we found in the bullish case. The spreads in the target prices illustrates well the uncertainty related to the low visibility of future market conditions in the industry.

9 Conclusion

The objective to this paper was to find the true value of a common stock in Songa Offshore SE as of 24.02.2017. To the estimate to be trustworthy, we conducted different analyses to best possibly pinpoint on factors decisive for Songa going forward.

The external industry analysis revealed an offshore drilling industry currently facing significant headwinds resulting from an imbalanced market deriving from an oversupply, lagging from more favorable market conditions previous years. Thus, it is instrumental to observe the scrapping of rigs to continue for the market to become more balanced. On the other hand, the current downturn has put pressure on all the companies within the industry, resulting in lower operational cost levels. Moreover, the fundamental driver within the offshore drilling industry is the oil price which has been latest years collapsed from a temporary oversupply initiated by OPEC. However, the analysis revealed a strong fundamental demand as energy source next decades which speaks for the offshore drilling industry, despite the many factors, closely considered in the analysis, which can create strong and transitory shifts in the oil price along the way.

The Porters 5 framework revealed an industry we concluded as competitive. A strong factor behind this conclusion was the homogeneity in services provided by the different drilling companies. Also, the buyers (E&P companies) hold strong bargaining power in contract negotiations which increases the total competitiveness in the industry.

In addition to the external analyses, we also took a closer look at internal aspects to Songa. In this section, we concluded that the Cat D rigs should be considered as highly valuable and providing the company with a temporary competitive advantage, while other factors analyzed were considered to be in parity with the market.

Profitability in different measures were also assigned to both Songa and peers. We discovered generally low profitability within the industry latest years, influenced by weaker market and significant write-downs of assets. Moreover, we found it hard to assess any clear

outperformance by an individual company over time, and cyclical factors affecting the whole industry profitability.

Based upon the analyses, we gained confidence in forecasting industry outlook, day rates, utilization rates, growth etc. representative for Songa. Ultimately, this yielded pro forma statements used in the fundamental valuation executed through the present value models FCFF and EVA, discounted with the representative cost of capital. The base case of the fundamental share price yielded a price amounting to NOK21.4. Following chapters tested this estimate regarding its sensitivity, alternative scenarios and robustness. Further, we tested what share price a multiple valuation approach would yield relative to the one set as the fundamental share price. The results given by the multiples EV/Sales, EV/EBITDA and P/B yielded a large spread of share prices and we accounted such spread for the weaknesses often associated with the multiple valuation approach.

The sensitivity and scenario analysis established clear indications that our base case scenario were sensitive to assumptions in the terminal period, regarding the perpetual WACC, growth rate, day rate and utilization rate as well as other possible scenarios not applied as the base case. Further, the Monte Carlo simulation yielded a mean and median close our estimated share price, however with a significant standard deviation. Our estimate was also evaluated towards other valuations done by investment banks. Among the banks covering Songa Offshore, there was a great spread in recommendations. We believe the findings regarding uncertainty and large spreads from the above mentioned analyses greatly accounts for the nature of the drilling industry today. Ultimately, after considering this fundamental uncertainty describing Songa offshore and its industry, we feel confident in suggesting the true value of Songa Offshore SE today amounting to NOK21.4, thus yielding a Sell recommendation from the closing price as of 24.02.2017.

10 References

Books

Koller, T., Goedhart, M.H., Wessels, D., Thomas, E. (2010) *Valuation: measuring and managing the value of companies.* Hoboken, New Jersey: John Wiley & Sons.

Stopford, M. (2009). *Maritime Economics, 3rd edition*. New York: Routledge.

Petersen, C. and Plenborg, T. (2012). *Financial Statement Analysis*. Harlow: Pearson Education Limited.

Reports

Pareto Securities, Bård Rosef (2017). Rig weekly.

Songa Offshore (2017). Q4 Report.

Mckinsey Global Institute (2015). Global Growth: Can Productivity save the day in an aging world.

IMF (2017), World Economic outlook: A shifting Global Economic Landscape

Norwegian Petroleum Directorate (2017). The shelf in 2016.

SEB (2016), Credit Research: Songa offshore.

Nordea (2016), Credit Research, Oil Services: Drilling.

Energy Information Administration (EIA) (2016), Energy Outlook 2016.

KPMG (2017), Equity Market Premium.

Websites

Maersk Drilling (2017). The drilling Industry. Retrieved from:

http://www.maerskdrilling.com/en/about-us/the-drilling-industry

Offshore Energy Today (2010). Offshore Drilling: history and Overview. Retrieved from:

http://www.offshoreenergytoday.com/offshore-drilling-history-and-overview/

Diamond Offshore (2017). Offshore rig basics. Retrieved from:

http://www.diamondoffshore.com/offshore-drilling-basics/offshore-rig-basics

Norwegian Petroleum Directorate (2014). Petroleum activity on the Norwegian Continental Shelf. Retrieved from:

http://www.npd.no/en/Publications/Reports/Compiled-CO2-atlas/2-Petroleum-activity-on-the-Norwegian-Continental-Shelf/

Norwegian Petroleum Directorate (2014). Sokkelaret 2016. Retrieved from:

http://www.npd.no/no/Nyheter/Nyheter/2016/Sokkelaret-2016/

Clarkson Platou (2017), The offshore markets 2016 in review. Retrieved from:

https://clarksonsresearch.wordpress.com/2017/02/15/the-offshore-markets-2016-in-review/

Market realist (2016). Understanding demand side of offshore drilling industry. Retrieved from:

http://marketrealist.com/2016/02/understanding-demand-side-offshore-drilling-industry/

Songa Offshore (2017). Company overview. Retrieved from:

http://www.songaoffshore.com/Pages/Company-Overview.aspx

Songa Offshore (2017). History. Retrieved from:

http://www.songaoffshore.com/Pages/History.aspx

Offshore Energy today (2015). Songa Offshore DSME in dispute over cost overruns. Retrieved from:

http://oilprice.com/Energy/Energy-General/Trump-May-Open-Up-Arctic-Drilling.html

Oilprice (2017). Trump May Open Up Arctic Drilling. Retrieved from:

http://www.offshoreenergytoday.com/songa-offshore-dsme-in-dispute-over-cost-overruns/

Energy Information Administration (2017 a), What drives crude oil prices: Demand OECD. Retrieved from:

https://www.eia.gov/finance/markets/crudeoil/demand-oecd.php

Energy Information Administration (2017 b), What drives crude oil prices: Supply non-OPEC. Retrieved from:

https://www.eia.gov/finance/markets/crudeoil/demand-nonoecd.php

Energy Information Administration (2017 c), What drives crude oil prices: Financial markets. Retrieved from:

https://www.eia.gov/finance/markets/crudeoil/financial_markets.php

Energy Information Administration (2017 d), What drives crude oil prices: Supply OPEC. Retrieved from:

https://www.eia.gov/finance/markets/crudeoil/supply-opec.php

Energy Information Administration (2017 e), What drives crude oil prices: Supply Non-OPEC. Retrieved from:

https://www.eia.gov/finance/markets/crudeoil/supply-nonopec.php

Energy Information Administration (2017 f), What drives crude oil prices: Balance. Retrieved from:

https://www.eia.gov/finance/markets/crudeoil/balance.php

Energy Information Administration (2017g), Short-term Energy and summer fuels outlook. Retrieved from:

https://www.eia.gov/outlooks/steo/

Market Realist (2016), Oil prices and rig count go hand in hand.

http://marketrealist.com/2016/02/oil-prices-rig-count-go-hand-hand/

Energy routes (2016), Porter's five forces model for oil and gas industry. By Athanasios Pitatzis. Retrieved from:

https://energyroutes.eu/2016/05/23/porters-five-forces-model-for-oil-and-gas-industry/

Harvard Business Review (2011). How Competitive Forces Shape Strategy. By Michael E. Porter. Retrieved from:

https://hbr.org/1979/03/how-competitive-forces-shape-strategy

World Tax (2017). Bermuda Tax System. Retrieved from:

https://www.world.tax/countries/bermuda/bermuda-tax-system.php

Ernst&Young (2013), US CAAP vs IRFRS the Basics. Retrieved from:

http://www.ey.com/Publication/vwLUAssets/EY-US-GAAP-vs-IFRS-the-basics-2013/$FILE/EY-US-GAAP-vs-IFRS-the-basics-2013.pdf

Offshore-mag (2012). Empirical relations characterize rig day rates. By Mark J. Kaiser and Brian F. Snyder. Retrieved from:

http://www.offshore-mag.com/articles/print/volume-72/issue-10/drilling-and-completion/empirical-relations-characterize-rig-day-rates.html

Rig-Serv (2017), Rig reactivation planning. By Sam Pannunnzio. Retrieved from:

http://rig-serv.com/2017/01/20/rig-reactivation-planning/

Oilprice (2017). Trump may open up Arctic Drilling. Retrieved from:

http://oilprice.com/Energy/Energy-General/Trump-May-Open-Up-Arctic-Drilling.html

Aswath Damodaran (2017). Betas by Sector (US). Retrieved from:

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html

Aswath Damodaran (2017). Ratings, interest Coverage ratios and Default Spread. Retrieved from:

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.htm

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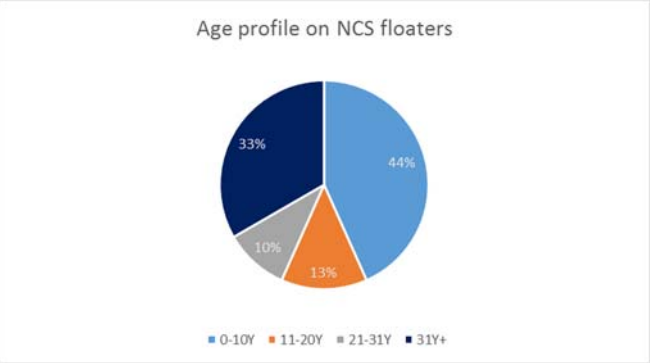
Appendix 1 Floaters and Age profile NCS



NCS floaters Ultimo 2016					
Age	Rigs	Generation	Rigs	Contracted	Utilisation
0-10Y	13	6th gen.	9	8	89%
11-20Y	4	5th gen.	3	1	33%
21-31Y	3	2-4 gen.	18	6	33%
31Y+	10				
Total	30		30	15	50%

Appendix 2 Damodaran Synthetic Rating Table

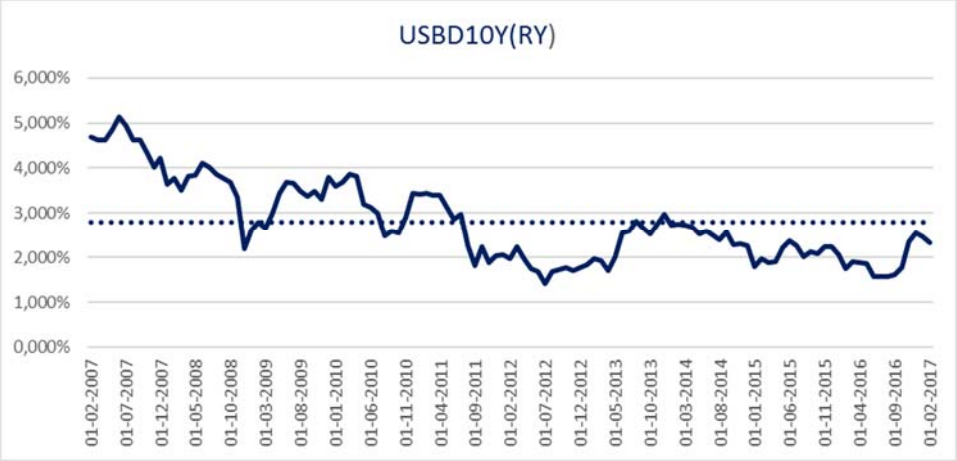
Interest Coverage Ratio Small M.Cap (<$5 Billion)	Rating	Typical Default Prob.
>12.50	*AAA*	1,25%
9.50-12.5	*AAA*	1,75%
7.50-9.50	*A+*	2,50%
6.00-7.50	*A*	2,50%
4.50-6.00	*A-*	3,00%
4.00-4.50	*BBB*	3,50%
3.50-4.00	*BB+*	4,25%
3.00-3.50	*BB*	5,00%
2.50-3.00	*B+*	6,00%
2.00-2.50	*B*	7,25%
1.50-2.00	*B-*	8,50%
1.25-1.50	*CCC*	10,00%
0.80-1.25	*CCC*	12,00%
0.50-0.80	*CCC*	15,00%
<0.65	*D*	20,00%

Appendix 3 Songs VS OSEBX indexed

Appendix 4 Description of Stock index

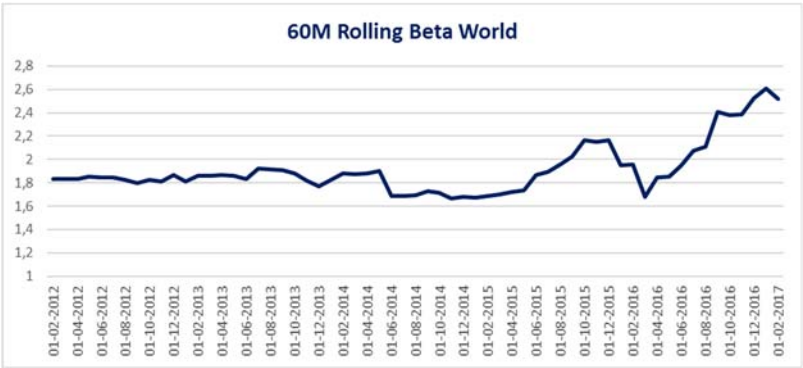
Appendix	
Market/Index	**Description**
S&P 500	*500 largest companies, NYSE & NASDAQ*
STOXX 50	*Blue-Chip Index from 11 euro zone countries*
FTSE	*100 largest companies, LSE*
STOXX 600	*Broad European index from 17 european countries*
AEX	*25 largest companies, Euronext Amsterdam*

Appendix 5 Overview US Tresaury bond 10Y vs applied Risk-free Proxy



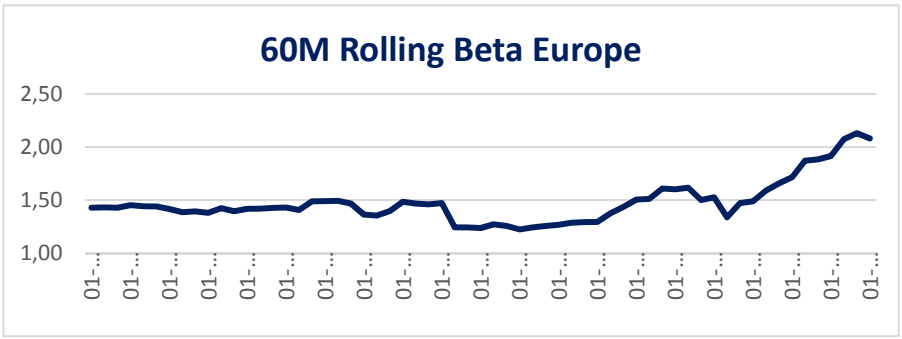
Appendix 6 Rolling Beta vs MSRI WORLD

			MSRI WORLD				
Code	N:SONG(P)	MSWRLD$(MSRI)	Songa Excess	MSRI World Excess	10Y Static Beta	60M Rolling Beta	Spread
24-02-2017	31,3	7253,0	-7,1%	0,3%	1,949	2,521442233	0,573
24-01-2017	32,7	7038,6	11,5%	-0,9%	1,949	2,611300168	0,663
24-12-2016	28,6	6907,3	40,2%	0,0%	1,949	2,523433354	0,575
24-11-2016	20	6717,8	-11,9%	-2,2%	1,949	2,384979064	0,436
24-10-2016	22	6675,8	2,0%	-3,9%	1,949	2,381015789	0,432
24-09-2016	21	6754,0	-32,8%	-2,7%	1,949	2,41019405	0,462
24-08-2016	30	6749,7	33,6%	-1,1%	1,949	2,108015698	0,159
24-07-2016	22	6639,5	26,6%	3,5%	1,949	2,072556008	0,124
24-06-2016	17	6249,3	-49,7%	-5,3%	1,949	1,94774043	-0,001
24-05-2016	32	6413,0	-8,7%	-4,2%	1,949	1,85603274	-0,093
24-04-2016	34	6506,7	52,6%	1,5%	1,949	1,84872484	-0,100
24-03-2016	21,88	6241,6	-56,6%	3,2%	1,949	1,67891797	-0,270
24-02-2016	47,4	5889,0	-23,2%	-2,7%	1,949	1,956293471	0,008
24-01-2016	59,55	5882,8	-2,8%	-10,9%	1,949	1,948535216	0,000
24-12-2015	59,55	6400,8	-21,1%	-3,9%	1,949	2,167540538	0,219
24-11-2015	72,92	6473,9	-18,9%	-3,2%	1,949	2,148781355	0,200
24-10-2015	86,89	6502,5	37,4%	4,9%	1,949	2,162782916	0,214
24-09-2015	61,98	6036,6	3,5%	-2,8%	1,949	2,029356974	0,081
24-08-2015	58,33	6034,6	-32,7%	-11,5%	1,949	1,959303216	0,011
24-07-2015	83,25	6612,0	-15,0%	-4,9%	1,949	1,8921246	-0,056
24-06-2015	94,79	6756,0	-4,7%	-3,6%	1,949	1,864276363	-0,084
24-05-2015	96,62	6811,5	-7,6%	-2,2%	1,949	1,733964344	-0,215
24-04-2015	101,48	6771,6	12,4%	-0,9%	1,949	1,72246971	-0,226
24-03-2015	88,11	6648,5	-9,2%	-2,7%	1,949	1,700202233	-0,248
24-02-2015	94,19	6642,8	-0,8%	1,4%	1,949	1,690193391	-0,258
24-01-2015	92,36	6378,2	-2,1%	-3,8%	1,949	1,669759678	-0,279
24-12-2014	91,76	6440,3	-22,9%	-3,5%	1,949	1,682589525	-0,266
24-11-2014	114,85	6483,3	-8,3%	1,7%	1,949	1,664802981	-0,284
24-10-2014	121,53	6202,1	-18,8%	-5,9%	1,949	1,712582542	-0,236
24-09-2014	144,62	6398,7	-7,2%	-3,3%	1,949	1,729033813	-0,220
24-08-2014	151,3	6433,4	-10,9%	-3,7%	1,949	1,695656481	-0,253
24-07-2014	164,67	6495,0	3,1%	-1,6%	1,949	1,686127301	-0,262
24-06-2014	155,56	6418,8	5,7%	-0,3%	1,949	1,685599609	-0,263
24-05-2014	143,41	6260,5	-2,8%	-1,3%	1,949	1,904959097	-0,044
24-04-2014	143,41	6170,6	-15,4%	-0,3%	1,949	1,881421561	-0,067
24-03-2014	164,07	6023,3	-15,4%	-3,9%	1,949	1,873039759	-0,076
24-02-2014	187,76	6091,0	7,6%	0,5%	1,949	1,883299985	-0,065
24-01-2014	170,14	5896,4	-13,3%	-4,0%	1,949	1,827681186	-0,121
24-12-2013	190,19	5968,3	-32,1%	-1,6%	1,949	1,768684492	-0,180
24-11-2013	269,18	5899,8	-23,6%	-1,6%	1,949	1,818090992	-0,130
24-10-2013	340,1	5832,0	-8,7%	0,8%	1,949	1,882909793	-0,066
24-09-2013	361,59	5632,3	-17,4%	0,5%	1,949	1,909207508	-0,039
24-08-2013	423,38	5452,8	7,4%	-3,2%	1,949	1,918803297	-0,030
24-07-2013	384,16	5475,9	31,4%	5,7%	1,949	1,924414336	-0,024
24-06-2013	286,37	5046,2	-8,3%	-8,8%	1,949	1,830528129	-0,118
24-05-2013	303,03	5366,4	-5,6%	0,6%	1,949	1,858906876	-0,090
24-04-2013	311,89	5192,2	-1,8%	-1,2%	1,949	1,864686647	-0,084
24-03-2013	308,94	5108,9	-1,7%	-0,4%	1,949	1,857417279	-0,091
24-02-2013	305,72	4988,6	-5,8%	-2,2%	1,949	1,858981912	-0,090
24-01-2013	315,12	4957,7	-27,7%	1,7%	1,949	1,808497362	-0,140
24-12-2012	419,89	4746,4	41,4%	0,0%	1,949	1,86422711	-0,084
24-11-2012	291,21	4619,0	-32,4%	-2,1%	1,949	1,813955998	-0,135
24-10-2012	413,71	4586,9	-40,8%	-5,0%	1,949	1,823102802	-0,125
24-09-2012	667,31	4692,8	-15,5%	1,0%	1,949	1,799731944	-0,149
24-08-2012	764,56	4522,7	3,2%	4,4%	1,949	1,828421451	-0,120
24-07-2012	721,04	4220,0	-4,3%	-2,9%	1,949	1,845660203	-0,103
24-06-2012	731,78	4223,4	-17,7%	-1,4%	1,949	1,845545852	-0,103
24-05-2012	859,66	4164,0	-21,2%	-8,6%	1,949	1,856048694	-0,093
24-04-2012	1053,08	4421,9	-6,2%	-5,2%	1,949	1,830980748	-0,118
24-03-2012	1090,69	4532,5	-13,8%	-1,9%	1,949	1,832052926	-0,117
24-02-2012	1225,01	4494,6	2,8%	2,6%	1,949	1,835157821	-0,113



Appendix 7 Rolling Beta vs MSRI EUROPE

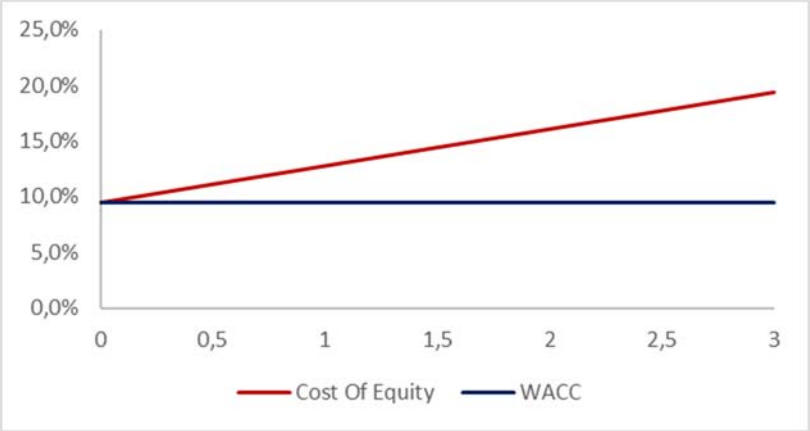
				MSRI EUROPE			
Code	N:SONG(P)	MSEROP$(MSRI)	Songa Excess	MSRI Europe Excess	10Y Static Beta	60M Rolling Beta	Spread
24-02-2017	31,3	8194,506	-7,1%	-2,20%	1,570	2,08	0,511
24-01-2017	32,7	8146,709	11,5%	0,62%	1,570	2,13	0,561
24-12-2016	28,6	7878,494	40,2%	1,69%	1,570	2,07	0,504
24-11-2016	20	7541,134	-11,9%	-6,14%	1,570	1,91	0,345
24-10-2016	22	7802,403	2,0%	-5,71%	1,570	1,88	0,314
24-09-2016	21	8037,375	-32,8%	-2,83%	1,570	1,87	0,303
24-08-2016	30	8040,847	33,6%	1,11%	1,570	1,71	0,145
24-07-2016	22	7738,94	26,6%	1,87%	1,570	1,66	0,088
24-06-2016	17	7394,714	-49,7%	-8,87%	1,570	1,59	0
24-05-2016	32	7873,14	-8,7%	-4,02%	1,570	1,49	-0
24-04-2016	34	7971,249	52,6%	2,70%	1,570	1,47	-0
24-03-2016	21,88	7556,745	-56,6%	3,73%	1,570	1,34	-0
24-02-2016	47,4	7094,329	-23,2%	-6,20%	1,570	1,53	-0
24-01-2016	59,55	7344,551	-2,8%	-11,48%	1,570	1,50	-0
24-12-2015	59,55	8043,799	-21,1%	-2,54%	1,570	1,62	0
24-11-2015	72,92	8023,767	-18,9%	-6,71%	1,570	1,60	0
24-10-2015	86,89	8350,941	37,4%	6,24%	1,570	1,61	0
24-09-2015	61,98	7659,399	3,5%	-6,19%	1,570	1,51	-0
24-08-2015	58.33	7929.491	-32.7%	-11.19%	1.570	1.51	-0.064
24-07-2015	83,25	8657,039	-15,0%	-5,51%	1,570	1,44	-0,134
24-06-2015	94,79	8899,432	-4,7%	-3,72%	1,570	1,37	-0,195
24-05-2015	96,62	8982,83	-7,6%	-0,86%	1,570	1,29	-0,275
24-04-2015	101,48	8813,259	12,4%	-1,20%	1,570	1,29	-0,277
24-03-2015	88,11	8675,317	-9,2%	-2,40%	1,570	1,29	-0,283
24-02-2015	94,19	8641,933	-0,8%	2,60%	1,570	1,27	-0,303
24-01-2015	92,36	8200,306	-2,1%	-3,32%	1,570	1,26	-0,314
24-12-2014	91,76	8244,309	-22,9%	-5,34%	1,570	1,24	-0,328
24-11-2014	114,85	8460,31	-8,3%	1,10%	1,570	1,22	-0,346
24-10-2014	121,53	8143,495	-18,8%	-8,79%	1,570	1,26	-0,314
24-09-2014	144,62	8663,61	-7,2%	-3,72%	1,570	1,27	-0,299
24-08-2014	151,3	8745,055	-10,9%	-6,49%	1,570	1,24	-0,334
24-07-2014	164,67	9081,497	3,1%	-4,00%	1,570	1,24	-0,327
24-06-2014	155,56	9192,575	5,7%	-1,63%	1,570	1,24	-0,326
24-05-2014	143,41	9087,242	-2,8%	-1,37%	1,570	1,47	-0,098
24-04-2014	143,41	8960,148	-15,4%	1,82%	1,570	1,46	-0,110
24-03-2014	164,07	8565,712	-15,4%	-6,23%	1,570	1,47	-0,103
24-02-2014	187,76	8870,584	7,6%	1,66%	1,570	1,48	-0,086
24-01-2014	170,14	8492,481	-13,3%	-2,46%	1,570	1,40	-0,173
24-12-2013	190,19	8464,373	-32,1%	-1,31%	1,570	1,35	-0,216
24-11-2013	269,18	8341,15	-23,6%	-3,80%	1,570	1,36	-0,206
24-10-2013	340,1	8426,664	-8,7%	1,91%	1,570	1,47	-0,102
24-09-2013	361,59	8048,288	-17,4%	0,78%	1,570	1,49	-0,077
24-08-2013	423,38	7770,709	7,4%	-0,26%	1,570	1,49	-0,080
24-07-2013	384,16	7579,291	31,4%	7,61%	1,570	1,49	-0,081
24-06-2013	286,37	6865,664	-8,3%	-10,53%	1,570	1,41	-0,162
24-05-2013	303,03	7441,621	-5,6%	0,60%	1,570	1,43	-0,139
24-04-2013	311,89	7198,011	-1,8%	-2,02%	1,570	1,43	-0,143
24-03-2013	308,94	7143,051	-1,7%	-1,72%	1,570	1,42	-0,151
24-02-2013	305,72	7067,386	-5,8%	-4,55%	1,570	1,42	-0,151
24-01-2013	315,12	7194,155	-27,7%	1,69%	1,570	1,40	-0,174
24-12-2012	419,89	6885,515	41,4%	1,73%	1,570	1,42	-0,147
24-11-2012	291,21	6587,711	-32,4%	-1,24%	1,570	1,38	-0,190
24-10-2012	413,71	6487,553	-40,8%	-4,23%	1,570	1,39	-0,177
24-09-2012	667,31	6582,389	-15,5%	2,97%	1,570	1,39	-0,184
24-08-2012	764,56	6224,004	3,2%	8,22%	1,570	1,42	-0,154
24-07-2012	721,04	5606,793	-4,3%	-4,59%	1,570	1,44	-0,129
24-06-2012	731,78	5709,404	-17,7%	-0,81%	1,570	1,44	-0,128
24-05-2012	859,66	5598,875	-21,2%	-11,05%	1,570	1,45	-0,118
24-04-2012	1053,08	6103,05	-6,2%	-6,91%	1,570	1,43	-0,142
24-03-2012	1090,69	6365,248	-13,8%	-3,54%	1,570	1,43	-0,139
24-02-2012	1225,01	6413,261	2,8%	4,45%	1,570	1,43	-0,141



Appendix 8 Historical NIBD/Invested Capital

	2010	2011	2012	2013	2014	2015	2016	Average
NIBD	232.996	1.014.755	1.414.495	655.656	598.725	2.065.789	2.218.817	
Invested Capital	1.275.397	2.168.443	2.361.488	1.736.210	1.634.493	2.638.896	3.019.989	
NIBD/Invested Capital	18,3%	46,8%	59,9%	37,8%	36,6%	78,3%	73,5%	**50,2%**

Appendix 9 Robustness to WACC vs Re in with change in capital structure



Appendix 10 Forecasted FCFF and EVA

	E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
NOPAT	174.988	191.511	195.546	150.385	186.941	197.081	81.876	222.449
Depreciation and Amortization	183.366	178.633	174.022	169.530	165.154	160.891	156.738	158.305
Change NWC	3.313	-722	-	2.861	-1.907	-373	6.925	-152
Investments	-75.976	-100.872	-98.269	-95.732	-93.261	-90.854	-88.508	-184.055
FCFF	285.692	268.550	271.299	227.043	256.927	266.745	157.031	196.546,4
NOPAT	174.988	191.511	195.546	150.385	186.941	197.081	81.876	222.449
WACC	0,0893	0,0893	0,0893	0,0893	0,0893	0,0893	0,0893	0,0893
EVA	-105.878	-79.469	-68.554	-106.951	-63.548	-47.159	-156.143	-8.859

Appendix 11 Individual expectations of operations/Total days

Utilization rate		2017E		2018E		2019E		2020E		2021E		2022E		2023E	
		Coverage	Days	Coverage	Days	Coverage	Days	Coverage	Days	Coverage	Days	Coverage	Days	Coverage	Days
Equinox	Contract Coverage	100%	365	100%	365	100%	365	100%	365	100%	365	90%	329	80%	300
	Planned SPS							-16%	-60						
	Other incidents														
Endurance	Contract Coverage	100%	365	100%	365	100%	365	100%	365	100%	365	100%	365	65%	300
	Planned SPS							-16%	-60						
	Other incidents														
Encourage	Contract Coverage	100%	365	100%	365	100%	365	100%	365	100%	365	100%	365	100%	365
	Planned SPS							-16%	-60						
	Other incidents														
Enabler	Contract Coverage	100%	365	100%	365	100%	365	100%	365	100%	365	100%	365	100%	365
	Planned SPS									-16%	-60				
	Other incidents	16%	-60												

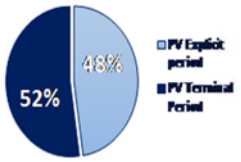
Appendix 12 FCFF Bull scenario

Forecast	E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Revenue								
Operating revenue	654.602	783.363	783.363	684.813	750.513	763.379	452.922	724.214
Rig operating expenses	-71.163	-165.161	-85.161	-74.447	-81.590	-82.988	-49.238	-72.421
Employee benfit expenses	-131.352	-157.189	-157.189	-137.414	-150.597	-153.179	-90.883	-145.320
General and administrative expenses	-48.468	-48.468	-48.468	-48.468	-48.468	-48.468	-48.468	-48.468
Reimbursable	-20.267	-24.254	-24.254	-21.202	-23.237	-23.635	-14.023	-22.422
Operational lease commitments								
EBITDA	383.352	388.292	468.292	403.282	446.622	455.109	250.310	435.582
Depreciation	-183.366	-180.155	-177.026	-172.457	-168.005	-163.668	-159.444	-161.038
Depreciation on capitalized lease								
Impairment		-25.000	-25.000					
Total depreciation and impairment	-183.366	-205.155	-202.026	-172.457	-168.005	-163.668	-159.444	-161.038
EBIT	199.986	183.137	266.266	230.825	278.617	291.441	90.867	274.544
Tax on EBIT	-24.998	-22.892	-33.283	-28.853	-34.827	-36.430	-11.358	-34.318
NOPAT	174.988	160.245	232.983	201.972	243.790	255.011	79.509	240.226
Interests on capitalized lease								
Financial income								
Financial expenses								
Net Interest Exp								
Other financial items								
Net financial expenses b. tax	-148.972	-139.100	-133.573	-122.927	-111.945	-98.169	-82.921	-77.404
Financial tax	18.622	17.387	16.697	15.366	13.993	12.271	10.365	9.676
Non-recurring items								
Tax related to non-recurring items								
Profit for the year	44.637	38.533	116.106	94.411	145.838	169.113	6.953	172.498

	E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Rigs, machinery and equipment	3.012.471	1.959.710	1.900.312	2.039.240	1.760.106	1.688.856	1.619.452	2.645.647
Capitalized operational lease								
Total operating non-current asset	3.012.471	1.959.710	1.900.312	2.039.240	1.760.106	1.688.856	1.619.452	2.645.647
NWC	22.018	26.349	26.349	19.034	25.244	25.679	15.234	15.386
Invested Capital(NOA)	3.034.489	1.986.059	1.934.660	2.058.274	1.785.349	1.714.536	1.634.686	2.661.033
equity	845.809	884.342	1.000.448	1.094.859	1.240.696	1.409.809	1.416.762	1.589.260
NIBD	2.188.680	1.101.717	1.934.211	1.763.415	1.544.653	1.304.726	1.217.924	1.071.773
Invested Capital(E+NIBD)	3.034.489	1.986.059	1.934.660	2.858.274	1.785.349	1.714.536	1.634.686	2.661.033

FCFF MODEL

		E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Discount factor		*0,918*	*0,843*	*0,774*	*0,710*	*0,652*	*0,599*	*0,549*	
NOPAT		*174.988*	*160.245*	*232.983*	*201.972*	*243.790*	*255.011*	*79.509*	*240.226*
Depreciation		*183.366*	*205.155*	*202.026*	*172.457*	*168.005*	*163.668*	*159.444*	*161.038*
Δ NWC		*3.313*	*-4.331*	*-*	*3.315*	*-2.210*	*-433*	*10.442*	*-152*
Investments		*-72.662*	*-156.725*	*-150.627*	*-94.070*	*-97.081*	*-92.855*	*-79.594*	*-187.385*
FCFF		**289.005**	**204.344**	**284.381**	**283.673**	**312.504**	**325.392**	**169.800**	**213.727**
PV FCFF		**265.313**	**172.213**	**220.018**	**201.478**	**203.760**	**194.770**	**93.305**	
SUM PV FCFF	1.350.857								
Terminal Period	2.695.171								
PV Terminal Period	1.480.996								
Estimated EV	2.831.853								
NIBD	2.344.021								
Estimated Value of Equity	487.832								
Estimated Share price USD	4,31								
Estimated Share price NOK	35,86								



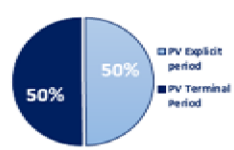
Songa Offshore

Appendix 13 Bear case

Forecast	E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Revenue								
Operating revenue	654.602	676.053	676.053	591.003	647.703	658.807	452.922	655.241
Rig operating expenses	-85.098	-87.887	-87.887	-76.830	-84.201	-85.645	-58.880	-65.524
Employee benfit expenses	-131.352	-135.656	-135.656	-118.590	-129.967	-132.196	-90.883	-131.480
General and administrative expenses	-48.468	-48.468	-48.468	-48.468	-48.468	-48.468	-48.468	-48.468
Reimbursable	-20.267	-20.931	-20.931	-18.298	-20.053	-20.397	-14.023	-20.287
Operational lease commitments								
EBITDA	369.417	383.111	383.111	328.817	365.013	372.101	240.669	389.482
Depreciation	-183.366	-178.633	-174.022	-169.530	-165.154	-160.891	-156.738	-158.305
Depreciation on capitalized lease								
Impairment								
Total depreciation and impairment	-183.366	-178.633	-174.022	-169.530	-165.154	-160.891	-156.738	-158.305
EBIT	186.051	204.478	209.089	159.287	199.859	211.211	83.931	231.177
Tax on EBIT	-23.256	-25.560	-26.136	-19.911	-24.982	-26.401	-10.491	-28.897
NOPAT	162.794	178.918	182.953	139.376	174.877	184.809	73.440	202.280
Interests on capitalized lease								
Financial income								
Financial expenses								
Net Interest Exp								
Other financial items								
Net financial expenses b. tax	-148.972	-139.875	-131.386	-122.250	-115.319	-106.170	-95.901	-91.790
Financial tax	18.622	17.484	16.423	15.281	14.415	13.271	11.988	11.474
Non-recurring items								
Tax related to non-recurring items								
Profit for the year	32.444	56.528	67.990	32.407	73.973	91.911	-10.474	121.964

FCFF MODEL

USD '000		E2017	E2018	E2019	E2020	E2021	E2022	E2023	Terminal
Discount factor		*0,918*	*0,843*	*0,774*	*0,710*	*0,652*	*0,599*	*0,549*	
NOPAT		*162.794*	*178.918*	*182.953*	*139.376*	*174.877*	*184.809*	*73.440*	*202.280*
Depreciation		*183.366*	*178.633*	*174.022*	*169.530*	*165.154*	*160.891*	*156.738*	*158.305*
Δ NWC		*3.313*	*-722*	*-*	*2.861*	*-1.907*	*-373*	*6.925*	*-152*
Investments		*-75.976*	*-100.872*	*-98.269*	*-95.732*	*-93.261*	*-90.854*	*-88.508*	*-184.055*
FCFF		**273.498**	**255.957**	**258.706**	**216.035**	**244.863**	**254.473**	**148.594**	**176.378**
PV FCFF		**251.077**	**215.711**	**200.154**	**153.438**	**159.656**	**152.320**	**81.652**	
SUM PV FCFF	1.214.008								
Terminal Period	2.224.182								
PV Terminal Period	1.222.188								
Estimated EV	2.436.196								
NIBD	2.344.021								
Estimated Value of Equity	92.175								
Estimated Share price USD	0,81								
Estimated Share price NOK	**6,8**								



Appendix 14 Day rate forecast

DateTime	Brent Monthly Average	Moving Average 24m	LN(MA)	LN AVERAGE DAY RATE	Forecasted Day Rate
01-01-2008	92,37	68,859	4,232057305	12,72488023	336.005
01-02-2008	95,05	70,080	4,249643392	12,74950075	344.380
01-03-2008	103,88	71,536	4,27019849	12,77827789	354.434
01-04-2008	109,29	73,277	4,294247918	12,81194709	366.57
01-05-2008	122,71	74,900	4,316148328	12,84260766	377.384
01-06-2008	132,02	77,103	4,34514111	12,88319755	393.643
01-07-2008	133,19	79,742	4,378792243	12,93030914	412.637
01-08-2008	112,47	82,222	4,40942392	12,97319349	430.77
01-09-2008	98,13	83,862	4,429173584	13,00084302	442.787
01-10-2008	72,26	85,380	4,447107001	13,0259498	454.044
01-11-2008	52,51	85,983	4,454143787	13,0358013	458.535
01-12-2008	40,78	85,715	4,451032701	13,03144578	456.546
01-01-2009	43,78	84,813	4,44044785	13,01662699	449.837
01-02-2009	43,07	84,423	4,435843825	13,01018135	446.941
01-03-2009	46,6	83,813	4,428587132	13,00002199	442.423
01-04-2009	50,34	83,163	4,420801535	12,98912215	437.627
01-05-2009	57,54	82,441	4,412080864	12,97691321	432.316
01-06-2009	68,55	82,040	4,407212012	12,97009682	429.380
01-07-2009	64,61	81,935	4,40592625	12,96829675	428.607
01-08-2009	72,83	81,413	4,39953906	12,95935468	424.792
01-09-2009	67,39	81,494	4,40052633	12,96073686	425.375
01-10-2009	72,75	81,088	4,395533957	12,95374754	422.417
01-11-2009	76,66	80,667	4,390325437	12,94645561	419.346
01-12-2009	74,28	80,005	4,382094341	12,93493208	414.543
01-01-2010	76,19	79,294	4,373164566	12,92243039	409.393
01-02-2010	73,63	78,620	4,36462612	12,91047657	404.526
01-03-2010	78,89	77,728	4,35320912	12,89449277	398.114
01-04-2010	84,89	76,686	4,339722422	12,87561139	390.667
01-05-2010	75,16	75,670	4,326376274	12,85692678	383.436
01-06-2010	74,97	73,688	4,299844487	12,81978228	369.454
01-07-2010	75,64	71,311	4,267054099	12,77387574	352.877
01-08-2010	77,15	68,913	4,232849676	12,72598955	336.378
01-09-2010	77,79	67,442	4,211263027	12,69576824	326.364
01-10-2010	82,79	66,594	4,198616986	12,67806378	320.637
01-11-2010	85,33	67,033	4,205183792	12,68725731	323.596
01-12-2010	91,36	68,400	4,225378916	12,71553048	332.878
01-01-2011	96,55	70,508	4,255724997	12,758015	347.325
01-02-2011	103,72	72,707	4,286433081	12,80100631	362.582
01-03-2011	114,6	75,234	4,320599333	12,84883991	380.347
01-04-2011	123,39	78,067	4,3575685	12,9005959	400.557
01-05-2011	114,55	81,111	4,395816532	12,95414314	422.594
01-06-2011	114,04	83,486	4,424681948	12,99455473	440.071
01-07-2011	116,9	85,382	4,447131402	13,02598396	454.060
01-08-2011	110,37	87,560	4,472329031	13,06126064	470.363
01-09-2011	112,98	89,125	4,490035204	13,08604929	482.165
01-10-2011	109,43	91,024	4,511125039	13,11557505	496.617
01-11-2011	110,24	92,553	4,527776051	13,13888647	508.330
01-12-2011	107,83	93,952	4,542780466	13,15989265	519.127
01-01-2012	110,4	95,350	4,557549962	13,18056995	529.367
01-02-2012	117,48	96,775	4,572388696	13,20134418	541.093
01-03-2012	125,33	98,602	4,591092391	13,22752935	555.447
01-04-2012	119,54	100,537	4,610526648	13,25473731	570.766
01-05-2012	110,6	101,981	4,624784887	13,27469884	582.275
01-06-2012	94,84	103,458	4,6391609	13,29482526	594.115

DateTime	Brent Monthly Average	Moving Average 24m	LN(MA)	LN AVERAGE DAY RATE	Forecasted Day Rate
01-07-2012	102,44	104,285	4,647131531	13,30598414	600.780
01-08-2012	113,41	105,402	4,657782402	13,32089536	609.606
01-09-2012	112,86	106,913	4,67201464	13,3408205	622.078
01-10-2012	111,8	108,374	4,685589746	13,35982564	634.014
01-11-2012	109,11	109,583	4,696681493	13,37535409	643.936
01-12-2012	109,41	110,574	4,705682719	13,38795581	652.102
01-01-2013	112,76	111,326	4,712461337	13,39744587	658.320
01-02-2013	116,28	112,001	4,718510032	13,40591404	663.918
01-03-2013	108,43	112,525	4,723171716	13,4124404	668.265
01-04-2013	101,94	112,268	4,720884416	13,40923818	666.129
01-05-2013	102,7	111,374	4,712891662	13,39804833	658.716
01-06-2013	102,91	110,880	4,708448535	13,39182795	654.632
01-07-2013	107,43	110,416	4,704257315	13,38596024	650.802
01-08-2013	110,45	110,022	4,700677316	13,38094824	647.548
01-09-2013	111,25	110,025	4,700707613	13,38099066	647.575
01-10-2013	109,44	109,953	4,700052244	13,38007314	646.982
01-11-2013	107,9	109,953	4,700056033	13,38007845	646.985
01-12-2013	110,7	109,856	4,6991689	13,37883646	646.182
01-01-2014	107,11	109,975	4,700256856	13,3803596	647.167
01-02-2014	108,84	109,838	4,699009588	13,37861342	646.038
01-03-2014	107,75	109,478	4,695726661	13,37401732	643.075
01-04-2014	108,09	108,746	4,689013355	13,3646187	637.060
01-05-2014	109,24	108,269	4,684616562	13,35846319	633.150
01-06-2014	111,97	108,212	4,684093036	13,35773025	632.686
01-07-2014	108,19	108,926	4,690667222	13,36693411	638.536
01-08-2014	103,4	109,165	4,692864316	13,37001004	640.504
01-09-2014	98,57	108,748	4,689036344	13,36465088	637.080
01-10-2014	88,05	108,153	4,683546121	13,35696457	632.202
01-11-2014	79,63	107,163	4,67435415	13,34409581	624.119
01-12-2014	63,27	105,935	4,662825698	13,32795598	614.126
01-01-2015	49,76	104,013	4,644511084	13,30231552	598.580
01-02-2015	58,79	101,388	4,618949809	13,26652973	577.538
01-03-2015	56,94	98,992	4,595039881	13,23305583	558.526
01-04-2015	61,14	96,847	4,573128972	13,20238056	541.653
01-05-2015	65,61	95,147	4,555419561	13,17758739	528.389
01-06-2015	63,75	93,601	4,539043738	13,15466123	516.413
01-07-2015	56,76	91,970	4,521457906	13,13004107	503.654
01-08-2015	48,21	89,858	4,498234356	13,0975281	487.735
01-09-2015	48,54	87,265	4,468949466	13,05652925	468.143
01-10-2015	49,29	84,652	4,438549719	13,01396961	448.637
01-11-2015	45,93	82,146	4,408496123	12,97189457	430.152
01-12-2015	38,9	79,564	4,376558587	12,92718202	411.343
01-01-2016	31,93	76,572	4,338232563	12,87352559	389.653
01-02-2016	33,53	73,440	4,296463073	12,8150483	367.709
01-03-2016	39,79	70,302	4,252795506	12,75391371	345.903
01-04-2016	43,34	67,470	4,211683055	12,69635628	326.556
01-05-2016	47,65	64,772	4,170874698	12,63922458	308.422
01-06-2016	49,93	62,206	4,130448779	12,58262829	291.451
01-07-2016	46,53	59,621	4,088005066	12,52320709	274.637
01-08-2016	47,16	57,052	4,04395729	12,46154021	258.213
01-09-2016	47,24	54,708	4,002016044	12,40282246	243.468
01-10-2016	51,39	52,570	3,962137689	12,34699276	230.267
01-11-2016	47,08	51,042	3,932650456	12,30571064	220.954
01-12-2016	54,92	49,686	3,905719849	12,26800779	212.779

01-07-2016	46,53	59,621	4,088005066	12,52320709	*274.637*
01-08-2016	47,16	57,052	4,04395729	12,46154021	*258.213*
01-09-2016	47,24	54,708	4,002016044	12,40282246	*243.488*
01-10-2016	51,39	52,570	3,962137689	12,34699276	*230.267*
01-11-2016	47,08	51,042	3,932650456	12,30571064	*220.954*
01-12-2016	54,92	49,686	3,905719849	12,26800779	*212.779*
01-01-2017	55,51	49,338	3,898692886	12,25817004	*210.696*
01-02-2017	56,00	49,578	3,903537102	12,26495194	*212.129*
01-03-2017	52,52	49,461	3,901189535	12,26166535	*211.433*
01-04-2017	57,00	49,277	3,897459132	12,25644278	*210.332*
01-05-2017	57,00	49,105	3,893952377	12,25153333	*209.302*
01-06-2017	57,00	48,746	3,886619724	12,24126761	*207.164*
01-07-2017	57,00	48,465	3,880833291	12,23316661	*205.493*
01-08-2017	57,00	48,475	3,881039606	12,23345545	*205.552*
01-09-2017	57,00	48,841	3,888566712	12,2439934	*207.730*
01-10-2017	57,00	49,193	3,895758113	12,25406136	*209.832*
01-11-2017	57,00	49,515	3,902267239	12,26317413	*211.753*
01-12-2017	57,00	49,976	3,911539555	12,27615538	*214.519*
01-01-2018	67,00	50,730	3,926517452	12,29712443	*219.065*
01-02-2018	67,00	52,191	3,954914856	12,3368808	*227.950*
01-03-2018	67,00	53,586	3,98128473	12,37379862	*236.523*
01-04-2018	67,00	54,720	4,002221659	12,40311032	*243.558*
01-05-2018	67,00	55,705	4,020077389	12,42810835	*249.723*
01-06-2018	67,00	56,512	4,034447107	12,44822595	*254.798*
01-07-2018	67,00	57,223	4,046954459	12,46573624	*259.299*
01-08-2018	67,00	58,076	4,061749628	12,48644948	*264.726*
01-09-2018	67,00	58,903	4,075883535	12,50623695	*270.016*
01-10-2018	67,00	59,726	4,089764646	12,5256705	*275.315*
01-11-2018	67,00	60,376	4,100595816	12,54083414	*279.521*
01-12-2018	67,00	61,206	4,114249308	12,55994903	*284.916*
01-01-2019	72,00	61,710	4,12243924	12,57141494	*288.201*
01-02-2019	72,00	62,397	4,133511855	12,5869166	*292.704*
01-03-2019	72,00	63,063	4,144139512	12,60179532	*297.091*
01-04-2019	72,00	63,875	4,156928049	12,61969927	*302.458*
01-05-2019	72,00	64,500	4,166665224	12,63333131	*306.610*
01-06-2019	72,00	65,125	4,1763085	12,6468319	*310.777*
01-07-2019	72,00	65,750	4,185859671	12,66020354	*314.961*
01-08-2019	72,00	66,375	4,19532048	12,67344867	*319.160*
01-09-2019	72,00	67,000	4,204692619	12,68656967	*323.376*
01-10-2019	72,00	67,625	4,213977737	12,69956883	*327.607*
01-11-2019	72,00	68,250	4,223177434	12,71244841	*331.853*
01-12-2019	72,00	68,875	4,232293267	12,72521057	*336.116*
01-01-2020	73,44	69,500	4,241326753	12,73785745	*340.393*
01-02-2020	73,44	69,768	4,24518023	12,74325232	*342.235*
01-03-2020	73,44	70,037	4,249018914	12,74862648	*344.079*
01-04-2020	73,44	70,305	4,25284292	12,75398009	*345.926*
01-05-2020	73,44	70,573	4,256652358	12,7593133	*347.776*
01-06-2020	73,44	70,842	4,26044734	12,76462628	*349.628*
01-07-2020	73,44	71,110	4,264227974	12,76991916	*351.484*
01-08-2020	73,44	71,378	4,267994369	12,77519212	*353.342*
01-09-2020	73,44	71,647	4,271746631	12,78044528	*355.203*
01-10-2020	73,44	71,915	4,275484866	12,78567881	*357.067*
01-11-2020	73,44	72,183	4,279209179	12,79089285	*358.934*
01-12-2020	73,44	72,452	4,282919673	12,79608754	*360.803*
01-01-2021	74,91	72,720	4,28661645	12,80126303	*362.675*
01-02-2021	74,91	72,841	4,288282416	12,80359538	*363.522*
01-03-2021	74,91	72,963	4,289945611	12,80592385	*364.370*
01-04-2021	74,91	73,084	4,291606044	12,80824846	*365.218*
01-05-2021	74,91	73,205	4,293263725	12,81056921	*366.066*
01-06-2021	74,91	73,326	4,294918662	12,81288613	*366.915*
01-07-2021	74,91	73,448	4,296570865	12,81519921	*367.765*
01-08-2021	74,91	73,569	4,298220343	12,81750848	*368.615*
01-09-2021	74,91	73,690	4,299867105	12,81981395	*369.466*
01-10-2021	74,91	73,811	4,301511159	12,82211562	*370.317*
01-11-2021	74,91	73,933	4,303152515	12,82441352	*371.169*
01-12-2021	74,91	74,054	4,304791181	12,82670765	*372.022*
01-01-2022	66	74,175	4,306427166	12,82899803	*372.875*
01-02-2022	66	73,865	4,302239103	12,82313474	*370.695*
01-03-2022	66	73,555	4,298033426	12,8172468	*368.519*
01-04-2022	66	73,245	4,293809986	12,81133398	*366.346*
01-05-2022	66	72,935	4,289568634	12,80539609	*364.177*
01-06-2022	66	72,625	4,285309215	12,7994329	*362.012*
01-07-2022	66	72,315	4,281031577	12,79344421	*359.851*
01-08-2022	66	72,005	4,276735561	12,78742979	*357.693*
01-09-2022	66	71,695	4,27242101	12,78138941	*355.539*
01-10-2022	66	71,385	4,268087763	12,77532287	*353.388*
01-11-2022	66	71,075	4,263735658	12,76922992	*351.242*
01-12-2022	66	70,765	4,259364528	12,76311034	*349.099*
01-01-2023	67,6	70,455	4,254974208	12,75696389	*346.960*
01-02-2023	67,6	70,150	4,250641746	12,75089844	*344.862*
01-03-2023	67,6	69,846	4,246290432	12,74480661	*342.767*
01-04-2023	67,6	69,541	4,241920102	12,73868814	*340.676*
01-05-2023	67,6	69,237	4,237530587	12,73254282	*338.589*
01-06-2023	67,6	68,932	4,23312172	12,72637041	*369.463*

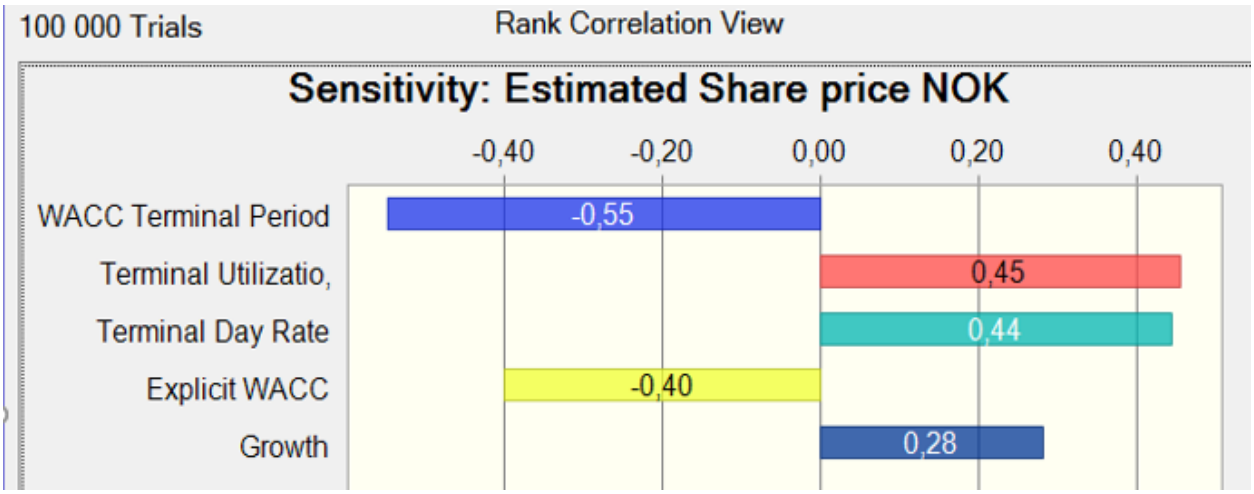
Appendix 15 Utilization historical Average

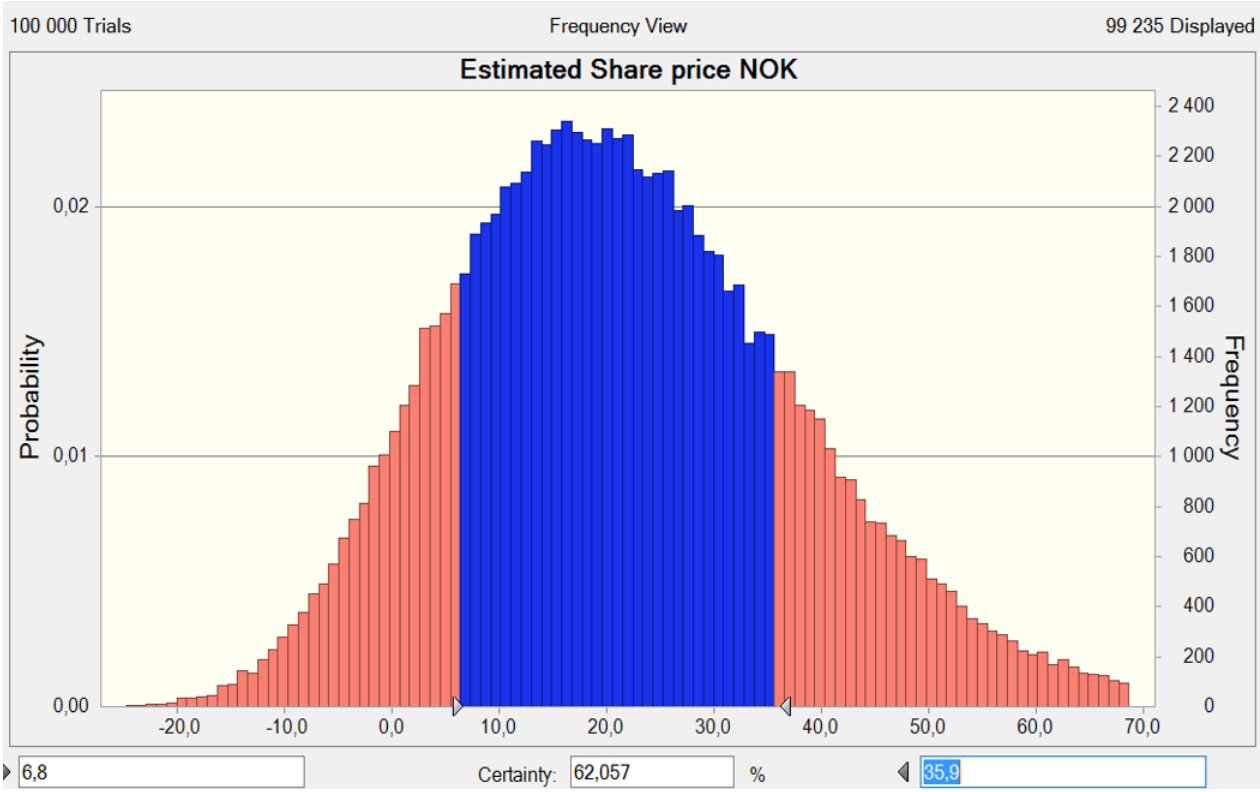
Date	SemiSub 1500'-5000' WD [Semi-Submersibles]	AVERAGE
31-12-2016	46%	75%
30-09-2016	62%	
30-06-2016	61%	
31-03-2016	53%	
31-12-2015	62%	
30-09-2015	69%	
30-06-2015	78%	
31-03-2015	82%	
31-12-2014	74%	
30-09-2014	69%	
30-06-2014	68%	
31-03-2014	75%	
31-12-2013	74%	
30-09-2013	79%	
30-06-2013	81%	
31-03-2013	81%	
31-12-2012	78%	
30-09-2012	77%	
30-06-2012	75%	
31-03-2012	78%	
31-12-2011	77%	
30-09-2011	79%	
30-06-2011	78%	
31-03-2011	78%	
31-12-2010	80%	
30-09-2010	87%	
30-06-2010	84%	
31-03-2010	79%	
31-12-2009	84%	
30-09-2009	84%	
30-06-2009	88%	
31-03-2009	9%	
31-12-2008	93%	
30-09-2008	92%	
30-06-2008	92%	
31-03-2008	93%	
31-12-2007	91%	
30-09-2007	9%	
30-06-2007	93%	
31-03-2007	90%	
31-12-2006	9%	
30-09-2006	88%	
30-06-2006	88%	
31-03-2006	90%	
31-12-2005	93%	
30-09-2005	90%	
30-06-2005	87%	
31-03-2005	84%	
31-12-2004	79%	
30-09-2004	79%	
30-06-2004	74%	
31-03-2004	73%	
31-12-2003	74%	
30-09-2003	72%	
30-06-2003	81%	
31-03-2003	75%	

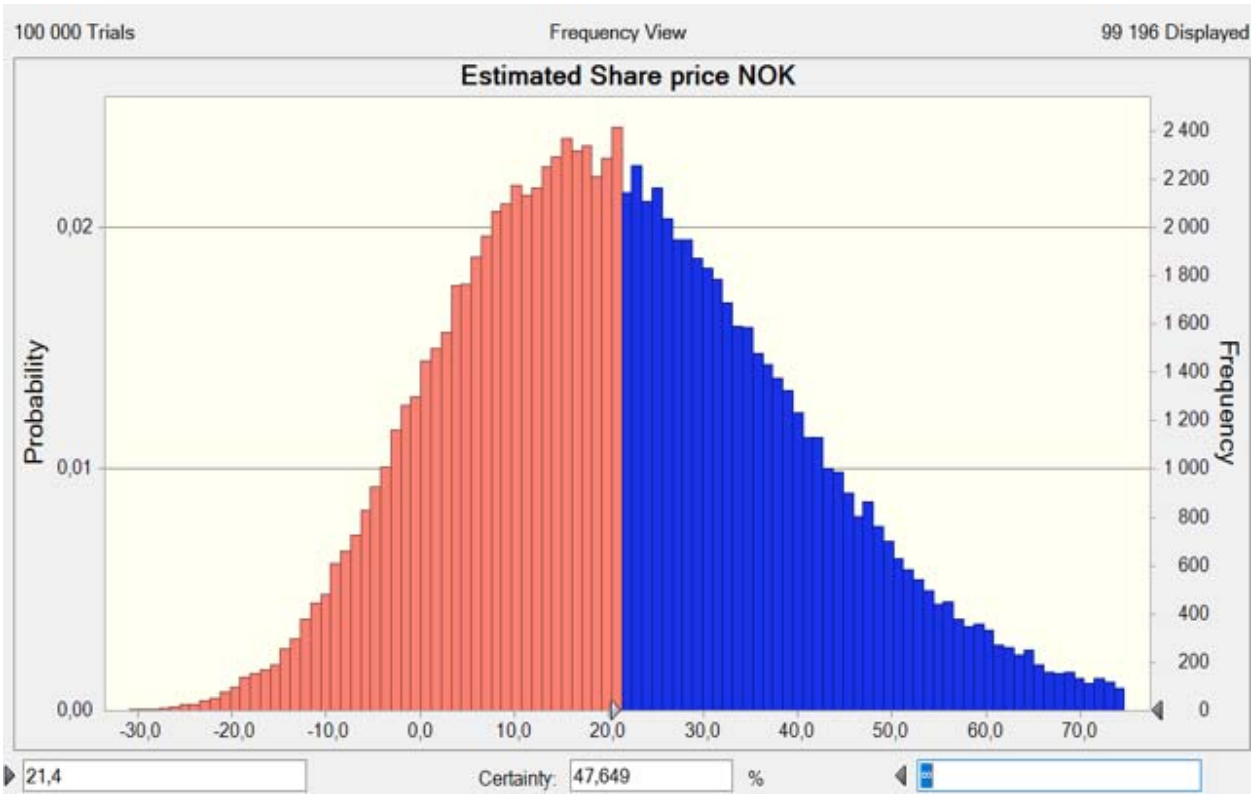
Appendix 16 Day rate Historical Average

Date	Average "Floaters"	Average "Floater DAY RATE"
30-06-2017	**334.833**	369.864
31-03-2017	**338.348**	
31-12-2016	**341.056**	
30-09-2016	**292.994**	
30-06-2016	**273.851**	
31-03-2016	**334.832**	
31-12-2015	**379.974**	
30-09-2015	**367.960**	
30-06-2015	**398.398**	
31-03-2015	**426.512**	
31-12-2014	**411.433**	
30-09-2014	**397.019**	
30-06-2014	**405.489**	
31-03-2014	**415.923**	
31-12-2013	**408.944**	
30-09-2013	**420.982**	
30-06-2013	**395.182**	
31-03-2013	**405.325**	
30-09-2012	**408.117**	
30-06-2012	**389.578**	
31-03-2012	**394.539**	
31-12-2011	**371.448**	
30-09-2011	**383.408**	
30-06-2011	**336.640**	
31-03-2011	**354.940**	
31-12-2010	**362.817**	
30-09-2010	**363.064**	
30-06-2010	**334.926**	
31-03-2010	**381.613**	
30-09-2009	**378.031**	
30-06-2009	**342.961**	
31-03-2009	**410.384**	
31-12-2008	**420.852**	
30-09-2008	**387.596**	
30-06-2008	**344.796**	
31-03-2008	**358.378**	
31-12-2007	**347.573**	
30-09-2007	**337.273**	
30-06-2007	**323.302**	
31-03-2007	**313.271**	

Appendix 17 Monte Carlo in Crystal ball



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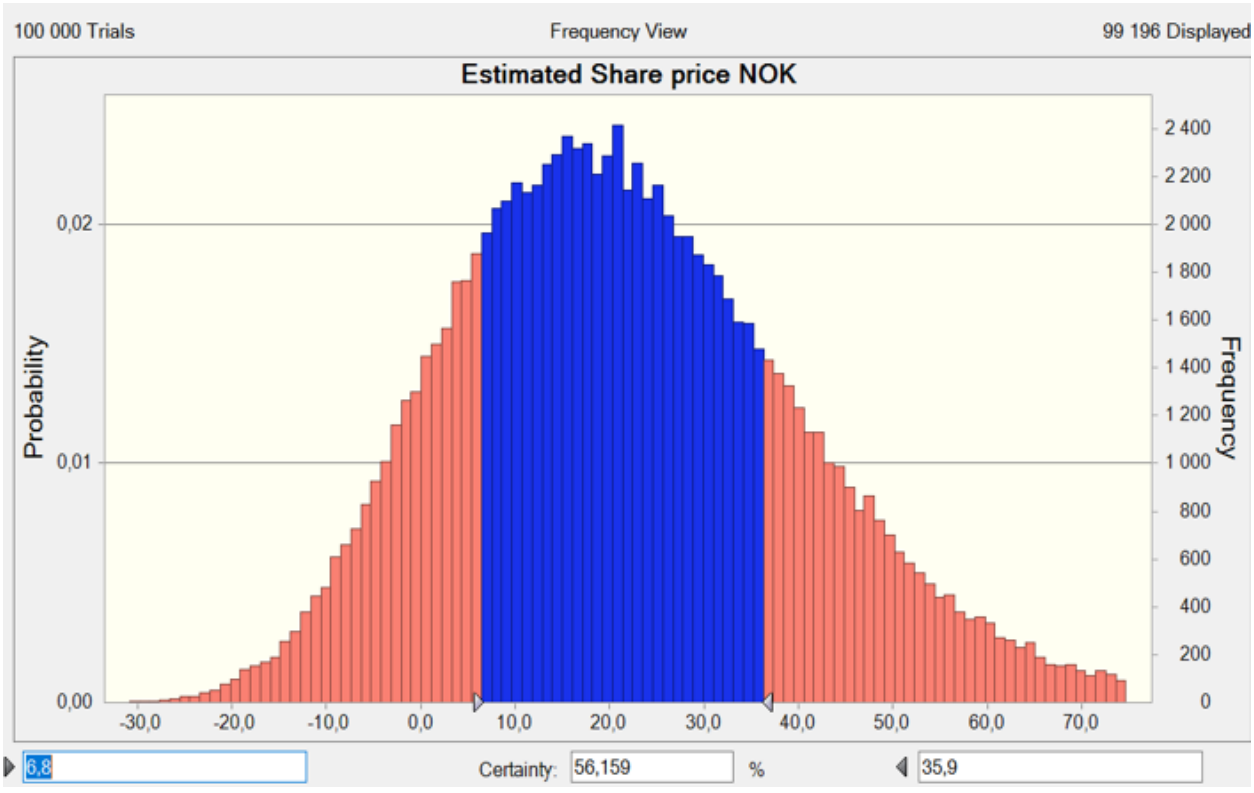
Certainty: 47,649 %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Certainty: 56,159 %
35,9

Appendix 18 Financial statements Songa

Income statement							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Operating revenue	**649,908**	**522,116**	**584,760**	**562,211**	**494,752**	**513,403**	**753,111**
Operating expenses	-327,846	-283,911	-330,807	-278,690	-217,119	-151,719	-243,426
Reimbursables	-6,001	-5,195	-7,448	-11,790	-33,196	-35,146	-21,300
General and administrative expenses	-47,404	-44,610	-55,503	-60,148	-48,678	-44,581	-38,351
Other gain and loss	58,048	358	7,290	1,091	799	-866	-
EBITDA	**326,705**	**188,758**	**198,292**	**212,675**	**196,558**	**281,091**	**450,034**
Depreciation	-101,649	-95,277	-124,280	-139,554	-114,299	-126,344	-177,487
impairment	-	-	-330,048	-92,261	-64,899	-521,005	-144,729
EBIT	**225,056**	**93,481**	**-256,036**	**-19,140**	**17,360**	**-366,258**	**127,818**
Financial income	630	929	874	555	3,414	7,318	4,000
Financial expenses	-36,184	-11,752	-39,624	-83,822	-33,546	-20,638	-116,560
Other financial items	-	-	-	-	-43,794	-52,789	-62,199
Profit before tax	**189,502**	**82,658**	**-294,786**	**-102,406**	**-56,566**	**-432,367**	**-46,941**
Income tax	-1,672	41,820	-10,675	-56,777	-97	-37,364	87
Net profit	**187,830**	**124,478**	**-305,461**	**-159,183**	**-56,663**	**-469,731**	**-46,854**

Balance sheet							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Assets							
Rigs, machinery and equipment	1,180,684	1,857,788	1,372,304	1,028,480	1,063,416	1,963,647	3,092,292
New-builds	-	234,498	506,588	582,564	731,057	869,414	-
Financial assets	50,000	-	-	-	53,722	8,044	11,500
Derivative financial instruments	-	-	9,744	28,822	72,740	97,129	3,546
Deferred tax assets	59,142	102,916	102,916	55,503	52,971	16,771	19,810
Total non-current assets	**1,289,826**	**2,195,202**	**1,991,552**	**1,695,369**	**1,973,906**	**2,955,005**	**3,127,148**
Asset held for sale	4,368	**3,328**	590,000	180,000	**-**	**-**	**-**
Trade receivables	99,835	60,910	50,583	62,986	41,577	34,431	54,943
Prepayments	4,130	6,730	8,029	5,308	4,597	6,106	5,358
Earned revenue	1,385	4,970	25,960	44,291	25,419	38,104	56,515
Financial assets	-	-	-	-	-	37,494	6,790
Derivative financial instrument	-	-	-	-	-	75	1,494
Other assets	15,227	90,980	35,650	10,747	24,556	10,707	3,843
Cash and equivalents	132,015	80,398	37,558	440,122	236,499	168,387	175,829
Total current assets	**256,959**	**247,316**	**747,779**	**743,454**	**332,648**	**295,304**	**304,772**
Total assets	**1,546,785**	**2,442,518**	**2,739,331**	**2,438,823**	**2,306,554**	**3,250,309**	**3,431,920**
Equity							
Issued capital	26,075	26,075	31,191	123,447	132,762	132,762	38,106
Share premium	371,564	371,564	474,118	617,825	633,868	633,868	792,835
Other equity	644,762	756,049	443,654	339,282	269,138	-193,523	-29,769
Total equity	**1,042,401**	**1,153,688**	**948,963**	**1,080,554**	**1,035,768**	**573,107**	**801,172**
Liabilities							
Bank loans and other facilities	288,088	773,214	620,141	265,669	270,642	1,516,849	1,733,960
Bond loans	47,508	226,264	372,495	337,089	282,292	242,964	246,640
Convertible bond	-	-	-	103,584	109,649	116,359	37,826
Derivative financial instruments	-	18,593	5,102	64,326	172,089	251,503	125,588
Deferred revenue	-	-	71,669	61,237	22,335	91,273	117,187
Other long term liabilities	6,650	4,038	8,067	14,545	22,512	13,531	4,054
Total non-current liabilities	**342,246**	**1,022,109**	**1,077,474**	**846,450**	**879,519**	**2,232,479**	**2,265,255**
Bank loan related to "asset held for sale"	-	-	304,898	24,261	-	-	-
Current portion of bank loans and other facilities	74,149	49,411	94,453	327,770	176,875	291,977	264,977
Bond loans	-	47,196	4,285	-	-	-	-
Trade payables	19,570	43,332	94,494	25,166	13,424	34,712	14,511
Tax payable	21,321	12,515	14,726	16,724	3,519	3,621	4,972
Deferred revenue	5,602	4,599	34,385	37,716	41,710	35,927	20,023
Derivative financial instruments	9,287	4,066	-	-	39,125	-	5,188
Other liabilities	32,209	105,602	165,653	80,183	116,613	78,485	55,822
Total current liabilities	**162,138**	**266,721**	**712,894**	**511,819**	**391,266**	**444,722**	**365,493**
Total liabilities	**504,384**	**1,288,830**	**1,790,368**	**1,358,269**	**1,270,785**	**2,677,201**	**2,630,748**
Total equity and liabilities	**1,546,785**	**2,442,518**	**2,739,331**	**2,438,823**	**2,306,553**	**3,250,308**	**3,431,920**

Cash flow statement							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Cash flow from operating activities							
Profit (loss) before tax	**189,502**	**82,658**	**-294,786**	**-102,406**	**-56,566**	**-432,367**	**-46,941**
Adjustment for:							
Depreciation	101,649	95,277	124,280	139,554	114,299	126,344	177,487
Cost of option plans	4,125	-4,209	2,173	-248	302	-	-
Impairment	-	-	330,048	92,261	64,899	521,005	144,729
Financial income	-	-	-	-	-	-7,318	-4,000
Financial expenses	36,184	11,752	39,624	83,822	33,546	20,638	116,560
Other financial items	-	-	-	-	43,794	52,789	62,199
Other gain and loss	-58,048	-358	-7,290	-1,091	-799	866	-
Movements in working capital:							
Change in receivables	52,549	-43,013	38,582	-3,110	36,846	-2,861	-47,028
Change in payables	-6,118	23,762	28,162	-26,581	-11,742	21,288	-20,201
Change in other liabilities	-5,298	35,519	139,051	-54,945	-75,498	10,921	-3,175
Increase/decrease in restricted cash balances	-	-	-	-	6,704	-53,608	44,113
Cash generated from operations	**314,545**	**201,388**	**395,498**	**127,256**	**155,786**	**257,697**	**423,743**
Taxes paid	-25,332	-1,004	-8,046	-4,439	-4,779	-1,586	-642
Interest paid	-41,331	-44,472	-73,482	-60,154	-57,740	-86,905	-91,612
Financing fees paid	-	-	-7,034	-21,368	-41,328	-6,396	-9,327
Interest income received	-	-	-	-	-	224	33
Cash effect from other financial items	-	-	-	-	-10,274	-18,714	-4,530
Cash effect from other gain and loss	-7,416	-5,927	-636	4,500	699	-	-
Net cash generated form operating activites	**240,466**	**149,985**	**306,300**	**45,795**	**42,364**	**144,320**	**317,665**
Cash flows from investing activities:							
Purchase of property, plant and equipment	-81,042	-830,438	-734,990	-222,520	-237,821	-1,649,277	-595,457
Proceeds from the sale of property, plant and equipment	282,342	-	-	590,000	112,500	-	-
Investment in other companies, net of cash aquired	-50,000	-91,130	-	-	-1,000	-	-
Net cash used in investing activities	**151,300**	**-921,568**	**-734,990**	**367,480**	**-126,321**	**-1,649,277**	**-595,457**
Cash flows from financing activities:							
Proceeds from share issue	-	-	110,512	250,222	25,495	-	25,000
Proceeds form issue of bonds and new bank loan raised	458,120	901,198	-	150,000	103,662	1,690,000	550,000
Proceeds form issue of convertible bond	-	-	-	-	-	-	125,000
Share issuance transaction cost	-	-	-2,840	-14,575	-79	-	-3,171
Convertible bond transaction costs	-	-	-	-6,847	-	-	-75
Repayment of bonds and bank loans	-932,757	-194,706	-123,507	-397,924	-242,130	-316,298	-367,281
Net cash generated from financing activities	**-474,637**	**706,492**	**-15,835**	**-19,124**	**-113,052**	**1,373,702**	**329,473**
Net increase/decreasse in cash and cash equivalents	63,173	-51,617	-47,626	394,150	-197,008	-131,255	51,681
Cash and cash equivalents at the beginning of the year	68,842	132,015	77,784	30,158	424,308	227,300	96,045
Unrestricted cash and cash equivalents at the end of the year	**132,015**	**80,398**	**30,158**	**424,308**	**227,300**	**96,045**	**147,726**

Reformulated income statement							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Revenue							
Operating revenue	**649,908**	**522,116**	**584,760**	**562,211**	**494,752**	**513,403**	**753,111**
Rig operating expenses	-162,622	-136,815	-152,024	-107,700	-66,601	-50,226	-90,068
Employee benfit expenses	-165,224	-147,095	-178,783	-170,989	-150,517	-101,492	-153,358
General and administrative expenses	-47,404	-44,610	-55,503	-60,148	-48,678	-44,581	-38,351
Reimbursable	-6,001	-5,195	-7,448	-11,790	-33,196	-35,146	-21,300
Operational lease commitments	-	-	733	2,326	1,920	1,695	2,604
EBITDA	**268,657**	**188,401**	**191,735**	**213,911**	**197,680**	**283,653**	**452,638**
Depreciation	-101,649	-95,277	-124,280	-139,554	-114,299	-126,344	-177,487
Depreciation on capitalized lease	-	-	-335	-1,976	-1,643	-1,291	-2,115
Impairment	-	-	-330,048	-92,261	-64,899	-521,005	-144,729
Total depreciation and impairment	**-101,649**	**-95,277**	**-454,663**	**-233,790**	**-180,841**	**-648,640**	**-324,331**
EBIT	**167,008**	**93,124**	**-262,928**	**-19,879**	**16,839**	**-364,987**	**128,307**
Tax on EBIT	-1,474	47,115	-9,521	-11,022	29	-31,541	-238
NOPAT	**165,534**	**140,239**	**-272,449**	**-30,901**	**16,868**	**-396,528**	**128,069**
Interests on capitalized lease	-	-	-398	-350	-277	-404	-489
Financial income	630	929	874	555	3,414	7,318	4,000
Financial expenses	-36,184	-11,752	-39,624	-83,822	-33,546	-20,638	-116,560
Other financial items	-	-	-	-	-43,794	-52,789	-62,199
Net financial expenses	**-35,554**	**-10,823**	**-39,148**	**-83,617**	**-74,203**	**-66,513**	**-175,248**
Financial tax	314	-5,476	-1,418	-46,360	-127	-5,748	325
Non-recurring items	58,048	358	7,290	1,091	799	-866	-
Tax related to non-recurring items	-512	181	264	605	1	-75	-
Profit for the year	**187,830**	**124,480**	**-305,461**	**-159,181**	**-56,662**	**-469,730**	**-46,854**

Common size income statement							
	2010	2011	2012	2013	2014	2015	Q4 2016
Revenue							
Operating revenue	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Rig operating expenses	-25.0%	-26.2%	-26.0%	-19.2%	-13.5%	-9.8%	-12.0%
Employee benfit expenses	-25.4%	-28.2%	-30.6%	-30.4%	-30.4%	-19.8%	-20.4%
General and administrative expenses	-7.3%	-8.5%	-9.5%	-10.7%	-9.8%	-8.7%	-5.1%
Reimbursable	-0.9%	-1.0%	-1.3%	-2.1%	-6.7%	-6.8%	-2.8%
Operational lease commitments	-	-	0.1%	0.4%	0.4%	0.3%	0.00
EBITDA	**41.3%**	**36.1%**	**32.8%**	**38.0%**	**40.0%**	**55.2%**	**60.1%**
Depreciation	-15.6%	-18.2%	-21.3%	-24.8%	-23.1%	-24.6%	-23.6%
Depreciation on capitalized lease	-	-	-0.1%	-0.4%	-0.3%	-0.3%	-0.00
Impairment	-	-	-56.4%	-16.4%	-13.1%	-101.5%	-19.2%
Total depreciation and impairment	**-15.6%**	**-18.2%**	**-77.8%**	**-41.6%**	**-36.6%**	**-126.3%**	**-43.1%**
EBIT	**25.7%**	**17.8%**	**-45.0%**	**-3.5%**	**3.4%**	**-71.1%**	**17.0%**
Tax on EBIT	-0.2%	9.0%	-1.6%	-2.0%	0.0%	-6.1%	0.0%
NOPAT	**25.5%**	**26.9%**	**-46.6%**	**-5.5%**	**3.4%**	**-77.2%**	**17.0%**
Interests on capitalized lease	-	-	-0.1%	-0.1%	-0.1%	-0.1%	-0.00
Financial income	0.1%	0.2%	0.1%	0.1%	0.7%	1.4%	0.5%
Financial expenses	-5.6%	-2.3%	-6.8%	-14.9%	-6.8%	-4.0%	-15.5%
Other financial items	-	-	-	-	-8.9%	-10.3%	-8.3%
Net financial expenses	**-5.5%**	**-2.1%**	**-6.7%**	**-14.9%**	**-15.0%**	**-13.0%**	**-23.3%**
Financial tax	0.0%	-1.0%	-0.2%	-8.2%	0.0%	-1.1%	0.0%
Non-recurring items	8.9%	0.1%	1.2%	0.2%	0.2%	-0.2%	-
Tax related to non-recurring items	-0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	-
Profit for the year	**28.9%**	**23.8%**	**-52.2%**	**-28.3%**	**-11.5%**	**-91.5%**	**-6.2%**

Trend analysis of income statement							
	2010	2011	2012	2013	2014	2015	Q4 2016
Revenue							
Operating revenue	**1.00**	**0.80**	**0.90**	**0.87**	**0.76**	**0.79**	**1.16**
Rig operating expenses	1.00	0.84	0.93	0.66	0.41	0.31	0.55
Employee benfit expenses	1.00	0.89	1.08	1.03	0.91	0.61	0.93
General and administrative expenses	1.00	0.94	1.17	1.27	1.03	0.94	0.81
Reimbursable	1.00	0.87	1.24	1.96	5.53	5.86	3.55
Operational lease commitments	-	-	1.00	3.17	2.62	2.31	-
EBITDA	**1.00**	**0.70**	**0.71**	**0.80**	**0.74**	**1.06**	**1.68**
Depreciation	1.00	0.94	1.22	1.37	1.12	1.24	1.75
Depreciation on capitalized lease	-	-	1.00	5.90	4.90	3.85	-
Impairment	-	-	1.00	0.28	0.20	1.58	0.44
Total depreciation and impairment	**1.00**	**0.94**	**4.47**	**2.30**	**1.78**	**6.38**	**3.19**
EBIT	**1.00**	**0.56**	**-1.57**	**-0.12**	**0.10**	**-2.19**	**0.77**
Tax on EBIT	1.00	-31.97	6.46	7.48	-0.02	21.41	0.16
NOPAT	**1.00**	**0.85**	**-1.65**	**-0.19**	**0.10**	**-2.40**	**0.77**
Interests on capitalized lease	-	-	1.00	0.88	0.70	1.02	-
Financial income	1.00	1.47	1.39	0.88	5.42	11.62	6.35
Financial expenses	1.00	0.32	1.10	2.32	0.93	0.57	3.22
Other financial items	-	-	-	-	1.00	1.21	1.42
Net financial expenses	**1.00**	**0.30**	**1.10**	**2.35**	**2.09**	**1.87**	**4.93**
Financial tax	1.00	-17.46	-4.52	-147.78	-0.41	-18.32	1.04
Non-recurring items	1.00	0.01	0.13	0.02	0.01	-0.01	-
Tax related to non-recurring items	1.00	-0.35	-0.52	-1.18	-0.00	0.15	-
Profit for the year	**1.00**	**0.66**	**-1.63**	**-0.85**	**-0.30**	**-2.50**	**-0.25**

Reformulated operational balance sheet							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Assets							
Rigs, machinery and equipment	1,180,684	1,857,788	1,372,304	1,028,480	1,063,416	1,963,647	3,092,292
New-builds	-	234,498	506,588	582,564	731,057	869,414	-
Deffered tax	59,142	102,916	102,916	55,503	52,971	16,771	19,810
Capitalized operational lease	-	-	6,315	5,560	4,393	6,416	7,760
Total operating non-current asset	**1,239,826**	**2,195,202**	**1,988,123**	**1,672,107**	**1,851,837**	**2,856,248**	**3,119,862**
Trade receivables	99,835	60,910	50,583	62,986	41,577	34,431	54,943
Prepayments	4,130	6,730	8,029	5,308	4,597	6,106	5,358
Earned revenue	1,385	4,970	25,960	44,291	25,419	38,104	56,515
Other assets	15,227	90,980	35,650	10,747	24,556	10,707	3,843
Total operating current assets	**120,577**	**163,590**	**120,221**	**123,332**	**96,149**	**89,348**	**120,659**
Total operating assets	**1,360,403**	**2,358,792**	**2,108,344**	**1,795,439**	**1,947,986**	**2,945,596**	**3,240,521**
Liabilities							
Trade payables	19,570	43,332	94,494	25,166	13,424	34,712	14,511
Tax payable	21,321	12,515	14,726	16,724	3,519	3,621	4,972
Deferred revenue	5,602	4,599	34,385	37,716	41,710	35,927	20,023
Other liabilities	32,209	105,602	165,653	80,183	116,613	78,485	55,822
Total operating liabilities	**78,702**	**166,048**	**309,258**	**159,788**	**175,266**	**152,745**	**95,328**
Invested capital	**1,281,701**	**2,192,744**	**1,799,086**	**1,635,651**	**1,772,720**	**2,792,851**	**3,145,193**

Reformulated fiancial balance sheet							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Equity							
Issued capital	26,075	26,075	31,191	123,447	132,762	132,762	38,106
Share premium	371,564	371,564	474,118	617,825	633,868	633,868	792,835
Other equity	644,762	756,049	443,654	339,282	269,138	-193,523	-29,769
Total equity	**1,042,401**	**1,153,688**	**948,963**	**1,080,554**	**1,035,768**	**573,107**	**801,172**
Assets							
Asset held for sale	4,368	3,328	590,000	180,000	-	-	-
Derivative financial instruments	-	-	9,744	28,822	72,740	97,204	5,040
Financial assets	50,000	-	-	-	53,722	45,538	18,290
Cash and equivalents	132,015	80,398	37,558	440,122	236,499	168,387	175,829
Total interest bearing assets	**186,383**	**83,726**	**637,302**	**648,944**	**362,961**	**311,129**	**199,159**
Liabilities							
Capitalized operational lease	-	-	6,315	5,560	4,393	6,416	7,760
Bank loan related to "asset held for sale"	-	-	304,898	24,261	-	-	-
Bank loans and other facilities	288,088	773,214	620,141	265,669	270,642	1,516,849	1,733,960
Bond loans	47,508	273,460	376,780	337,089	282,292	242,964	246,640
Convertible bond	-	-	-	103,584	109,649	116,359	37,826
Derivative financial instruments	9,287	22,659	5,102	64,326	211,214	251,503	130,776
Other long term liabilities	6,650	4,038	8,067	14,545	22,512	13,531	4,054
Current portion of bank loans and other facilities	74,149	49,411	94,453	327,770	176,875	291,977	264,977
Deffered revenue	-	-	71,669	61,237	22,335	91,273	117,187
Total interest bearing liabilites	**425,682**	**1,122,782**	**1,487,425**	**1,204,041**	**1,099,912**	**2,530,872**	**2,543,180**
NIBD	**239,300**	**1,039,056**	**850,123**	**555,097**	**736,951**	**2,219,743**	**2,344,021**
Invested capital	**1,281,701**	**2,192,744**	**1,799,086**	**1,635,651**	**1,772,719**	**2,792,850**	**3,145,193**

Reformulated operational balance sheet							
	2010	2011	2012	2013	2014	2015	Q4 2016
Assets							
Rigs, machinery and equipment	92.1%	84.7%	76.3%	62.9%	60.0%	70.3%	98.3%
New-builds		10.7%	28.2%	35.6%	41.2%	31.1%	0.0%
Deffered tax	4.6%	4.7%	5.7%	3.4%	3.0%	0.6%	0.6%
Capitalized operational lease			0.4%	0.3%	0.2%	0.2%	0.2%
Total operating non-current asset	96.7%	100.1%	110.5%	102.2%	104.5%	102.3%	99.2%
Trade receivables	7.8%	2.8%	2.8%	3.9%	2.3%	1.2%	1.7%
Prepayments	0.3%	0.3%	0.4%	0.3%	0.3%	0.2%	0.2%
Earned revenue	0.1%	0.2%	1.4%	2.7%	1.4%	1.4%	1.8%
Other assets	1.2%	4.1%	2.0%	0.7%	1.4%	0.4%	0.1%
Total operating current assets	**9.4%**	**7.5%**	**6.7%**	**7.5%**	**5.4%**	**3.2%**	**3.8%**
Total operating assets	**106.1%**	**107.6%**	**117.2%**	**109.8%**	**109.9%**	**105.5%**	**103.0%**
Liabilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Trade payables	1.5%	2.0%	5.3%	1.5%	0.8%	1.2%	0.5%
Tax payable	1.7%	0.6%	0.8%	1.0%	0.2%	0.1%	0.2%
Deferred revenue	0.4%	0.2%	1.9%	2.3%	2.4%	1.3%	0.6%
Derivative financial instruments	0.7%	1.0%	0.3%	3.9%	11.9%	9.0%	4.2%
Other liabilities	2.5%	4.8%	9.2%	4.9%	6.6%	2.8%	1.8%
Total operating liabilities	**6.1%**	**7.6%**	**17.2%**	**9.8%**	**9.9%**	**5.5%**	**3.0%**
Invested capital	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Reformulated fiancial balance sheet							
	2010	2011	2012	2013	2014	2015	Q4 2016
Equity							
Issued capital	2.0%	1.2%	1.7%	7.5%	7.5%	4.8%	1.2%
Share premium	29.0%	16.9%	26.4%	37.8%	35.8%	22.7%	25.2%
Other equity	50.3%	34.5%	24.7%	20.7%	15.2%	-6.9%	-0.9%
Total equity	**81.3%**	**52.6%**	**52.7%**	**66.1%**	**58.4%**	**20.5%**	**25.5%**
Assets							
Financial assets	3.9%	0.0%	0.0%	0.0%	3.0%	1.6%	0.6%
Cash and equivalents	10.3%	3.7%	2.1%	26.9%	13.3%	6.0%	5.6%
Total interest bearing assets	**14.5%**	**3.8%**	**35.4%**	**39.7%**	**20.5%**	**11.1%**	**6.3%**
Liabilities							
Capitalized operational lease			0.4%	0.3%	0.2%	0.2%	0.2%
Bank loans and other facilities	22.5%	35.3%	34.5%	16.2%	15.3%	54.3%	55.1%
Bond loans	3.7%	12.5%	20.9%	20.6%	15.9%	8.7%	7.8%
Convertible bond				6.3%	6.2%	4.2%	1.2%
Other long term liabilities	0.5%	0.2%	0.4%	0.9%	1.3%	0.5%	0.1%
Current portion of bank loans and other facilities	5.8%	2.3%	5.3%	20.0%	10.0%	10.5%	8.4%
Deffered revenue			4.0%	3.7%	1.3%	3.3%	3.7%
Total interest bearing liabilites	**33.2%**	**51.2%**	**82.7%**	**73.6%**	**62.0%**	**90.6%**	**80.9%**
NIBD	**18.7%**	**47.4%**	**47.3%**	**33.9%**	**41.6%**	**79.5%**	**74.5%**
Invested capital	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Reformulated operational balance sheet

	2010	2011	2012	2013	2014	2015	Q4 2016
Assets							
Rigs, machinery and equipment	100	157	116	87	90	166	262
New-builds		100	216	248	312	371	-
Deffered tax	100	174	174	94	90	28	33
Capitalized operational lease			100	88	70	102	123
Total operating non-current asset	**100**	**177**	**160**	**135**	**149**	**230**	**252**
Trade receivables	100	61	51	63	42	34	55
Prepayments	100	163	194	129	111	148	130
Earned revenue	100	359	1,874	3,198	1,835	2,751	4,081
Other assets	100	598	234	71	161	70	25
Total operating current assets	**100**	**136**	**100**	**102**	**80**	**74**	**100**
Total operating assets	**100**	**173**	**155**	**132**	**143**	**217**	**238**
Liabilities							
Trade payables	100	221	483	129	69	177	74
Tax payable	100	59	69	78	17	17	23
Deferred revenue	100	82	614	673	745	641	357
Derivative financial instruments	100	244	55	693	2,274	2,708	1,408
Other liabilities	100	328	514	249	362	244	173
Total operating liabilities	**100**	**211**	**393**	**203**	**223**	**194**	**121**
Invested capital	**100**	**171**	**140**	**128**	**138**	**218**	**245**

Reformulated fiancial balance sheet

	2010	2011	2012	2013	2014	2015	Q4 2016
Equity							
Issued capital	100	100	120	473	509	509	146
Share premium	100	100	128	166	171	171	213
Other equity	100	117	69	53	42	-30	-5
Total equity	**100**	**111**	**91**	**104**	**99**	**55**	**77**
Assets							
Financial assets	100	-	-	-	107	91	37
Cash and equivalents	100	61	28	333	179	128	133
Total interest bearing assets	**100**	**45**	**342**	**348**	**195**	**167**	**107**
Liabilities							
Capitalized operational lease			100	88	70	102	123
Bank loans and other facilities	100	268	215	92	94	527	602
Bond loans	100	576	793	710	594	511	519
Convertible bond				100	106	112	37
Other long term liabilities	100	61	121	219	339	203	61
Current portion of bank loans and other facilities	100	67	127	442	239	394	357
Deffered revenue			100	85	31	127	164
Total interest bearing liabilites	**100**	**264**	**349**	**283**	**258**	**595**	**597**
NIBD	**100**	**434**	**355**	**232**	**308**	**928**	**980**
Invested capital	**100**	**171**	**140**	**128**	**138**	**218**	**245**

Appendix 19 Financial statement Odfjell

Reformulated income statement						
USD '000	2011	2012	2013	2014	2015	Q4 2016
Operating revenue	**1,056,704**	**1,093,754**	**1,173,605**	**1,087,960**	**926,827**	**657,392**
Share of profit from joint ventures	-6,834	-13,399	436	-82,278	-297,591	1,419
Personell expenses	-465,651	-486,182	-547,039	-501,188	-381,736	-232,561
Other operating expenses	-247,766	-266,609	22,288	11,344	-197,423	-140,663
EBITDA	**336,453**	**327,564**	**649,290**	**515,838**	**50,077**	**285,587**
Depreciation and impairment	-144,998	-147,318	-145,180	-141,235	-163,886	-250,722
EBIT	**191,455**	**180,246**	**504,110**	**374,603**	**-113,809**	**34,865**
Tax on EBIT	-40,202	-37,960	-301,702	-172,555	10,050	22,737
NOPAT	**151,253**	**142,286**	**202,408**	**202,048**	**-103,759**	**57,602**
Financial income	3,635	7,369	9,823	3,076	1,241	819
Financial expenses	-80,451	-63,955	-65,513	-58,450	-70,156	-73,320
Other financial items	-7,118	20,936	-21,112	5,186	4,470	-1,544
Net financial expenses	**-83,934**	**-35,650**	**-76,802**	**-50,188**	**-64,445**	**-74,045**
Financial tax	17,625	7,508	45,965	23,118	5,691	-48,288
Non-recurring items	45,972	3,438	-256,338	-245,693	1	629
Tax on non-recurring items	-9,653	-724	153,414	113,174	-0	410
Profit for the year	**121,262**	**116,858**	**68,647**	**42,460**	**-162,512**	**-63,692**

Reformulated operational balance sheet						
USD '000	2011	2012	2013	2014	2015	Q4 2016
Assets						
Property, plant and equipment	1,794,795	1,871,897	1,773,615	2,312,214	2,288,284	1,912,754
Goodwill	27,022	29,091	26,618	21,785	18,383	18,786
Software	-	-	6,109	15,211	15,417	14,223
Derivative financial instruments	-	-	3,221	688	386	235
Deferred tax assets	5,303	835	-	-	8,397	2,498
Other operating non-current assets	17,144	38,387	12,065	506	360	287
Total operating non-current asset	**1,844,264**	**1,940,210**	**1,821,628**	**2,350,404**	**2,331,227**	**1,948,783**
Spare parts	3,669	2,960	3,666	3,428	2,818	1,782
Trade receivables	250,429	242,055	247,793	213,158	178,481	111,090
Other receivables	24,947	35,289	44,420	27,543	45,195	12,097
Total operating current assets	**279,045**	**280,304**	**295,879**	**244,129**	**226,494**	**124,969**
Total operating assets	**2,123,309**	**2,220,514**	**2,117,507**	**2,594,533**	**2,557,721**	**2,073,752**
Liabilities						
Trade payables	34,361	36,033	33,492	29,335	25,150	17,233
Derivative financial instruments	26,300	26,390	16,383	9,367	2,156	-
Current income tax	7,040	26,021	42,036	18,679	9,567	-
Social security and other taxes	29,100	32,746	31,851	25,929	16,697	-
Other current liabilities	108,858	110,324	123,896	107,850	130,433	92,857
Total operating liabilities	**205,659**	**231,514**	**247,658**	**191,160**	**184,003**	**110,090**
Invested capital	**1,917,650**	**1,989,000**	**1,869,849**	**2,403,373**	**2,373,718**	**1,963,662**

Reformulated fiancial balance sheet						
USD '000	2011	2012	2013	2014	2015	Q4 2016
Equity						
Share capital	14	15	2,000	2,000	1,987	1,987
Other contributed capital	339,095	331,794	329,809	329,809	326,853	326,853
Other reserves	-35,982	-30,896	-75,354	-103,566	-113,684	-100,000
Retainted earnings	706,978	824,610	873,894	887,631	733,288	493,245
Non-controlling interests	22,727	28,779	-	-	-	-
Total equity	**1,032,832**	**1,154,302**	**1,130,349**	**1,115,874**	**948,444**	**722,085**
Assets						
Investments in joint ventures	313,253	331,144	338,480	306,763	14,419	8,217
Available-for-sale financial assets	914	22	3	3	-	-
Sub-ordinated loan to related parties	-	52,069	79,273	-	-	-
Cash and cash equivalents	303,137	200,636	200,902	191,201	201,626	181,623
Total interest bearing assets	**617,304**	**583,871**	**618,658**	**497,967**	**216,045**	**189,840**
Liabilities						
Borrowings LT	1,289,995	1,140,544	1,092,170	1,470,723	878,664	1,208,180
Borrowings ST	117,802	211,270	180,178	233,764	718,360	204,058
Post-employment benefits	86,990	62,148	67,447	76,626	42,636	17,554
Deffered income tax liability	-	-	17,911	2,401	-	-
Other non-current liabilities	7,334	4,606	450	1,951	1,660	1,623
Total interest bearing liabilites	**1,502,121**	**1,418,568**	**1,358,156**	**1,785,465**	**1,641,320**	**1,431,415**
NIBD	**884,817**	**834,697**	**739,498**	**1,287,498**	**1,425,275**	**1,241,575**
Invested capital	**1,917,649**	**1,988,999**	**1,869,847**	**2,403,372**	**2,373,719**	**1,963,660**

Appendix 20 Financial statements North Atlantic Drilling

Reformulated income statement						
USD '000	2011	2012	2013	2014	2015	2016
Operating revenue	881,300	955,400	1,116,700	1,058,800	730,400	510,100
Reimbursables	33,300	89,200	195,300	160,000	17,300	13,900
Total operating revenue	**914,600**	**1,044,600**	**1,312,000**	**1,218,800**	**747,700**	**524,000**
Gain on sale of assets	-	-	-	-	-82,000	2,400
Vessel and rig operating expenses	-329,900	-345,600	-527,100	-458,400	-270,800	-181,900
Reimbursable expenses	-30,000	-82,200	-183,700	-150,000	-15,400	-13,100
Loss on Goodwill impairment	-140,700	-162,800	-188,000	-212,200	-	-
General and administrative expenses	-35,400	-50,000	-64,900	-78,900	-60,100	-30,000
EBITDA	**378,600**	**404,000**	**348,300**	**319,300**	**319,400**	**301,400**
Depreciation and impairment	-	-	-	-480,600	-221,900	-221,300
EBIT	**378,600**	**404,000**	**348,300**	**-161,300**	**97,500**	**80,100**
Tax on EBIT	-51,675	-152,003	-38,056	-16,413	124,630	58,881
NOPAT	**326,925**	**251,997**	**310,244**	**-177,713**	**222,130**	**138,981**
Financial income	6,800	600	500	500	200	-
Financial expenses	-77,600	-83,900	-84,900	-103,800	-97,700	-106,000
Foreign exchange	3,300	-12,000	10,900	41,000	28,300	3,400
Loss/gain on derivative financial instruments	-47,700	-17,500	-16,100	-86,200	-57,400	-9,900
Other financial items	-600	-	-6,500	-26,000	-5,400	-8,500
Net financial expenses	**-115,800**	**-112,800**	**-96,100**	**-174,500**	**-132,000**	**-121,000**
Financial tax	15,805	42,440	10,500	-17,756	-168,730	-88,947
Non-recurring items	26,600	100	12,300	44,900	-	10,700
Tax on non-recurring items	-3,631	-38	-1,344	4,569	-	7,866
Profit for the year	**249,900**	**181,700**	**235,600**	**-320,500**	**-78,600**	**-52,400**

Reformulated operational balance sheet					
USD '000	2012	2013	2014	2015	2016
Assets					
Goodwill	480,600	480,600	-	-	-
Newbuildings	248,700	312,900	172,600	-	-
Drilling units	2,416,200	2,377,800	2,923,500	2,738,000	2,528,800
Deferred tax assets	25,800	16,400	31,800	7,500	-
Other non-current assets	138,500	128,200	104,000	94,700	85,000
Total operating non-current asset	**3,309,800**	**3,315,900**	**3,231,900**	**2,840,200**	**2,613,800**
Account receivables, net	211,900	221,700	235,100	99,300	76,000
Related party receivables	-	-	-	-	11,200
Amount due from related party	242,900	5,800	34,800	4,700	-
Deferred tax assets	9,500	2,900	-	-	-
Other current assets	42,400	43,600	22,000	25,100	15,100
Total operating current assets	**506,700**	**274,000**	**291,900**	**129,100**	**102,300**
Total operating assets	**3,816,500**	**3,589,900**	**3,523,800**	**2,969,300**	**2,716,100**
Liabilities	-	-	-	-	-
Current portion of long-term debt	166,700	166,700	210,200	210,400	1,078,500
Amount due to related party	47,300	13,000	17,000	39,800	36,600
Deffered taxes	34,200	35,700	54,200	57,700	48,400
Trade accounts payables	5,700	10,400	6,500	12,300	3,200
Tax payable	71,400	17,900	11,800	20,300	16,800
Other current liabilities	398,800	223,400	267,800	211,800	125,800
Total operating liabilities	**724,100**	**467,100**	**567,500**	**552,300**	**1,309,300**
Invested capital	**3,092,400**	**3,122,800**	**2,956,300**	**2,417,000**	**1,406,800**

Reformulated fiancial balance sheet					
USD '000	2012	2013	2014	2015	2016
Equity					
Share capital	1,138,100	1,138,100	1,205,700	2,400	2,400
Additional paid in capital	800	1,300	48,600	49,200	49,900
Contributed surplus	834,300	834,300	834,300	2,037,600	2,037,600
Contributed deficit	-1,186,100	-1,188,400	-1,188,400	-1,188,400	-1,188,400
Accumulated other comprehensive loss/gain	-32,800	-39,400	-58,600	-23,700	-2,100
Accumulated deficit/earnings	83,800	113,900	-390,100	-484,900	-513,400
Non-controlling interests	-	-2,300	10,100	26,500	-
Total equity	**838,100**	**857,500**	**461,600**	**418,700**	**386,000**
Assets	-	-	-	-	-
Cash and cash equivalents	98,400	84,100	116,200	150,900	68,700
Resticted cash	23,600	25,300	11,000	6,500	5,200
Non-current assets held for sale	-	-	-	128,400	128,400
Total interest bearing assets	**122,000**	**109,400**	**127,200**	**285,800**	**202,300**
Liabilities	-	-	-	-	-
Long-term interest bearing debt	1,583,300	1,581,200	2,188,200	1,903,500	880,500
Long term debt due to related parties	702,500	700,000	308,400	321,000	321,200
Pension liabilities	50,100	57,600	82,900	37,400	3,200
Other non-current liabilities	40,400	35,900	42,400	22,200	18,200
Total interest bearing liabilites	**2,376,300**	**2,374,700**	**2,621,900**	**2,284,100**	**1,223,100**
NIBD	**2,254,300**	**2,265,300**	**2,494,700**	**1,998,300**	**1,020,800**
Invested capital	**3,092,400**	**3,122,800**	**2,956,300**	**2,417,000**	**1,406,800**

Appendix 21 Financial statements Fred. Olsen Energy

Reformulated income statement							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Operating revenue	**995,578**	**1,153,985**	**1,181,382**	**1,194,789**	**1,184,066**	**1,116,445**	**825,000**
Materials	-2,420	-13,694	-31,899	-17,375	-11,824	-2,188	
Saleries and other personal costs	-200,825	-249,949	-284,186	-324,479	-318,691	-254,767	
Other operating expenses	-229,818	-258,909	-258,275	-281,480	-337,338	-222,475	
EBITDA	**562,515**	**631,433**	**607,021**	**571,456**	**516,213**	**637,015**	**498,400**
Depreciation and amorization	-202,057	-224,839	-232,032	-242,269	-329,418	-354,108	**-290,400**
Impairment	-	-2,726	-	-	-42,702	-607,940	**-230,800**
EBIT	**360,457**	**403,868**	**374,990**	**329,187**	**144,093**	**-325,033**	**-22,800**
Tax on EBIT	-13,211	-3,728	-16,281	-18,928	-29,316	-2,430	-7,466
NOPAT	**347,246**	**400,140**	**358,709**	**310,259**	**114,777**	**-327,463**	**-30,266**
Financial income	37,309	69,563	27,530	64,586	127,095	92,158	
Financial expenses	-65,513	-97,644	-74,970	-80,529	-122,611	-115,151	
Net financial expenses	**-28,204**	**-28,081**	**-47,441**	**-15,943**	**4,484**	**-22,993**	**-56,600**
Financial tax	1,034	259	2,060	917	-912	-172	-18,534
Profit for the year	**320,076**	**372,318**	**313,328**	**295,233**	**118,349**	**-350,628**	**-105,400**

Reformulated operational balance sheet							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Assets							
Property, plant and equipment	1,672,970	1,863,465	2,179,101	2,563,415	2,901,586	1,862,393	1,361,000
Intagible assets	16,306	17,580	16,935	16,774	13,262	11,190	-
Other non-current assets	826	577	336	27	205	197	17,300
Deferred tax assets	5,762	10,381	26,875	27,919	31,237	22,712	-
Total operating non-current asset	**1,695,865**	**1,892,003**	**2,223,247**	**2,608,136**	**2,946,290**	**1,896,492**	**1,378,300**
Consumable spare parts	66,277	83,177	74,036	106,578	115,165	120,030	113,100
Prepayments, tax refunds and other cur	70,396	72,291	32,448	32,801	31,085	207,712	20,100
Trade and other receivables	156,359	213,963	165,694	196,386	172,657	135,097	94,600
Total operating current asset	**293,031**	**369,431**	**272,177**	**335,765**	**318,907**	**462,839**	**227,800**
Total operating assets	**1,988,896**	**2,261,433**	**2,495,424**	**2,943,900**	**3,265,197**	**2,359,331**	**1,606,100**
Liabilities							
Interest-bearing loans and borrowings	213,126	235,117	125,462	135,819	95,455	325,658	-
Trade and other payables	17,732	39,333	35,436	45,098	58,346	31,825	-
Tax payable	4,662	2,326	3,032	7,845	15,219	6,597	-
Other accrued expenses and deferred r	87,456	91,360	415,237	682,833	485,227	123,778	-
Total operational liabilities	**322,976**	**368,136**	**579,167**	**871,595**	**654,247**	**487,858**	**72,800**
Invested capital	**1,665,920**	**1,893,297**	**1,916,257**	**2,072,306**	**2,610,950**	**1,871,473**	**1,533,300**

Reformulated financial balance sheet							
USD '000	2010	2011	2012	2013	2014	2015	Q4 2016
Equity							
Share capital	220,648	237,879	229,150	226,975	193,290	193,290	193,300
Share premium	90,670	97,750	94,163	93,269	83,549	83,549	83,549
Translation reserves	-105,286	-62,478	-160,368	-33,449	6,875	1,512	-
Reserve for own shares	-1,423	-1,534	-1,478	-1,464	-1,215	-1,215	-
Retained earings	942,406	1,151,720	1,145,097	1,202,172	1,025,430	688,392	576,351
Non-controlling interests	869	1,226	-	-	-	-	-
Total equity	**1,147,884**	**1,424,563**	**1,306,565**	**1,487,503**	**1,307,929**	**965,528**	**853,200**
Assets							
Cash and cash equivalents	247,841	389,419	238,235	229,904	203,425	214,098	290,400
Total financial assets	**247,841**	**389,419**	**238,235**	**229,904**	**203,425**	**214,098**	**290,400**
Liabilities							
Interest-bearing loan and borrowings	703,121	789,933	720,988	685,470	1,359,937	1,002,088	879,600
Employee benefits	39,274	44,279	112,454	125,546	133,899	97,463	88,258
Financial instruments	23,481	23,942	14,484	3,691	12,610	20,492	2,642
Total financial liabilities	**765,877**	**858,153**	**847,927**	**814,707**	**1,506,446**	**1,120,043**	**970,500**
NIBD	**518,035**	**468,734**	**609,692**	**584,802**	**1,303,021**	**905,945**	**680,100**
Invested capital	**1,665,920**	**1,893,297**	**1,916,257**	**2,072,306**	**2,610,950**	**1,871,473**	**1,533,300**

Appendix 22 Financial statements Transocean

Reformulated income statement							
USD '000	2010	2011	2012	2013	2014	2015	2016
Operating revenue	**7,698,000**	**7,407,000**	**8,773,000**	**9,070,000**	**8,963,000**	**6,802,000**	**3,705,000**
Other revenue	251,000	620,000	423,000	179,000	222,000	584,000	456,000
Operating and maintenance	-4,219,000	-6,179,000	-6,106,000	-5,563,000	-5,100,000	-2,955,000	-1,875,000
General and administrative	-246,000	-288,000	-282,000	-286,000	-234,000	-192,000	-172,000
Loss on impairment	-	-5,201,000	-118,000	-81,000	-4,043,000	-1,875,000	-93,000
Gain/loss on disposals	255,000	-12,000	36,000	7,000	-26,000	-36,000	4,000
EBITDA	**3,739,000**	**-3,653,000**	**2,726,000**	**3,326,000**	**-218,000**	**2,328,000**	**2,025,000**
Depreciation and impairment	-1,009,000	-1,109,000	-1,123,000	-1,109,000	-1,129,000	-963,000	-893,000
EBIT	**2,730,000**	**-4,762,000**	**1,603,000**	**2,217,000**	**-1,347,000**	**1,365,000**	**1,132,000**
Tax on EBIT	-369,912	-283,723	-90,259	-345,402	-69,309	-161,379	-129,683
NOPAT	**2,360,088**	**-5,045,723**	**1,512,741**	**1,871,598**	**-1,416,309**	**1,203,621**	**1,002,317**
Financial income	23,000	44,000	56,000	52,000	20,000	22,000	20,000
Financial expenses	-567,000	-621,000	-723,000	-584,000	-483,000	-432,000	-409,000
Gain/loss on retirement of debt	-33,000	-	2,000	-	-13,000	23,000	148,000
Other financial items	2,000	-99,000	-50,000	-29,000	35,000	37,000	43,000
Net financial expenses	**-575,000**	**-676,000**	**-715,000**	**-561,000**	**-441,000**	**-350,000**	**-198,000**
Financial tax	77,912	-40,277	40,259	87,402	-22,691	41,379	22,683
Pofit for the year	**1,863,000**	**-5,762,000**	**838,000**	**1,398,000**	**-1,880,000**	**895,000**	**827,000**

Reformulated operational balance sheet						
USD '000	2011	2012	2013	2014	2015	2016
Assets						
Property, plant and equipment	20,788,000	20,880,000	21,707,000	21,538,000	20,818,000	21,093,000
Goodwill	3,217,000	2,987,000	2,987,000	-	-	-
Other non-current assets	3,491,000	1,741,000	1,080,000	833,000	410,000	400,000
Total operating non-current asset	**27,496,000**	**25,608,000**	**25,774,000**	**22,371,000**	**21,228,000**	**21,493,000**
Trade receivables	2,049,000	1,940,000	2,112,000	2,084,000	1,343,000	833,000
Other receivables	127,000	260,000	50,000	36,000	36,000	65,000
Materials and supplies	529,000	610,000	737,000	818,000	635,000	561,000
Other current assets	646,000	382,000	331,000	128,000	84,000	121,000
Total operating current assets	**3,351,000**	**3,192,000**	**3,230,000**	**3,066,000**	**2,098,000**	**1,580,000**
Total operating assets	**30,847,000**	**28,800,000**	**29,004,000**	**25,437,000**	**23,326,000**	**23,073,000**
Liabilities						
Trade payables	880,000	1,047,000	1,106,000	784,000	448,000	206,000
Accrued income taxes	86,000	116,000	53,000	131,000	82,000	95,000
Debt due within one year	2,187,000	1,367,000	323,000	1,032,000	1,093,000	724,000
Other current liabilities	2,375,000	2,933,000	2,072,000	1,822,000	1,046,000	960,000
Total operating liabilities	**5,528,000**	**5,463,000**	**3,554,000**	**3,769,000**	**2,669,000**	**1,985,000**
Invested capital	**25,319,000**	**23,337,000**	**25,450,000**	**21,668,000**	**20,657,000**	**21,088,000**

Reformulated fiancial balance sheet						
USD '000	2011	2012	2013	2014	2015	2016
Equity						
Share capital	4,982,000	5,130,000	5,147,000	5,169,000	5,193,000	36,000
Other contributed capital	7,211,000	7,521,000	6,784,000	5,797,000	5,739,000	10,993,000
Other reserves	-240,000	-240,000	-240,000	-240,000	-240,000	-
Retainted earnings	4,180,000	3,855,000	5,262,000	3,349,000	4,140,000	5,056,000
Accumulated other comprehensive loss	-496,000	-521,000	-262,000	-404,000	-334,000	-283,000
Non-controlling interests	-10,000	-15,000	-6,000	311,000	310,000	3,000
Redeemable non-controlling interests	116,000	-	-	11,000	8,000	28,000
Total equity	**15,743,000**	**15,730,000**	**16,685,000**	**13,993,000**	**14,816,000**	**15,833,000**
Assets						
Deferred tax assets	-	-	-	360,000	316,000	298,000
Available-for-sale financial assets	26,000	179,000	148,000	25,000	8,000	-
Restricted cash	142,000	142,000	151,000	114,000	340,000	466,000
Cash and cash equivalents	4,017,000	5,134,000	3,243,000	2,635,000	2,339,000	3,052,000
Total interest bearing assets	**4,185,000**	**5,455,000**	**3,542,000**	**3,134,000**	**3,003,000**	**3,816,000**
Liabilities						
Borrowings	10,756,000	10,929,000	10,379,000	9,019,000	7,397,000	7,740,000
Long-term debt of consolidated variable interest entities	593,000	163,000	-	-	-	-
Deffered income tax liability	487,000	366,000	374,000	436,000	339,000	178,000
Other non-current liabilities	1,925,000	1,604,000	1,554,000	1,354,000	1,108,000	1,153,000
Total interest bearing liabilites	**13,761,000**	**13,062,000**	**12,307,000**	**10,809,000**	**8,844,000**	**9,071,000**
NIBD	**9,576,000**	**7,607,000**	**8,765,000**	**7,675,000**	**5,841,000**	**5,255,000**
Invested capital	**25,319,000**	**23,337,000**	**25,450,000**	**21,668,000**	**20,657,000**	**21,088,000**

Appendix 23 Key financial ratios

ROIC	2010	2011	2012	2013	2014	2015	2016
SONG	**12.9%**	**8.1%**	**-13.7%**	**-1.8%**	**1.0%**	**-17.4%**	**4.3%**
ODL		7.9%	7.3%	10.5%	9.5%	-4.3%	2.7%
NADL			8.1%	10.0%	-5.8%	8.3%	7.3%
FOE	20.8%	21.1%	18.7%	15.0%	4.4%	-17.5%	-2.0%
RIG		-19.9%	6.2%	7.7%	-6.0%	5.7%	4.8%
Mean	16.9%	4.3%	5.3%	8.3%	0.6%	-5.1%	3.4%
Median	16.9%	8.0%	7.3%	10.0%	1.0%	-4.3%	4.3%

Profit margin	2010	2011	2012	2013	2014	2015	2016
SONG	**25.5%**	**26.9%**	**-46.6%**	**-5.5%**	**3.4%**	**-77.2%**	**17.0%**
ODL		14.3%	13.0%	17.2%	18.6%	-11.2%	8.8%
NADL		35.7%	24.1%	23.6%	-14.6%	29.7%	26.5%
FOE	34.9%	34.7%	30.4%	26.0%	9.7%	-29.3%	-3.7%
RIG	30.7%	-68.1%	17.2%	20.6%	-15.8%	17.7%	27.1%
Median	30.7%	26.9%	17.2%	20.6%	3.4%	-11.2%	17.0%
Mean	30.3%	8.7%	7.6%	16.4%	0.3%	-14.1%	15.1%

Invested capital turnover rate	2010	2011	2012	2013	2014	2015	2016
SONG	**0.51**	**0.30**	**0.29**	**0.33**	**0.29**	**0.22**	**0.25**
ODL		0.55	0.56	0.61	0.51	0.39	0.30
NADL			0.34	0.42	0.40	0.28	0.27
FOE	0.60	0.65	0.62	0.60	0.51	0.50	0.48
RIG		0.29	0.36	0.37	0.38	0.32	0.18
Median	0.55	0.43	0.36	0.42	0.40	0.32	0.27
Mean	0.55	0.45	0.43	0.47	0.42	0.34	0.30

Net borrowing cost	2010	2011	2012	2013	2014	2015	2016
SONG	**-14.7%**	**-2.5%**	**-4.3%**	**-18.5%**	**-11.5%**	**-4.9%**	**-7.7%**
ODL		-4.4%	-1.9%	-2.2%	-1.7%	-3.4%	-8.0%
NADL			-3.1%	-3.8%	-8.1%	-13.4%	-13.9%
FOE	-5.2%	-5.6%	-8.4%	-2.5%	0.4%	-2.1%	-9.5%
RIG		-7.5%	-7.9%	-5.8%	-5.6%	-4.6%	-3.2%
Mean	-10.0%	-5.0%	-5.1%	-6.6%	-5.3%	-5.7%	-8.4%
Median	-10.0%	-5.0%	-4.3%	-3.8%	-5.6%	-4.6%	-8.0%

Spread (ROIC - NBC)							
	2010	2011	2012	2013	2014	2015	2016
SONG	-1.8%	5.5%	-17.9%	-20.3%	-10.5%	-22.3%	-3.4%
ODL		3.5%	5.4%	8.3%	7.7%	-7.8%	-5.3%
NADL			5.0%	6.2%	-13.9%	-5.1%	-6.6%
FOE	15.6%	15.5%	10.3%	12.5%	4.8%	-19.6%	-11.4%
RIG		-27.4%	-1.6%	1.9%	-11.7%	1.1%	1.6%
Average	6.9%	-0.7%	0.2%	1.7%	-4.7%	-10.7%	-5.0%
Median	6.9%	4.5%	5.0%	6.2%	-10.5%	-7.8%	-5.3%

Financial leverage							
	2010	2011	2012	2013	2014	2015	2016
SONG	**0.23**	**0.58**	**0.90**	**0.69**	**0.61**	**1.84**	**3.32**
ODL		0.86	0.79	0.69	0.90	1.31	1.60
NADL			2.69	2.67	3.61	5.10	3.75
FOE	0.45	0.38	0.39	0.43	0.68	0.97	0.87
RIG		0.61	0.55	0.51	0.54	0.47	0.36
Mean	0.34	0.61	1.06	1.00	1.27	1.94	1.98
Median	0.34	0.60	0.79	0.69	0.68	1.31	1.60

Financial gearing effect							
	2010	2011	2012	2013	2014	2015	2016
SONG	**-0.4%**	**3.2%**	**-16.1%**	**-14.1%**	**-6.4%**	**-40.9%**	**-11.1%**
ODL		3.0%	4.2%	5.7%	7.0%	-10.2%	-8.5%
NADL			13.5%	16.5%	-50.2%	-26.1%	-24.9%
FOE	7.0%	5.9%	4.1%	5.3%	3.2%	-19.0%	-10.0%
RIG		-16.7%	-0.9%	1.0%	-6.2%	0.5%	0.6%
Mean	3.3%	-1.1%	1.0%	2.9%	-10.5%	-19.2%	-10.8%
Median	3.3%	3.1%	4.1%	5.3%	-6.2%	-19.0%	-10.0%

ROE							
	2010	2011	2012	2013	2014	2015	2016
SONG	**12.5%**	**11.3%**	**-29.8%**	**-15.9%**	**-5.4%**	**-58.3%**	**-6.8%**
ODL		10.9%	11.5%	16.2%	16.4%	-14.6%	-5.8%
NADL			21.7%	26.5%	-56.1%	-17.9%	-17.6%
FOE	27.9%	27.1%	22.8%	20.3%	7.6%	-36.5%	-12.0%
RIG		-36.6%	5.3%	8.6%	-12.3%	6.2%	5.4%
Mean	20.2%	3.2%	6.3%	11.2%	-9.9%	-24.2%	-7.4%
Median	20.2%	11.1%	11.5%	16.2%	-5.4%	-17.9%	-6.8%

Appendix 24 Multiples

	EV/Sales		EV/EBITDA		P/B
	2016	FY1	2016	FY1	2016
ODL	2.41	2.85	5.55	8.44	0.48
NADL	2.04	5.53	3.54	12.57	0.12
FOE	1.02	2.71	1.69	6.61	0.19
RIG	2.77	3.31	5.08	7.60	0.32
Harmonic Mean	1.78	3.33	3.20	8.32	0.21
Median	2.23	3.08	4.31	8.02	0.25
SONG	3.68	3.93	6.12	6.60	0.53

	EV/sales	EV/EBITDA	P/B
Implied share price	11.89	62.11	12.59

Appendix 25 Operational lease calculations

Capitalized operational lease						
Cost of debt (Rd)	7.40%					
USD '000		2012	2013	2014	2015	2016
Asset life (years)		3.3	3.5	3.1	2.9	3.9
Operational lease expenses		-733	-2,326	-1,920	-1,695	-2,604
Asset value		6,315	5,560	4,393	6,416	7,760
Depreciation on capital lease		-335	-1,976	-1,643	-1,291	-2,115
Interests on capital lease		-398	-350	-277	-404	-489