



Odfjell Drilling Ltd  
Board of Directors  
Clarendon House  
2 Church Street  
Hamilton HM11  
BERMUDA

**OUR REFERENCE**  
15/6422

**YOUR REFERENCE**

**CONFIDENTIAL**

**DATE**  
23.05.2016

## Review of financial reporting – enforcement decision

Where [\*] is inserted, text has been deleted pursuant to the Freedom of Information Act § 13(1), cf. the Public Administration Act § 13 (1) no 2.

### 1. Introduction

Finanstilsynet has reviewed certain accounting topics related to the financial reporting of *Odfjell Drilling Ltd.* ("Odfjell"/"Company") as required by the Securities Trading Act section 15-1 subsection (3). The present letter to Odfjell sets out Finanstilsynet's enforcement decision in the matter.

Odfjell is an international company with operations worldwide with services in offshore drilling, well services and engineering. The total value of Odfjell's wholly owned rigs constituted 74% of total assets as of 31 December 2014. During 2014 Odfjell identified several indications of impairment and performed impairment tests for all rigs in accordance with IAS 36 *Impairment of Assets* at year-end 2014. Finanstilsynet's review was initially based on the Company's impairment test as of 31 December 2014 but, due to the significant market developments during 2015, the process was extended to include subsequent quarters. In addition to the worsening market conditions in general, other external indicators of impairment were the developments in price/book ratios and broker values. The price/book ratio as at 30 September 2015 (Q3 2015) was 0.14 and broker values had dropped significantly. These indicators clearly showed that Odfjell had based its impairment tests on assumptions far more optimistic than those employed by external market participants.

An Advance notification of decision relating to the impairment test performed for Q3 2015 was sent to the Company on 10 February 2016. In response, Odfjell revised the impairment test for Q3 2015 ("revised Q3 2015") adjusting some assumptions and to some extent taking Finanstilsynet's comments into account. No impairment was identified in the revised impairment tests.

Based on an overall assessment, Finanstilsynet is still of the opinion that Odfjell has applied overly optimistic assumptions in its revised Q3 2015 impairment tests and has not adequately taken into

account negative scenarios in the tests. The present enforcement decision relates to the rigs Deepsea Atlantic (DSA) and Deepsea Stavanger (DSS) as of 30 September 2015. No factors have emerged giving Finanstilsynet reason to revise its Advance notification of decision.

Section 2 includes further background information on Odfjell's impairment testing and Finanstilsynet's overall assessment of the reasonability and quality of the impairment testing. Section 3 assesses the cash flow assumptions employed. Section 4 assesses the discount rate applied in Odfjell's impairment test. Section 5 sets out Finanstilsynet's enforcement decision regarding the Company's impairment test.

Finanstilsynet has concluded that the Deepsea Atlantic and Deepsea Stavanger rigs were impaired as of 30 September 2015. Finanstilsynet hereby orders the Company to recalculate the Value In Use (VIU) for both rigs and to correct the identified errors.

## **2. Overall assessment**

### **2.1 Background**

Finanstilsynet's review is confined to the Deepsea Atlantic (DSA) and Deepsea Stavanger (DSS) rigs. Both rigs are harsh environment (HE), ultra deepwater (UDW) sixth generation mobile offshore drilling units (MODUs). During 2014 Odfjell identified several indicators of impairment, and performed impairment tests for all rigs in accordance with IAS 36 at year-end 2014 and at each subsequent quarter-end in 2015. Per 30 September 2015 Odfjell estimated the value in use and identified no impairment. Finanstilsynet was critical to the discount rate applied, and to the normalized day rate and operational expenses (opex) assumption, and issued an Advance notification of decision stating that the impairment testing as of Q3 2015 was not based on reasonable and supportable cash flow assumptions nor used an appropriate discount rate; hence the test was not in compliance with IAS 36. After receiving the advance notification, Odfjell revised its Q3 impairment tests, adjusted the WACC and the normalized day rate assumption, and modified the assumptions underlying the estimation of normalized opex.

Odfjell's impairment model was based on a discounted cash flow model (DCF) calculating the VIU for each rig, pursuant to IAS 36.30. Each rig was defined as a Cash Generating Unit (CGU), hence was tested separately for impairment. The DCF assumed that the rigs had an economic lifetime of 30 years, with each rig having approximately 25 years left in operation as of Q3 2015. Both rigs had an expected residual value of MUS\$ 50, based on the estimated scrap value in year 2039/40. Odfjell based the cash flow projections on actual contracts including any options to extend, and assumed a normalization of cash flows for the remaining period. Capex for Special Periodic Survey (SPS) and related days of off-hire was included every fifth year. The legal structure of the group makes any profit from the rigs tax exempt. The estimated cash flows were discounted by a Weighted Average Cost of Capital (WACC), where the cost of equity was derived using the Capital Asset Pricing Model (CAPM).

### **2.2 Inconsistency and contradicting explanations**

As can be seen from the table below, Odfjell has made changes to key assumptions in the model during the process with Finanstilsynet, especially from Q2 to Q3 and in its revised Q3 impairment test.

<b>Summary - key assumptions:</b>				
MUSD	2014	Q2 15	Q3 15	Revised Q3 15
<b>Key assumptions:</b>				
Normalized day rate	500	500	500	450
Normalized opex	215	215	170	170
WACC	6,90 %	6,96 %	6,41 %	8,20 %
<b>Values:</b>				
BV Atlantic	698	673	665	665
BV Stavanger	684	676	671	671
VIU Atlantic	854	669	862	715
VIU Stavanger	792	713	913	704
Broker estimates	660	588	563*	563*
Total headroom (BV - ViU)	265	33	439	83

\* interpolated based on Q2 15 and Q4 15 broker estimates

In Finanstilsynet's view it gives rise to concern that Odfjell provides different and inconsistent explanations for some assumptions. In Finanstilsynet's view some of the changes in assumptions and corresponding explanations have resulted in assumptions not being coherent, see section 3.2.1 and 3.2.2 below. The identified inconsistency in applied assumptions are resulting in more favourable cash flows and have a material effect on the VIU impairment tests as of 30 September 2015.

To limit the use of assumptions that are unsupported in VIU tests, IAS 36 requires cash flow projections to be based on reasonable and supportable assumptions and greater weight to be given to external evidence. In Finanstilsynet's view external evidence such as broker estimates/appraisals, research reports, observable market transactions and comparable company analysis etc. should also be taken into account and provides necessary support for the reasonability of the assumptions applied also in a VIU impairment model.

It is Finanstilsynet's view that the inconsistencies creates significant uncertainty related to the overall impairment test process, and the use of external evidence to ensure that the outcome of the impairment test is reasonable will be of even greater importance. Finanstilsynet has placed substantial weight on the fact that external evidence indicates that the assets in question were impaired as of 30 September 2015. Finanstilsynet expects material impairments for both rigs.

### 2.3 Broker estimates

Odfjell obtains external valuations of all its rigs twice a year as part of its reporting to the Company's lenders. The estimates are provided by Clarkson Platou and Pareto Offshore. Both brokers give a range of the value per rig. As of year-end 2014 the book values of both rigs were above the average broker values, but within the range indicated by Clarkson Platou. As of year-end 2015 the book values for both rigs were above the average of the two value ranges, but this time they were also significantly above the value range indicated by both brokers.

Average broker values for Q3 2015 indicated a value of MUSD 563 per rig, calculated as the average of the Q2 2015 and Q4 2015 estimates, while the impairment tests estimated the values to be MUSD 704 – 715. The book values were MUSD 665 for DSA and MUSD 671 for DSS.

Comparison of value in use estimates and broker values				
MUSD	2014	Q2 15	Q3 15	Revised Q3 15
<i>Value in Use:</i>				
Atlantic	854	669	862	715
% change from y.e. 2014		-22 %	1 %	-16 %
Stavanger	792	713	913	704
% change from y.e. 2014		-10 %	15 %	-11 %
Average broker estimates	660	588	563	563
% change from y.e. 2014		-11 %	-15 %	-15 %
<i>Spread ViU - broker est.</i>				
Atlantic	194	82	299	152
Stavanger	132	126	350	141
Total spread	326	207	649	293

Broker values are estimated free of contract, but any excess value in any of the contracts is not expected to be significant as of Q3 2015. For both rigs the material contracts were entered into in Q2 and Q3 2015, and should be close to market terms as of Q3 2015.

During 2015 numerous analysts have described the market for drilling as going from challenging to disastrous. Based on this, Finanstilsynet finds it unreasonable that the value in use of the rigs does not decrease by a larger margin from 31 December 2014 to 30 September 2015. The gap between Odfjell's VIU estimates and the average of the broker estimates is significant in all periods.

Further, Finanstilsynet refers to its Circular 16/2014 "Finanstilsynet`s review of financial statements in 2014", section 2, especially 2.4 Value in use and fair value. Here it is stated: *"In some segments of the shipping and rig sector it is normal to define individual assets (ships or rigs, alongside any contract) as CGUs. These segments often have well-functioning secondary markets for the above assets or, alternatively, prices available for new ships/rigs, which can give a good indication of what rates the market expects in the future. The segments generally feature a high degree of transparency, low entry barriers, strong competition, and small synergies between the above assets and standardized services. Against this background, continuing use of an asset is less likely to generate a significantly higher cash flow for the current owner than would be achieved by a general market participant. In such cases Finanstilsynet considers that management's forecasts in a value-in-use calculation must be reconciled with market expectations.*

*The basis and quality of external market data must be assessed in each case. However, disregarding any surplus or shortfall in value of an associated contract, the difference between value in use and fair value can in general be expected to be substantially smaller for this type of asset than for other assets. If value in use over time remains significantly higher than fair value less costs to sell, this is a clear indication that management's expectations are overly optimistic. "*

Compared to analysts' reports and implied pricing of the assets, the average estimated broker value of MUSD 563 also appears to be optimistic, see section 2.5.

## 2.4 Market capitalization

According to IAS 36.12 (d) a price/book ratio below one is an indication that an asset may be impaired. The price/book ratio for Odfjell was 0.32 as of 31 December 2014 and decreasing to 0.14 as of Q3 2015, pricing the assets at 14% of book values.

## 2.5 Analyst reports

Some financial analysts disclose estimated values per Odfjell rig including backlog, and some provide estimates of the implied value per UDW rig based on current market pricing of Odfjell. In addition to this, several analysts estimate the market value of a general 6/7 gen. UDW floater based on own assumptions. Examples of such values are given in the table below:

Summary of estimated 6.gen UDW floaters (MUSD)					
Analyst	Date	Atlantic	Stavanger	General 6th	
				UDW	Comment
[*]	26.11.2015	391	360		NPV including contracts
[*]	22.09.2015			382	Implicit retirement adjusted UDW value for Odfjell
[*]	25.11.2015	514	404		DCF based NAV including contracts
[*]	15.10.2015			380	DCF benchmark for 6th/7th UDW floater
[*]	26.05.2015	431	436		DCF including contracts

Based on the above, it is evident that several analysts value Odfjell's rigs significantly lower than the value estimated by the rig brokers. Investors and analysts have a more negative view on the future for the offshore drilling market in general, and base their valuations on significantly less positive assumptions than Odfjell.

## 2.6 Weighted average of all possible outcomes:

It is Finanstilsynet's view that even though a single assumption for the calculated cash flows is within an acceptable range, the total sum of several optimistic assumptions can result in an overall unreasonable and unsupported valuation of an asset. E.g. if the valuation is based on levels for day rates and utilization observed in peak periods, while opex and capex are based on low levels achieved after cost reductions justified by a steep market downturn, the calculated value in use will be too high.

IAS 36 requires the expected possible variation in the amount or timing for the future cash flows to be taken into consideration in the calculation of an asset's value in use, according to IAS 36.30 b). IAS 36.32 provides the opportunity to reflect this either as adjustments to the cash flows or as adjustment to the discount rate. No matter which way the items are reflected, the result should be the expected present value of future cash flows, meaning "the weighted average of all possible outcomes", see also Appendix A to IAS 36.

The Company's discount rate includes no element reflecting uncertainty related to possible variations in the amount or timing of cash flows. Hence, Odfjell's estimated cash flows must reflect an average of all possible outcomes.

In light of the macroeconomic and industry specific challenges observed in the period, it is Finanstilsynet's view that the estimated cash flows may be significantly lower than anticipated, and that Odfjell has not sufficiently accounted for this scenario in their model.

## 2.7 Conclusion

Finanstilsynet has concluded that the Deepsea Atlantic and Deepsea Stavanger rigs were impaired as of 30 September 2015.

## 3. Impairment test – Cash flow assumptions

### 3.1 Odfjell's assessments

Odfjell's basis for estimating future cash flows and other key assumptions in the model as of Q3 2015 is set out below.

### 3.1.1 Day rates

#### Short term

Odfjell had included all signed contracts including option periods for both rigs in the model as specified in the table below:

	Contract	From	To	Day rate USDk/day
Deepsea Atlantic	Statoil - fixed period	March 2016	Feb. 2019	295
	Statoil - option	March 2019	Feb. 2022	377
Deepsea Stavanger	BP	Sept. 2016	Nov 2016	545
	Wintershall - option	Feb. 2017	March 2017	306
	Wintershall - fixed	April 2017	Oct. 2018	306
	Wintershall - option	Nov. 2018	Feb. 2019	366

The day rates in the contracts included a mix of currencies to hedge opex, mostly incurred in NOK. Any reduction in opex measured in USD due to a weaker NOK would have an opposite negative effect on day rates for these contracts. DSA was assumed to be idle until start-up of the contract with Statoil, while DSS was assumed to be able to secure one contract for half of the idle period until start-up with Wintershall in 2017. This was modelled in by assuming 50% utilization and a day rate of 250 in the period Dec. 2015-Jan. 2017.

#### Normalized day rates

Odfjell recognized that the current oil market is oversupplied, and that it is difficult to predict how this will develop going forward. However, the Company stated that not a lot needs to change on the demand or supply side from current levels before the oil market starts to re-balance, with the subsequent effect of increased demand for drilling capacity and thereafter increased rig rates. Both units were operating on contracts on the Norwegian Continental Shelf (NCS), but the Company acknowledged that the potential market for both units may also extend beyond this geographical area in the future. However, it was also argued that units that receive the Norwegian AoC<sup>1</sup> historically often tend to operate on the NCS as a result, since this is a market with high entry barriers for units operating outside the NCS.

Odfjell argued that the harsh environment market should maintain a better balance than the ultra deepwater market both short term and long term, since this is more of a niche market, with fewer expected newbuilds being delivered over the next 3 years relative to the UDW market. Based on the expected order book and delivery time for newbuilds, the Company estimated that the market would be in a balance from 2018-2019, and that day rates at this point will be determined by the newbuild price for similar assets (newbuild parity). Hence, both rigs were assumed to be exposed to the normalized day rate level when the current contract backlog expires. This was assumed to be in 2019 for DSS and 2022 for DSA.

In the initial impairment model for Q3 2015 Odfjell assumed a long term day rate of USD 500k/day. This rate was estimated based on a required day rate given a newbuild price for similar assets of MUSD 600, a 10% WACC and residual value of MUSD 50.

In Odfjell's revised impairment test for Q3 2015 the Company lowered its long-term day rate forecast to USD 450k/day. The day rate level was estimated based on an adjusted newbuild parity calculation (cost MUSD 700, opex 170, 10% WACC and MUSD 50 residual value), external

<sup>1</sup> Acknowledgement of Compliance issued by the Petroleum Safety Authority of Norway

market reports and historically observed UDW day rates for the years 2000 to 2015. Odfjell also assumed that the rigs would operate 50/50% on the NCS and rest of the world in the normalized period. The normalized day rate level did not assume any currency hedge linked to the normalized opex as opposed to the periods with a contracted backlog.

### *3.1.2 Opex*

#### Short term

Odfjell applied the budgeted opex level for 2016 as basis for all periods with contracts, including option periods. Odfjell stated that opex for rigs operating on the NCS are mostly incurred in NOK, but converted to USD in the model. Total opex in periods under contract was estimated to be USD 151k/day. The budgeted opex included a fixed fee of USD 6k/day to cover overhead costs incurred on a group level. A daily stacking cost of USD 100k/day was assumed for the DSA in the idle period before startup of the Statoil contract.

For the DSS the opex assumed for the idle period before start-up with Wintershall was set to USD 135k/day, reflecting that this would include periods of both operations and stacking.

The opex assumed for rigs under contracts was reduced significantly from the Q2 impairment test to the Q3 impairment test. According to Odfjell the reduction was a result of a weaker NOK vs. USD, cost cutting and efficiency programs.

#### Normalized opex

The normalized opex level was assumed to be USD 170k/day, matching in time with the normalization of day rates. The level was derived from the normalized opex for the DSA and the DSS operating on the NCS of NOK 1 350k/day converted to USD in the model. Odfjell revised its budgeted USD/NOK exchange rate from 6.3 in the Q2 testing, to using 8.0 in the Q3 tests. The corresponding opex measured in USD was then reduced from USD 215k/day to USD 170k/day strictly as a result of this adjustment.

In its initial Q3 impairment test the Company stated that the potential market for both rigs was also outside the NCS, and that opex then would accrue in other currencies than NOK. However, Odfjell also pointed out that once a rig has obtained its AoC, history shows that they often tend to stay and operate in this area. If a rig should decide to operate in regions with local content requirements that typically would increase the opex level, Odfjell assumed that this additional cost would be compensated for through higher day rates or other favourable contract terms. This assumption was supported by experience from operating in countries like Angola and Brazil.

Later in the review process, and after being challenged by Finanstilsynet on the assumption taken on the long term USD/NOK exchange rate, Odfjell elaborated further on the basis for applying a normalized opex of USD 170k/day. Further support of the current and historical levels of opex was disclosed. As supporting evidence for the applied opex levels, Odfjell referred to actual opex levels achieved by DSA in the period 2011 -2015. Odfjell argued that it was the historical opex for DSA that best represented a normalized opex level. The average opex over the last 5 years was approximately NOK 1 177k/day for DSA. Historical opex for DSS was not disclosed since the operation in Angola for BP was not considered to be representative for standard and regular worldwide rig operations.

Odfjell argued that normalized opex of USD 170k/day was representative also when operating in areas outside the NCS. The Company referred to experience with operating the drillship Deepsea Metro I in Tanzania and Vietnam, where actual daily opex was in the USD 150-170k range. Opex

for drillships are higher than for semisubmersibles, hence this was also supporting a normalized opex of USD 170k/day in the model.

The Company modified its previous statement that opex mostly originated in NOK, to assessing that the opex on the NCS had approximately 75% of the costs originating in NOK and 25% in other currencies, mainly USD. In addition, the revised Q3 impairment test assumed that the rigs would operate 50% on the NCS and 50% outside for the remaining lifetime of the rigs after finishing the existing backlog. Hence, the resulting USD/NOK opex split was assumed to be 50% in the normalized period.

Odfjell also supplied the following calculation of opex based on budgeted 2016 figures as an example of the effect of this revised currency split:

Calculated long term Opex:		
	USD/NOK	Odfjell calculation using budget 2016
Opex in NOK		1 149 610
Originated in USD 50% (current)	8	71 851
Remaining in NOK - 50%		574 805
Remaining in USD (reverting over time)	6,7921	84 628
Total opex in USD		156 479

The USD/NOK rate assumed long term of 6.792 is based on the average exchange rate from 1991–2015. Based on the calculation Odfjell concluded that the applied normalized opex of USD 170k/day was robust and not an optimistic assumption.

Odfjell also referred to an analyst report on Seadrill from [\*] dated November 25 2015, where an opex level of USD 125k/day from 2017 was estimated, hence supporting that the normalized opex level was not too optimistic.

### 3.1.3 EBITDA margin

Odfjell calculated the operating margin (EBITDA) including cash capex for both rigs in the model to be 52% in the normalized period. Odfjell also stated that it is difficult to compare EBITDA margins with other companies, due to diverse practices among companies in how opex is calculated and to what degree SPS costs are included in operating costs. The Company disclosed historical information on EBITDA margins for Ocean Rig, Pacific Drilling and Seadrill showing an average EBITDA margin of 53% in the 2008 – 2015 period, falling to 52% if consensus forecasts for 2015-2017 were included. Odfjell's source was Bloomberg and company reports.

The Company also referred to an analysis of the EBITDA margin for Seadrill's floater segment for the period 2008-2014 which showed an average margin of 63% (excluding cash capex), comparable to the normalized EBITDA margin of 60% in Odfjell's models (adjusted for financial utilization).

Odfjell concluded that the normalized EBITDA margin applied in the model was in line with margins for other comparable offshore rig companies.

### 3.1.4 Other assumptions in the cash flow forecast

#### Special Periodic Survey (SPS):

The model assumed that the rigs have to be reclassified every fifth year. The SPS capex was estimated to be MUSD 54.8 for both rigs, based on a daily expected maintenance cost of USD 25k/day and an additional USD 5k/day to cover other capex. In addition, the rigs were assumed to have a 30 day off-hire period in connection with each SPS.



The SPS assumptions were supported by actual costs for the SPS projects on the DSA and Deepsea Bergen in 2014 and 2015.

#### Financial utilization:

Utilization was assumed to be 97.8% for all periods covered by contracts including option periods. The basis for the estimated utilization was the budget for 2016. The level assumed was also supported by actual levels achieved for rigs under contracts historically.

Odfjell assumed a normalized long-term financial utilization of 95%, a level that was considered conservative compared to actual utilization rates achieved historically, but adjusted to take into account the risk connected to shorter periods of mobilization between contracts.

#### Inflation:

Odfjell has for practical reasons not adjusted future income or expenses for inflation, and has assumed that any future cost inflation would be captured through cost escalation clauses in drilling contracts. The Company viewed this as a conservative approach for forecasting future cash flows.

### **3.2 Finanstilsynet's assessment**

IAS 36.33 requires that when measuring an asset's value in use, an entity shall base its cash flow projections on reasonable and supportable assumptions. Greater weight shall be given to external evidence.

#### *3.2.1 Day rates*

##### Short term

Odfjell uses contracted day rates in all periods covered by signed contracts including option periods. Finanstilsynet notes this for the record.

##### Normalized day rates

The remaining lifetime of the rigs after the specific contract period (normalized period) constitutes a significant period of time and the value in use calculations are very sensitive to the estimated normalized levels for periods after 2019/2022. The forecasts for this period are also associated with the highest uncertainty. It is important to make a thorough analysis and exercise sound judgement to ensure that the assumptions are supportable and reasonable. It is Finanstilsynet's view that for the assets in question it is important to benchmark the outcome of the value in use calculation towards external sources of information.

In the initial impairment model for Q3 2015 Odfjell had assumed a long-term day rate of USD 500k/day. The reasoning behind the expected increase in rates in the longer term from the current low level was the assumption that the market would balance out in line with newbuild parity in the future. Finanstilsynet does not disagree with this reasoning, but challenged the underlying assumptions for this calculation, having observed several rig analysts in Norway assumed long term rig rates below this level.

In Odfjell's revised impairment test for Q3 2015 the Company had lowered its long-term day rate assumption to USD 450k/day and agreed with the documentation presented by Finanstilsynet supporting this lower level. It is Finanstilsynet's opinion that the revised level was in the higher end of the range forecasted by analysts.

##### Inconsistency with normalized opex:

In earlier correspondence, Odfjell had pointed out that the harsh environment market was a niche market, and that it was reasonable to add a premium to the day rates for these assets compared to

traditional 6.gen. UDW floaters. In Odfjell's letter of 28 August 2015 the HE premium was estimated by the Company to be USD 25k/day. An HE premium was also included in the day rate forecast for Q3 2015, where in its reply letter Odfjell states the following: "The Company has in its previous correspondence with Finanstilsynet emphasized that the harsh environment (HE) market is a niche market and that the Company is likely to get a premium day rate for its 6G MODUs". Based on this, Finanstilsynet is of the understanding that the revised normalized day rate of USD 450k/day also includes such an HE premium. In the same letter, Odfjell argues that that the potential market for both rigs is worldwide, but also states the following "However, the history shows that MODUs, once they have received the Norwegian AoC, often tend to stay and operate as a result of the effective entry barriers". In its letter of 15 December, and repeated in the letter dated 4 March 2016, Odfjell referred to research from Swedbank and IHS Petrodata on the market balance development in the North Sea floater market as supporting documentation of a recovery in the HE market in the NCS and in UK. According to IHS Petrodata<sup>2</sup>, the market area for HE floaters is approximately 19% of total market areas. The NCS constitutes a significant part of the HE market, hence for the Company to include an HE premium in the normalized day rate, it follows that a significant part of future work would have to be assumed to be on the NCS. Finanstilsynet is of the opinion that an underlying premise for Odfjell's estimation of normalized day rates is the assumption that a significant share of future contracts would come from the NCS.

Finanstilsynet observes that the detailed description of normalized opex given in the letter from Odfjell dated 15 April 2016 assumed a higher share of contracts outside the NCS, more specifically a 50/50% split between NCS and the rest of the world. As such, it is Finanstilsynet's view that this to a degree contradicts the underlying premise for estimating normalized day rates as described above. If a larger part of future contracts is assumed to originate outside the NCS, then it would be reasonable to also assume that a portion of these expected contracts would be in competition with non-harsh UDW rigs, and that the assumed premium for a harsh environment would therefore on average be lower than the assumed USD 25k/day.

Finanstilsynet is of the opinion that the Company has not applied consistent assumptions when estimating the normalized day rates and opex. The normalized day rate should have been reduced in its revised impairment tests to take into account the likelihood that a larger share of future contracts would not be eligible for a harsh environment premium.

### 3.2.2 *Opex*

#### Short term

Odfjell used an estimated opex of USD 151k/day based on its 2016 budget for periods with firm contracts, including option periods with a few exceptions as accounted for in chapter 3.1.1. The opex level assumed under the contract periods has declined significantly during 2015. The decline was a result of cost cutting and currency effects. The budgeted opex level was supported by actual opex levels observed in the current market. Finanstilsynet notes this for the record.

#### Normalized opex

For the remaining life time of the rigs after contract expiration, Odfjell assumed that opex would revert back to a normalized level. In the impairment test performed as of 30 June 2015 Odfjell assumed a long term opex level of USD 215k/day, and this was reduced to USD 170k/day in the Q3 impairment tests. The reduction from Q2 to Q3 was explained by the Company to be a currency effect combined with cost cutting and efficiency programs. In Finanstilsynet's view it is reasonable to reduce costs in a market with significant pressure on day rates. However, it is optimistic to expect

<sup>2</sup> Investor Presentation Pacific Drilling, 15 December 2015

them to remain at this low level as activity recovers and day rates increase. Finanstilsynet asked for further documentation supporting a normalized opex of USD 170/day.

In Odfjell's reply letter of 4 March 2016 Odfjell explained that measured in NOK, the normalized opex level for DSA and DSS on the Norwegian Continental Shelf ("NCS") was approximately NOK 1 350 000/day. In the Q2 impairment test the opex was converted to USD using an exchange rate of USD/NOK 6.3, while in Q3 this was revised to 8.0, hence the reduced opex level was merely an effect of the change in assumptions regarding the exchange rate. In Finanstilsynet's view one would have to assume a corresponding reversion of this currency effect on opex if the oil market strengthens. A normalized day rate level of USD 450k/day assumes an improvement in the demand for oil rigs, which again is dependent on a rise in oil prices from current levels. Historically, there is a strong negative correlation between the oil price and the USD/NOK rate<sup>3</sup> and this effect has to be taken into consideration. If not there would be a mismatch in the underlying oil market assumptions when estimating the rig rates versus opex, resulting in profit margins that are not reasonable or probable over time.

The forecasted opex was estimated based on operations on the NCS, and Odfjell argued initially that it was most likely to continue to work in this region due to the high entry barriers for non-AOC operators, and that if the rigs were to go outside the NCS, a change in opex would be aligned with a corresponding change in day rates.

Odfjell's reply to Finanstilsynet's remark regarding the reversal of the USD/NOK exchange rate was that although opex on the NCS for the most part is payable in NOK, part of this has its origin in USD, and consequently these suppliers would adjust their NOK prices in circumstances where the USD/NOK exchange rates changed materially. The Company estimated that 25% of the opex when working on the NCS originated in USD. When operating outside the NCS the split was estimated to be 25% NOK and 75% USD. Odfjell had assumed in the revised tests that DSA and DSS would be working 50% outside the NCS for the remainder of their lives after the existing contracts expire. As a result, the normalized opex would be based on 50% costs in NOK and 50% of the cost base in USD. The Company provided a calculation of the opex level in the budget for 2016, see section 3.1.2.

Finanstilsynet has made a similar calculation using Odfjell's long term opex assumption of NOK 1 350 000 rather than the budgeted opex for 2016 to calculate a corresponding normalized opex in USD:

<b>Calculated long term Opex:</b>			
	USD/NOK	Odfjell calculation using budget 2016	Calculation using long term opex level
Opex in NOK		1 149 610	1 350 000
Originated in USD 50% (current)	8	71 851	84 375
Remaining in NOK - 50%		574 805	675 000
Remaining in USD (reverting over time)	6,7921	84 628	99 380
<b>Total opex in USD</b>		<b>156 479</b>	<b>183 755</b>

Based on Odfjell's reasoning, and the estimate for normalized opex in NOK provided by the Company, the normalized opex in USD would be USD 184k/day. This is significantly higher than the USD170k/day used in the Q3 impairment tests.

<sup>3</sup> Correlation equals -0,75 over the 1996 – 2015 period.

Odfjell also disclosed historical opex for the DSA, arguing that this was the most relevant historical opex data that also was representative of normal rig activity. The opex figures were denominated in NOK, and Finanstilsynet has used the average annual USD/NOK exchange rate to obtain the approximate figures in USD.

Historical opex DSA						
	2011	2012	2013	2014	2015	Average 11-15
Opex in NOK k/day	1 199	1 193	1 153	1 195	1 174	1 183
Average USDNOK	5,61	5,82	5,88	6,30	8,07	
Opex in USD k/day	214	205	196	190	145	
Fixed fee (in USD)	6	6	6	6	6	
Comparable opex	220	211	202	196	151	196

Source: Odfjell, Norges Bank

Finanstilsynet has added the fixed fee element that should cover general overhead costs and management of the rigs to obtain comparable figures to the USD 170k/day used in the model. The calculation shows that the average opex in USD terms for the period was approx. USD 196k/day, significantly higher than what was assumed in the Q3 impairment tests.

Odfjell also referred to a market report from [\*] estimating opex for Seadrill to be USD 125k/day in 2017. Finanstilsynet notes that Odfjell has not included SG&A costs also specified in the report, to make the figure comparable with Odfjell's own SG&A costs in the model. Assuming a level equal to what was observable in Q3 2015 of USD 26k/day the total comparable opex would be USD 151k/day in 2017. The level is in line with what Odfjell has used in the model for the same period, and as such external evidence for the level in 2017. However, Finanstilsynet would, as already stated, assume escalating costs as the market normalizes and does not consider the analysis to be supportive of, or to suggest long term opex at these levels.

It is Finanstilsynet's opinion that the normalized opex level of USD 170k/day applied in the revised impairment model is too low. It is not calculated consistently based on the Company's own quoted level of normalized opex denominated in NOK, and Finanstilsynet cannot see that historical opex data support a normalized opex at these levels.

### 3.2.3 EBITDA margin

Finanstilsynet agrees with Odfjell that it is difficult to compare EBITDA margins between different rig companies. Using Thompson Reuters as source, Finanstilsynet found that the average EBITDA margin for the period 2006–2018 (using consensus estimates for 2015-2018) for the same 3 companies that Odfjell looked at was 48%, demonstrating that comparing these margins is of little value. Finanstilsynet observes that Odfjell has not specifically presented or commented on historical EBITDA margin levels for the DSA and the DSS to support the long term EBITDA margin.

Odfjell had a calculation of historical EBITDA margins for the MODU segment in the first version of its Q3 impairment model. This showed an average historical EBITDA margin of 45% (excluding SPS capex) from 2012-2015. The corresponding normalized margin in the revised model was assumed to be 64%, which looks to be very optimistic compared to historically achieved levels.

As already stated, it is difficult to compare EBITDA margins across companies in the industry, and although Odfjell's refers to the historical EBITDA margin of Seadrill's floater segment being 63%, it is highly uncertain that this can be directly comparable to the EBITDA margin in Odfjell's impairment model, or that Odfjell ever would be able to generate such margins. There are several factors that could distort the comparison, e.g. operational differences between the companies, different accounting principles and different policy in defining items as capex vs. operating costs.

The average historical EBITDA depends on the periods included in the calculation. Excluding the 2014 margin of 74% reduces the average to approximately 60%. Including the margin for 2015, of only 31%, gives an average EBITDA margin of 58%.

Finanstilsynet is of the opinion that the forecasted normalized EBITDA levels in the revised impairment model cannot be supported by current or historically achieved margins.

### 3.2.4 Other assumptions in the cash flow model

SPS costs are based on and supported by actual costs incurred historically. Finanstilsynet notes this for the record.

Short term financial utilization is supported by previously achieved levels. Analyst reports supporting a long term average financial utilization of 95% can be found. Finanstilsynet notes this for the record.

### 3.2.5 Conclusion

In Finanstilsynet's opinion the applied normalized level for day rates is not estimated consistently with the basis for estimating long term opex. The HE premium should be reduced. Normalized opex is not estimated consistently with regard to a long-term reversion of the currently beneficial USD/NOK exchange rate. The opex level is not supported by historical levels or calculated correctly in USD terms given the stated normalized opex of NOK 1 350 000, and the Company's stated mix of exposure to NOK and USD respectively. Historical EBITDA margins for the MODU segment indicates significantly lower margins. Finanstilsynet concludes that key assumptions in the revised impairment tests are not based on reasonable and supportable assumptions as required by IAS 36.

## 4. Impairment test – discount rate

### 4.1 Introduction

In its letter to Odfjell dated 1 July 2015, Finanstilsynet requested a description of how the discount rate was calculated, including the assumptions underlying the calculations and documentation of these. Odfjell used a discount rate (WACC) of 6.4% when performing the value in use calculations for the 6<sup>th</sup> generation drilling rigs as of 30 September 2015. The discount rate is a USD rate of return and matched the USD denominated cash flows.

WACC calculations:			
	2014	Q3 15	Revised Q3 15
Yield US treasury, 30 yrs	2,8 %	2,9 %	2,9 %
Market Risk Premium (MRP)	4 %	4 %	5 %
Equity Beta	0,59	0,44	0,67
Asset Beta	1,47	1,09	1,68
Return on equity	8,6 %	7,2 %	11,2 %
Yield US treasury, 30 yrs	2,8 %	2,9 %	2,9 %
Debt Risk Premium (DRP)	3 %	3 %	3,3 %
Return on debt	5,8 %	5,9 %	6,2 %
Tax	0 %	0 %	0 %
We	40 %	40 %	40 %
Wd	60 %	60 %	60 %
WACC	6,9 %	6,4 %	8,2 %

Initially, Finanstilsynet disagreed with Odfjell on the assumptions used for beta, Market Risk Premium (MRP) and Debt Risk Premium (DRP). In the Advance notification of decision to Odfjell

dated 10 February 2015, Finanstilsynet commented on these issues and the need to use market participant assumptions in the discount rate.

Below are Odfjell and Finanstilsynet's assessments of these assumptions presented in more detail. It was Finanstilsynet's opinion that the discount rate used was too low, and that it did not reflect current market assessment of the time value of money, and the risks specific to the asset for which future cash flow estimates have not been adjusted for according to IAS 36. Finanstilsynet emphasized that management have to apply judgement on the overall results. Finanstilsynet found it unlikely that a market participant would apply a discount rate of 6.4% when making investment decisions in this industry at the time of the impairment test.

Odfjell re-assessed the discount rate used in the impairment tests as a consequence of Finanstilsynet's written communication to the Company, and applied a discount rate of 8.2% in the revised Q3 impairment test.

#### **4.2 Market participant assumptions**

According to IAS 36.55, the discount rate shall reflect current market expectations of the time value of money and the risks specific to the asset for which future cash flow estimates have not been adjusted. Further, a rate that reflects current market assessment of the time value of money and the risks specific to the asset is the return that investors would require if they were to choose an investment that would generate cash flows of amount, timing and risk profile equivalent to those the entity expects to derive from the asset (IAS 36.56).

It is Finanstilsynet's view that the discount rate used for value in use impairment testing has to be based on market participants' assumptions. One market participant's assessment of risk may differ from other market participants. It is Finanstilsynet's opinion that the inputs used in the calculations must represent the market participants' compiled assessment of risk. A single participant's view alone does not reflect the market's assessment according to IAS 36. Further, it is Finanstilsynet's opinion that the accumulated view of the market participants is represented by a mid-estimate of observed relevant external evidence. Finanstilsynet agrees that a range of estimates will be acceptable and representing the market assessment of risk. However, it is Finanstilsynet's view that this range of values is close to the observed mid-estimates and does not include the full observed range of values.

#### **4.3 Market risk premium**

##### *4.3.1 Facts and Odfjell's assessment*

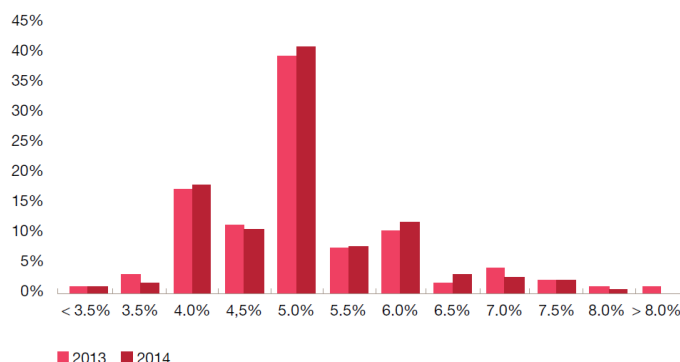
The MRP represents the return in excess of the risk free interest rate required by an investor for making equity investments. Odfjell has over time (years) applied a 4% MRP for the purpose of performing impairment tests, reasoned by the fact that the Company would like to apply a level of consistency in its impairments tests over time. Odfjell also stated that it was not aware of any research concluding that the MRP has changed or that 4% was not in line with present market assessments.

The Company supported the estimated MRP by referring to a survey performed by PwC in Norway- "Risk premium in the Norwegian market" published in December 2014<sup>4</sup>. In this survey 17% of the respondents would have used 4% and below. The responses in the survey ranged from below 3.5% to 8%.

---

<sup>4</sup> Survey based on the responses from 142 of the 1 082 members of The Norwegian Society of Financial Analysts

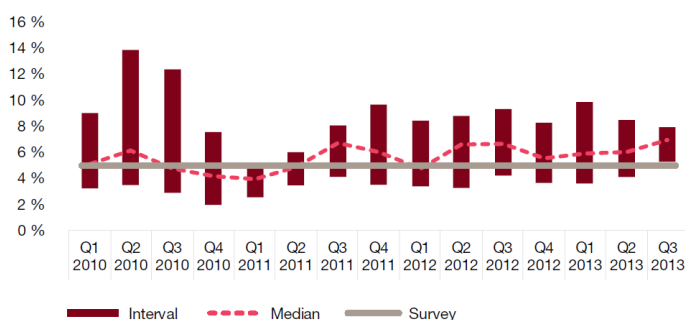
Figure 4.2: Market risk premium 2013 and 2014



Source: PwC "Risk premium in the Norwegian market"

The survey also presented the implied MRP for the OBX index on the Oslo Stock Exchange from 2010 to 2014. The low end of the implied MRP range was lower than 4% for almost all quarters, with four quarters where the low end of the observed range was higher than 4%. Odfjell argued that both the survey and the analysis show that 4% was within the observed range, and that they supported the applied MRP of 4%.

Figure 5.1: Median implied market risk premium for the OBX list Q1 2010 to Q3 2013



Source: PwC "Risk premium in the Norwegian market"

Odfjell was of the opinion that as long as the applied estimate is within an observed range, it is in line with IAS 36. The Company argued that the levels referred to from research are mid-estimates, and that using mid-estimates is not an absolute requirement for MRPs.

The Company changed the applied MRP to 5% for the revised Q3 impairment test.

#### 4.3.2 Finanstilsynet's assessment

Sizing the market risk premium is a much debated issue in finance, and the research material on the topic is extensive. Generally, there are three fundamental approaches to estimate future MRP used in the CAPM methodology:

1. Estimating the future risk premium by measuring and extrapolating historical market returns. The SBBI Yearbook series by Ibbotson (now published under Duff&Phelps Valuation Handbook) is generally considered to be the authoritative source of historical US market data. Depending on the time period used as basis, the MRP indicated is in the 5-7% range.
2. Estimating MRP through surveying investors or managers to obtain a sense of expectation for MRP. Since it is the expected MRP that should be used, a logical way to estimate this is by asking practitioners what they require as expected returns. One of the most extensive surveys

undertaken annually is that of Fernandéz et.al<sup>5</sup>. In the survey for 2014 the average MRP for US was 5.4%, while it was 5.5% in 2015. The average result for the last 5 years is 5.5%.

3. Estimating implied premiums from pricing models, e.g. DCF, or option models. When investors price assets, the implicit expected MRP can be derived from the pricing formulas. The most used source of implicitly derived MRPs for the US market is the implied premiums of the S&P500 calculated monthly by Damodaran<sup>6</sup>. As of year-end 2014 the implied MRP was estimated to be 5.78%, increasing to 5.81% end of second quarter 2015 and to 6.63% at the end of third quarter 2015.

The surveys and research referred to above, supports using a MRP in the range of 5-7% as of third quarter 2015:

Research	Estimated MRP
PwC Norway (survey Norway)	5%
Duff&Phelps (historical market returns)	5-7% range
Fernandéz et.al (survey expected MRP)	US 5.5%
Damodaran (implied MRP)	6.6%

Surveys and research that support using a 4% MRP also exists, but many of these pre-date the financial crisis and the ensuing low interest rate environment. Based on recent research, Finanstilsynet is of the opinion that many practitioners and valuation experts have adjusted the MRP upwards compared to pre-crisis levels due to the historically low risk free interest rates observed over the last 5-6 years. Alternatively some practitioners prefer to keep the MRP unchanged, but use a higher risk free rate based on a calculated historical average risk free rate.

The surveys and research referred to above are updated annually (some quarterly), and should reflect current market assessments. These are also probably the most used sources of MRP for practitioners and valuation experts, and it is Finanstilsynet's opinion that the input from these sources should form a representative basis for estimating the MRP assumption for market participants.

Local offices of the big 4 accounting firms also publish their view on current MRP. Deloitte in Norway estimated the MRP to be 6% for Norway at year-end 2014. KPMG Netherlands estimated the MRP to be 6% for the S&P500 as of year-end 2014. Both KPMG and Deloitte calculated the expected MRP based on the implied equity risk premium method.

### Conclusion

Finanstilsynet was of the opinion that using a MRP of 4% when calculating a discount rate used for impairment testing of the Odfjell rigs as of 30 September 2015 was too low and not in line with the current market assessment as required by IAS 36.55. Further, it is Finanstilsynet's view that the MRP should be reassessed at every reporting date as this is an estimate that should reflect current conditions and that consistency over time relates to the methodology applied and not the assumption made.

<sup>5</sup> Fernandéz, Linares, Acin "Market Risk Premium used in 88 countries in 2014: a survey with 8,228 answers" (June 2014)

Fernandéz, Ortiz, Acin " Discount rate (Risk-free rates and Market Risk Premium) used for 41 countries in 2015: a survey" (April 2015)

<sup>6</sup> <http://pages.stern.nyu.edu/~adamodar/>



Finanstilsynet observes that Odfjell has changed the assumption regarding the MRP to 5% in its revised impairment testing for Q3 2015. It is Finanstilsynet's view that this is in the lowest end of an acceptable range when considered separately, and forms part of the basis for an overall conclusion that the discount rate used is too low.

#### 4.4 Beta

##### 4.4.1 Facts and Odfjell's assessment

Initially Odfjell calculated a beta based on a peer group of 3 companies that most closely resembled Odfjell in terms of having a 'young fleet of modern assets'. The peer group had not changed since 2013, and consisted of Ocean Rig, Pacific Drilling and Seadrill.

As of 30 September 2015, the asset beta calculated based on the Odfjell peer group was 0.44, as shown below.

Company	Country	Eq. Beta	# of obs.	5 year D / E	Ass. beta
OCEAN RIG UDW INC	CY	1,8	48,0	3,8	0,4
SEADRILL LTD	BM	1,0	60,0	1,5	0,4
PACIFIC DRILLING SA	US	2,3	46,0	3,2	0,5
<b>Average ORIG, PACD, SDRL</b>					<b>0,44</b>

Odfjell stated that including additional, less comparable companies to the peer group would not improve the precision of the estimated beta. The Company also pointed to the fact that deriving a beta is not an exact science, and it is necessary to use judgement. The unlevered beta of 0.44 was recalculated to an equity beta of 1.09, assuming a debt/equity ratio of 150% (40% equity and 60% debt).

In the revised impairment tests Odfjell had taken Finanstilsynet's view of peer group selection presented in the Advance notification of decision into consideration, and extended the peer group for the calculation of beta. The beta was then calculated based on the 11 companies below:

Company	Ass. beta
ATWOOD OCEANICS INC	1,0
DIAMOND OFFSHORE DRILLING	1,0
ENSCO PLC-CL A	0,9
FRED OLSEN ENERGY ASA	0,4
NOBLE CORP PLC	0,8
OCEAN RIG UDW INC	0,4
ROWAN COMPANIES PLC-A	0,8
SEADRILL LTD	0,4
SONGA OFFSHORE	0,3
TRANSOCEAN LTD	0,9
PACIFIC DRILLING SA	0,5
<b>Average</b>	<b>0,67</b>

Odfjell was of the opinion that the peer group of Seadrill, Pacific Drilling and Ocean Rig would still be the most natural peers for comparison. Compared to Finanstilsynet's suggested peer group from the Advance notification of decision Odfjell did not agree that Songa Offshore, Fred. Olsen Energy and Rowan should be excluded from a peer group. Odfjell was of the opinion that Songa had comparable liquidity in its stock as Odfjell, and should therefore be included. Further, Odfjell

included Fred. Olsen and Rowan as it did not find any good reasons for excluding them from an extended peer group.

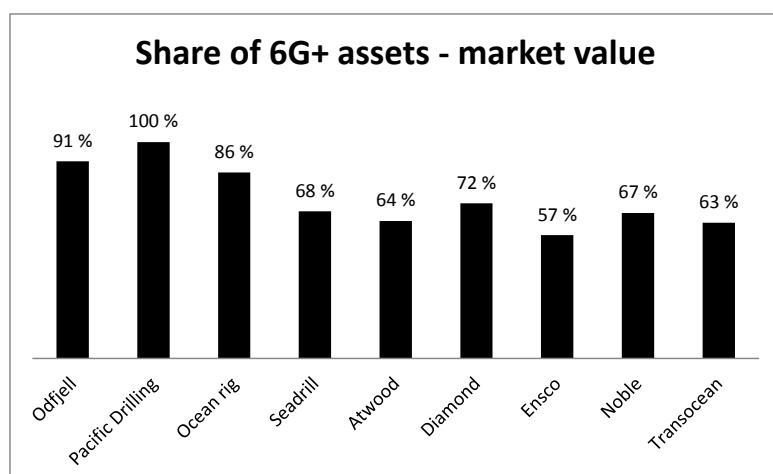
#### 4.4.2 *Finanstilsynet's assessment*

The applied beta has to be in line with the current market assessment, and estimated based on information that the average market participant would use. It is also important to do an overall reasonability check of the final result.

#### Selection of peer group

When deciding on a relevant peer group of companies to use when calculating the beta, it is necessary to make a trade-off between the level of similarity with the target company, and the number of companies in the peer group necessary to get statistically sound results.

According to Odfjell, a "young fleet of modern assets" is the basis for selecting the relevant peer group. Finanstilsynet has compared the estimated percentage of 6<sup>th</sup> generation drilling rigs for a wider group of companies based on market values of the assets. All companies in this extended peer group have more than 50% of their asset value related to 6th generation drilling rigs as shown in the graph below.



Source: Morgan Stanley, Nordea, Odfjell

Finanstilsynet calculated a beta using this extended peer group as of Q3 2015<sup>7</sup>. Assuming that investors are global in nature, it is common practice to use a value weighted, well diversified market portfolio, like the S&P500, Morgan Stanley World Index or Stoxx 600, when estimating betas. Finanstilsynet used the MSCI World Index in the calculation.

<sup>7</sup> Additional comparable companies have been considered, but were excluded due to low R<sup>2</sup> and limited historical data.

Estimation of unlevered beta							
Currency:	USD	Date:	30.09.2015				
Benchmark	MSCI World Index			Levered beta		Unlevered beta	
		Market value	Net debt/	5 yr monthly		5 yr monthly	
Company name	Country	equity	equity	Adjusted	Raw	Adjusted	Raw
Seadrill Ltd	Bermuda	2 874	128 %	1,26	1,12	0,55	0,49
Pacific Drilling SA	Luxembourg	270	332 %	2,18	2,24	0,51	0,52
Ocean Rig UDW Inc	Cyprus	343	395 %	1,76	1,78	0,35	0,36
Atwood Oceanics Inc	United States	958	49 %	1,58	1,60	1,06	1,08
Diamond Offshore Drilling Inc	United States	2 373	24 %	1,35	1,27	1,09	1,02
EnSCO PLC	United Kingdom	3 318	50 %	1,43	1,36	0,96	0,91
Noble Corporation PLC	United Kingdom	2 640	82 %	1,52	1,48	0,83	0,81
Transocean Ltd	Switzerland	4 800	67 %	1,71	1,76	1,02	1,06
Maximum			395,3 %	2,18	2,24	1,09	1,08
Average			140,8 %	1,60	1,58	<b>0,80</b>	<b>0,78</b>
Median			74,8 %	1,55	1,54	<b>0,90</b>	<b>0,86</b>
Minimum			23,7 %	1,26	1,12	0,35	0,36

Source: Thompson Reuters, Finanstilsynet

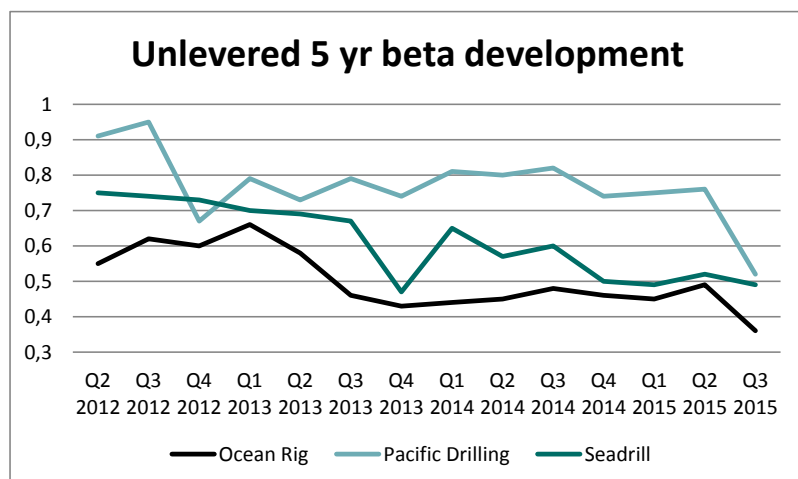
Songa Offshore was not included due to low liquidity of the stock, and Fred. Olsen and Rowan were excluded after a thorough analysis of asset composition<sup>8</sup>.

Finanstilsynet estimated in the Advance notification of decision dated 2 February 2016 the average unlevered beta for the extended peer group to be in the 0.8 – 0.9 range, significantly higher than the 0.44 used by Odfjell. The estimated unlevered betas had a wide range from 0.36 to 1.08, and the standard deviations of the different betas were relatively high. Finanstilsynet is of the opinion that adding companies in the same industry, with similar operating risks to the peer group, will provide a statistically more reliable estimate of beta. As long as estimation errors across companies are uncorrelated, overestimates and underestimates of individual betas will tend to cancel each other. In Finanstilsynet's view, companies that are comparable and would increase the quality of the beta estimation should be included in the peer group when estimating an industry beta.

#### Use of historical data

Analyzing the beta estimates for the three companies Odfjell had selected as peer group, the quality of the calculated historical betas used could be challenged. The industry has experienced large changes over the past year, with one obvious change being the increase in gearing driven by falling market capitalizations for all companies. Possible lower liquidity in the stocks and the change in the D/E ratio may have distorted the calculation of the betas. Finanstilsynet has estimated the rolling 5 year beta from 2012, and for all three companies the beta calculated as of 30 September 2015 was the lowest value observed in the period.

<sup>8</sup> Both companies have less than 50% of modern assets (6G+) measured in terms of market value, so although still having comparable operating risks they are excluded. The resulting change in estimated unlevered beta from excluding the two companies from the extended peer group was insignificant.



Source: Thompson Reuters

The betas for both Pacific Drilling and Seadrill have declined significantly over the last year. Looking further back, both companies display considerably higher betas. Given the recent development in betas for the three companies, Finanstilsynet questions Odfjell's uncritical use of historically derived betas.

#### Reasonability check

Finanstilsynet recognize that deriving a beta is not an exact science, and that judgement is required. It is important to do an overall reasonability check of the results when estimating betas based on historical data. A reasonability check can be made by estimating fundamental betas<sup>9</sup>.

Beta represents a stock's incremental risk to a diversified investor, where risk is defined by how much the stock co-varies with the market portfolio. The beta of a company is determined by 3 variables:

- *Cyclicalty of revenues*; since beta measures the risk of a company relative to the market index, the more sensitive a business is to market conditions, the higher its beta. The rig industry is considered to be quite cyclical, highly dependent on oil price and the corresponding E&P spending by oil companies. It is reasonable to assume that the rig industry is at least as cyclical as the market as a whole, and probably even more so. Finanstilsynet finds no reason to believe that the cyclical exposure is significantly different between the companies in the extended peer group, and so it would be relevant to expand the peer group with these companies.
- *Operational leverage*; the degree of operating leverage is usually defined as the ratio of fixed costs to total costs for a company. A higher degree of fixed costs will lead to higher variability in operating income, magnifying the systematic risk of free cash flows from the company. A company with a higher operational leverage should have a higher equity beta. One method of estimating the degree of operating leverage is to analyse how sensitive operating profit is to a change in sales. For the companies in the extended peer group, the median operating leverage ratio for the 2011 – 2015 period is 1.8. This indicates a high degree of operating leverage in the industry, which is reasonable as the rig industry is highly asset intensive. Most of the companies have a long term ratio close to the median, supporting that the companies are comparable.

<sup>9</sup> Several text books describe this method e.g. "Damodaran on Valuation, 2. Edition. 2006, Aswath Damodaran" and "Verdivurderinger, 2011 – Kaldestad/Møller"

Operating leverage	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- E 2016	2016- E 2017	2017- E 2018	Median 2011 - 2015	Median 2011-2018E
Odfjell				2,6	9,6	30,6	12,6	8,6	6,1	9,6
Seadrill Ltd	2,1	0,3	1,0	1,9	1,8	2,1	11,2	-2,3	1,8	1,9
Pacific Drilling SA		-1,6	2,0	1,7	8,2	2,6	13,2	23,2	1,8	2,6
Ocean Rig UDW Inc		-0,7	3,7	1,9	-0,7	1,8	3,1	15,9	0,6	1,9
Atwood Oceanics Inc		-0,1	1,0	0,2	0,9	1,4	3,0	-5,0	0,6	0,9
Diamond Offshore Drilling Inc	324,9	2,4	3,6	6,6	1,4	2,2	2,1	2,2	3,6	2,3
Ensco PLC			1,2	-0,8	2,0	2,1	4,2	2,9	1,2	2,1
Noble Corporation PLC	12,3	2,0	2,0	-0,5	2,8	2,3	3,5	3,6	2,0	2,6
Transocean Ltd		10,5	118,9	-0,9	-3,1	1,1	1,9	6,4	4,8	1,9
Median									1,8	2,1

Source: Reuters

- *Financial leverage*; this effect is adjusted for by the de-leveraging of peer group equity betas and re-leveraging according to the capital structure used in Odfjell's WACC calculation. The capital structure used by Odfjell of 60% debt and 40% equity is in line with the extended peer group's average capital structure.

It is Finanstilsynet's view that the additional companies in the extended peer group have similar characteristics with regards to cyclicity and operational gearing as the 3 companies initially selected by Odfjell. It would be reasonable to assume that a market participant would have included some or all of these additional companies when determining a peer group.

It is also necessary to analyze if the results makes sense on an overall level. Since the rig industry is considered to be at least as cyclical as the market portfolio, and is characterized by a high level of operational leverage, it is reasonable to expect the unlevered beta for assets in the industry to be higher than the unlevered market portfolio beta. The unlevered beta for the market portfolio is estimated by several sources to be in the 0.7 – 0.85 range<sup>10</sup>.

A beta calculated based on historical data and using an extended peer group indicated an asset beta for a rig company to be in the 0.8 – 0.9 range. The estimated range could be further supported by a fundamental analysis of beta.

### Conclusion

Finanstilsynet was of the opinion that there were a number of additional relevant and similar companies that a market participant would have included when calculating a beta for the rig industry. Five additional companies were identified, that had similar characteristics with regards to the primary drivers of beta, being cyclicity and operational gearing. Adding these companies increased the estimated unlevered beta to be in the 0.8 – 0.9 range and improved the statistical precision and quality of the estimate. Analysis of historical rolling 5 year betas for the 3 companies selected by Odfjell showed that two of the betas had declined significantly in 2015, bringing the quality of these historically betas into question. It is Finanstilsynet's opinion that when calculating beta based on historical data, unreasonable low betas must be adjusted for. A fundamental approach to estimating betas indicated that a reasonable estimated beta for the rig industry should be higher than the unlevered beta for the market portfolio of 0.7 – 0.85 and most likely significantly higher.

<sup>10</sup> Damodaran estimates the unlevered beta for the S&P500 to be 0,69 as of year-end 2015

[http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/Betas.html](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html)

Kaldestad/Møller estimates the unlevered beta of a broad world index to be approximately 0,75 – Verdivureringer, 2011 s. 115.

Thore Johnsen og Ole Gjølberg estimates the unlevered beta for the Oslo stock Exchange to be 0,85 in the 2002-2006 period, <http://www2.enova.no/minas27/publicationdetails.aspx?publicationID=282>

Based on the considerations above, Finanstilsynet is of the opinion that the asset beta of 0.67 assumed by Odfjell in the revised impairment test for Q3 was too low, and not in line with the current market assessment of risk as required by IAS 36.55.

#### **4.5 Debt risk premium**

##### *Facts and Odfjell's assessment*

The debt risk premium used in the calculations was 3% as of 30 September 2015. According to Odfjell, the rigs debt facilities have a margin of approximately 3% and these debt facility agreements were entered into in late 2011/beginning 2012. All the facilities are guaranteed by Odfjell Drilling Ltd. Odfjell assumed that the guarantee has resulted in lower margins than otherwise would be achieved. Further, Odfjell argued that the debt margin in general has fallen in this period. On the other hand, Odfjell assumed that the uncertainty with oil service has increased in the same period, which would also be reflected in the margins if the Group were to refinance today. Odfjell indicated that the current debt risk premium achievable today might be even lower than 3%.

It is Odfjell's understanding that it is quite common to apply the company's DRP as the best estimate for DRP, even if it is a couple of years old.

Odfjell has increased the DRP in the recalculated impairment test for Q3 2015 from 3% to 3.32% and it is the Company's view that this reflects the current bank lending terms. Finanstilsynet notes this for the record.

#### **5. Enforcement decision**

Finanstilsynet has concluded that the rigs Deepsea Atlantic and Deepsea Stavanger were impaired as of 30 September 2015. The impairments are considered to be material.

Odfjell is ordered to recalculate the value in use for both rigs. Finanstilsynet expects that the amended impairment tests include assumptions that are more in line with external value estimates.

*Pursuant to the Securities Trading Act section 15-1 subsection (3) and Regulations to the Securities Trading Act of 29 June 2007 no. 876 section 13-8, Odfjell Drilling Ltd is ordered to:*

- 1) Recalculate the value in use for the Deepsea Atlantic and the Deepsea Stavanger as of 30 September 2015 in accordance with IAS 36, taking into account Finanstilsynet's comments regarding cash flow assumptions and the discount rate.*
- 2) Take into account Finanstilsynet's comments regarding cash flow assumptions and the discount rate in future financial reporting.*
- 3) Correct and disclose the identified errors in accordance with the provisions of IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, par. 41-49.*

An updated presentation of the Company's Consolidated Income Statement and Consolidated Statement of Financial Position, including disclosures as required by IAS 36 and IAS 1.125-129, should be disclosed to the market in a stock exchange notification. The presentation should include the periods for Q3 2015 and subsequent financial statements.

#### **6. Closing**

The above matters may be subject to legal provisions regarding disclosure of inside information in accordance with the Securities Trading Act section 5-2 subsection (1) and section 3-2.

Finanstilsynet expects the Company to consider its requirement to disclose inside information on a continuous basis.

Finanstilsynet's decisions may be appealed to the Ministry of Finance under section 28 of the Public Administration Act. The appeal should be directed to Finanstilsynet. The time limit for an appeal is three weeks from the date this letter is received. The Company has the right to access the documents of the case under the provisions of sections 18 and 19 of the Public Administration Act.

Finanstilsynet has sent a copy of this letter to the Company's appointed auditor and Oslo Stock Exchange.

On behalf of Finanstilsynet

Anne Merethe Bellamy  
Deputy Director General

Christian Falkenberg Kjøde  
Head of Section

*This document is electronically approved, and does not need a signature.*