

CREDIT OPINION

8 May 2023

New Issue



Send Your Feedback

RATINGS

Odfjell Drilling Ltd.

Domicile	Bermuda
Long Term Rating	B2
Type	LT Corporate Family Ratings
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Maria Chiara +44.20.7772.5481
Caviggioli
Analyst
mariachiara.caviggioli@moodys.com

Sven Reinke +44.20.7772.1057
Associate Managing Director
sven.reinke@moodys.com

CLIENT SERVICES

Americas 1-212-553-1653
Asia Pacific 852-3551-3077
Japan 81-3-5408-4100
EMEA 44-20-7772-5454

Odfjell Drilling Ltd.

Niche offshore driller with quality assets and strong metrics amidst improving industry fundamentals

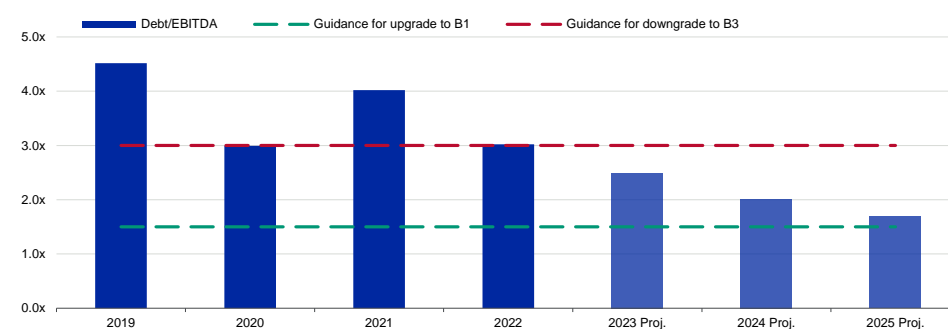
Summary

The B2 corporate family rating (CFR) assigned to Odfjell Drilling Ltd (ODL) reflects the company's (i) well established position as a provider of offshore drilling services with a long operational track record; (ii) high-quality and young rig fleet with significant collateral value and competitive advantages; (iii) exposure to improving deep-water drilling market conditions; (iv) firm order backlog of \$1.7 billion as of May 2023, which provides good medium-term revenue and cash flow visibility (v) pro-forma gross leverage (defined as debt to EBITDA, Moody's-adjusted) of 3.0x, which is modest but expected to decline over time through a combination of earnings growth and debt amortisation. We expect ODL will continue to adhere to conservative financial policies, including holding net leverage below 2.5x as well as prudently managing shareholder distributions and growth spending.

Concurrently, ODL's CFR is constrained by the company's (i) reliance on volatile upstream oil and gas spending, potentially conducive to fleet re-contracting risk; (ii) small fleet of eight units; (iii) high geographic and customer concentration, given that the owned fleet is currently entirely contracted to support Norwegian operations of two customers, [Equinor ASA](#) (Aa2 stable) and [Aker BP ASA](#) (Baa2 stable) and (iv) some uncertainty with regards to future dividend policy, yet to be established.

Exhibit 1

We expect ODL's leverage to remain well within our rating guidance for the B2 rating Evolution of historic and projected gross debt/EBITDA, Moody's-adjusted



Datapoints from 2021 onwards exclude EBITDA contribution from businesses disposed in early 2022.

Source: Moody's Financial Metrics™, Moody's Investors Service

Credit strengths

- » Established presence in Norway, enabled by long-standing relationships with Equinor and Aker BP
- » High-quality and relatively young fleet with harsh environment, as well as deep and ultra-deep water capabilities
- » Track record of positive earnings and cashflow generation through recent industry downturns
- » History of conservative financial policies
- » Strong financial metrics and good liquidity on a pro-forma basis

Credit challenges

- » Exposure to inherently volatile oil and gas upstream spending
- » Exclusive focus on niche segment of offshore drilling activities
- » Small fleet, adding to high customer and geographic concentration
- » Re-contracting risk on certain rigs in the medium term
- » Some uncertainty with regards to future financial policy

Rating outlook

The stable outlook reflects our expectation that ODL will maintain strong credit metrics by successfully re-contracting its rigs, generating sufficient free cash flow to satisfy debt servicing requirements. The stable outlook also reflects our expectation of ODL maintaining a prudent approach towards capital allocation, including shareholder remuneration and growth spending.

Factors that could lead to an upgrade

ODL's ratings could be upgraded if the company:

- » Achieves larger scale as well as longer duration of contracts in a healthy industry environment
- » Sustains a track record of strong profitability at least in line with current levels and
- » Maintains a strong balance sheet with leverage trending towards 1.5x, sustained strong positive FCF generation and prudent shareholder distributions

Factors that could lead to a downgrade

Conversely, ODL's ratings would be downgraded if the company's:

- » Earnings and backlog deteriorate materially, leading to gross leverage sustainedly in excess of 3.0x and EBITDA / Interest expense falls below 3x
- » FCF generation turns negative, as a result of weaker operating performance or more aggressive than currently anticipated financial policies or
- » Liquidity position weakens

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2

Odfjell Drilling Ltd.

USD million	2019	2020	2021	2022	2023 Proj.	2024 Proj.	2025E
EBITDA	319.8	421.9	270.7	301.6	313.8	318.5	326.5
Assets	2,678.5	2,640.5	2,515.2	2,219.3	2,133.9	2,053.8	1,944.0
EBIT Margin	16.4%	23.4%	20.9%	20.0%	17.4%	17.6%	18.4%
EBITDA / Interest	3.6x	6.3x	5.4x	6.1x	4.4x	4.9x	5.8x
Debt / EBITDA	4.5x	3.0x	4.0x	3.0x	2.5x	2.0x	1.7x

All figures and ratios are calculated using Moody's estimates and standard adjustments. Projections (Proj.) are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™; Moody's Investors Service estimates

Profile

[Odfjell Drilling Ltd.](#) provides offshore contract drilling services to the oil and gas industry. The company operates a modern fleet of eight 6th-generation semi-submersibles (four owned, four under management) with harsh environment capabilities and an average age of 8.5 years. In 2022, ODL generated revenue of \$650 million and Moody's-adjusted EBITDA of \$302 million.

Founded in 1973, ODL is 60.37% owned by Odfjell Partners Holding LTD (ultimately owned by Helene Odfjell) while the rest is free float listed on the Oslo Stock Exchange. As of 8 May 2023, ODL had a market capitalisation of \$545 million.

Detailed credit consideration

Established position in Norway; small scale mitigated by good customer base and resilient utilisation rates

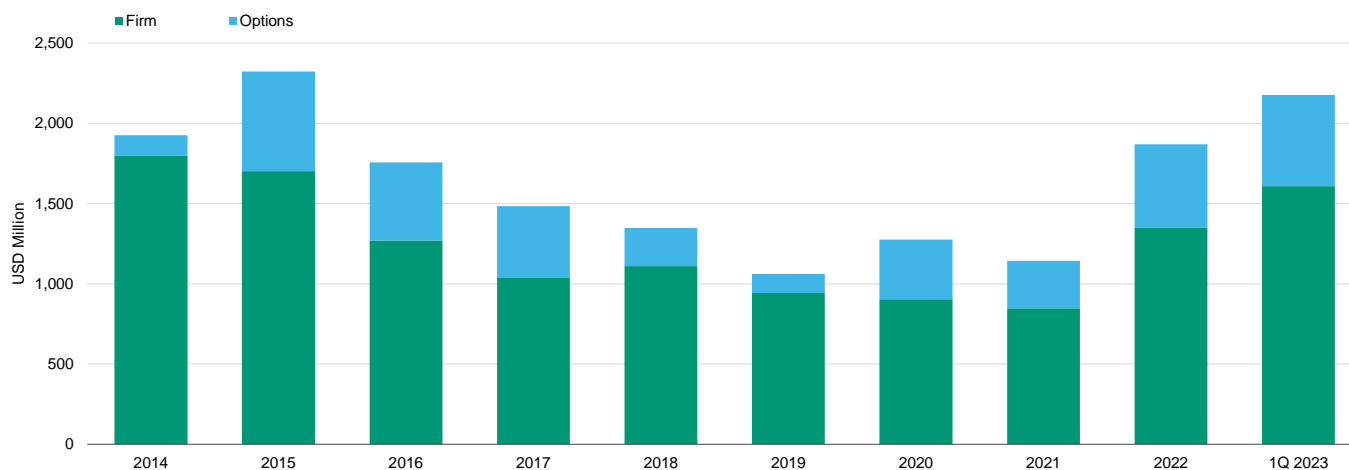
ODL's fleet is evenly split between four owned units and four rigs that the company manages on behalf of third parties. All rigs are modern 6th generation semi-submersibles with harsh environment capabilities; while they are typically deployed in deepwater environment, they are technologically advanced to cater for select work in both shallow and ultra-deep water depths. Additionally, ODL's fleet meets stringent regulatory and technical requirements needed to operate on the Norwegian Continental Shelf (NCS), which create barriers to entry and favoured the establishment of ODL's strong local operational footprint over time.

ODL's fleet is smaller and less diversified by rig type than that of similarly rated drillers [Noble Finance II LLC](#) (B1 stable), [Nabors Industries Ltd.](#) (B2 positive) and [Valaris Limited](#) (B2 positive); as a result, the company's backlog exhibits a high degree of customer and geographic concentration going forward. That said, we take into consideration some mitigating factors: (i) the deepwater drilling market consists of a few dozen large, generally very well capitalized upstream customers while the number of rig providers is considerably smaller. Though ODL and most of its major competitors actively seek business from all operators, concentration among a few key customers is typically hard to avoid; (ii) key customers Equinor and Aker BP are Norway's top two largest hydrocarbon producers with rich pipelines of projects on the NCS. This provides a wide opportunity set for ODL to secure new work, also given the company's long-standing relationships with both customers; (iii) coupled with the company's ability to secure work through the cycle, the small fleet size prevented ODL from stacking rigs during recent downturns. The resulting very high utilisation rates translated into consistently strong earnings and cash flow generation over the past few years; (iv) the company significantly increased the number of rigs under management (in exchange for a fixed fee) during 2022. The fixed management fee that ODL receive per managed unit is significantly lower than the day-rates earned on owned rigs; as such, rigs under management do not meaningfully diversify ODL's earnings and cash flows, yet they add to ODL's operational track record and customer awareness beyond the NCS.

Strengthening backlog given rising upstream spending and tight rig supply

The offshore drilling industry, particularly the floater market, tightened considerably in 2022-23 following a protracted cyclical downturn since 2014. Day-rates and global rig utilization have been rising from low levels since early 2021 as global energy prices have remained elevated and upstream companies have steadily raised spending on offshore assets. ODL has benefitted from such development and its backlog (including both firm work and options) increased sharply from \$1.1bn as at the end of 2021 to \$2.3bn as of May 2023 (see Exhibit 3), providing increased visibility into earnings and cash flow generation for the upcoming years.

Exhibit 3

ODL's backlog has almost doubled compared to end of 2021

Source: Company data

We expect offshore exploration, development and project sanction activities to stay healthy through 2024 based on our view of tight global oil supply. Demand for offshore drilling should remain robust as hydrocarbons continue to contribute to the global energy mix and development of new oilfields is necessary to replace depleting assets. The rig supply side is also tight despite some persistent idle capacity. Notwithstanding the improvement, the current pricing environment does not support the re-activation of cold-stacked unit, due to high associated costs and lengthy payback periods. Finally, orders for newbuilds are also unlikely to materialise due to capacity constraints on shipyards and low availability of construction financing, resulting in material upfront equity contribution and significantly higher day-rates required to justify the investment in new capacity.

Specifically to Norway, we expect demand for drilling services to remain particularly robust on account of significant sanctioning of projects supported by the country's stable and favourable tax regime for exploration and development activities. Of the 22 semi-submersibles currently capable to operate on the NCS, 6 units are contracted for work outside of North Sea and a few others could leave the region, constraining further the supply and support higher day-rates for incumbent drillers like ODL.

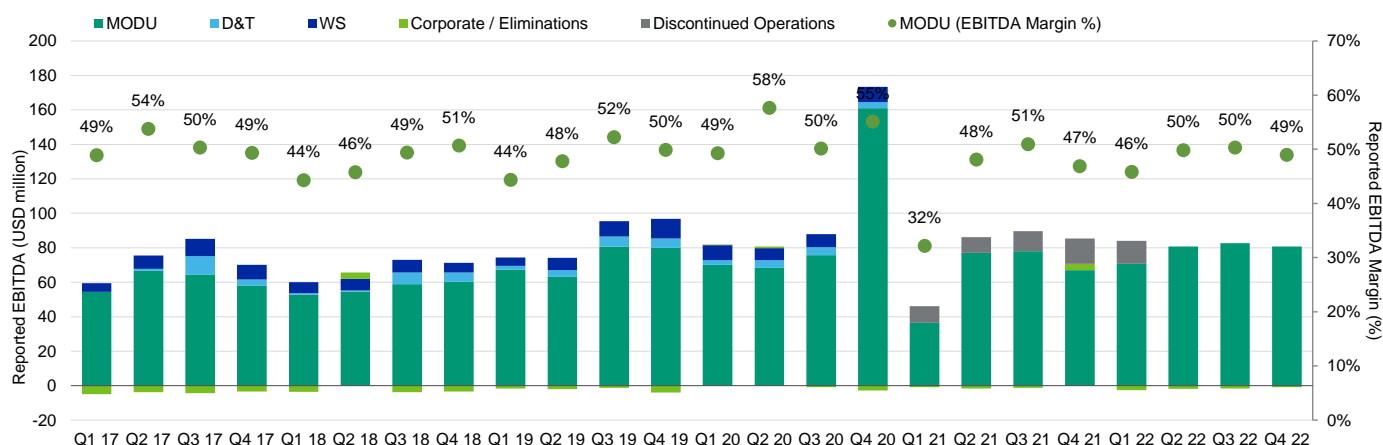
Strong operational track record and improving credit metrics

All units within ODL's current owned fleet have been operating almost seamlessly on both short and long term contracts since delivery, with minimal time spent out of contracts and average utilization of 97%-99% through the cycle. As a result, the company generated positive EBITDA and free cash flow (FCF, as defined by Moody's) notwithstanding the prolonged industry downturn since 2014 and the sharp oil price correction of early 2020 (see Exhibit 4). The absence of idle time during industry downturns also reflected in healthy average EBIT and EBITDA margins (both Moody's-adjusted) on a historical basis.

Exhibit 4

ODL's drilling services operated almost seamlessly over the past five years, generating positive EBITDA

Quarterly evolution of reported EBITDA, split by reporting segment



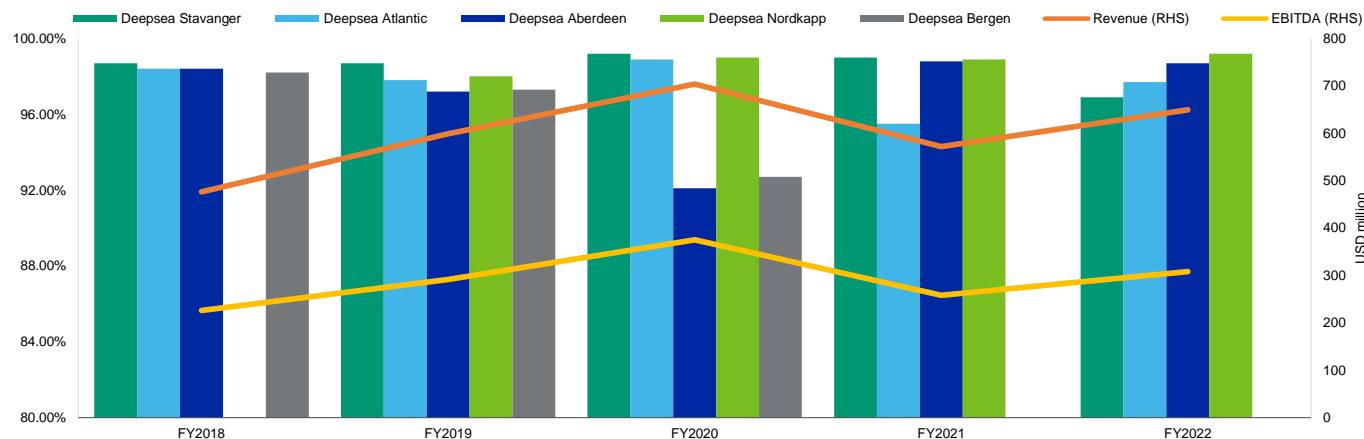
MODU: Mobile Offshore Drilling Units; D&T: Drilling & Technology (disposed in 2022); WS: Well Services (disposed in 2022)

Source: Company reports

Revenue for the full-year 2022 increased to \$650 million from \$572 million in 2021 owing to higher contribution from Deepsea Stavanger, which in 2022 spent less time in transit and between contracts than in 2021, and addition of three units to the managed fleet. ODL reported EBITDA of \$308.0 million (47.4% margin) in 2022, compared to \$258.4 million (45.2%) in 2021; such a margin improvement was driven by revenue growth as well as 2021 costs being affected by timing of recognition of certain demobilization costs.

Exhibit 5

Evolution of own fleet's financial utilization, revenue and EBITDA



Note: FY2018-FY2020 revenue and EBITDA represents numbers reported under MODU segment; Deepsea Bergen was decommissioned in March 2020

Source: Company data

ODL's cash conversion has historically been strong due to limited cash consumption, with main outflows represented by interests, as well as capital expenditure in relation to maintenance, special periodic surveys (SPS, structural investigations and inspections to ensure asset's integrity) and equipment upgrades. ODL generated \$188 million of Moody's adjusted FCF in 2022 and \$144 million in 2021, as a result of strong operating cashflow generation and modest capital investments of, respectively \$85 million and \$109 million. The negative FCF generation in 2018 and 2019 reflects the \$600 million acquisition of the newbuild Deepsea Nordkapp, which was funded with a combination of preferred equity issuance and debt (40/60 split). Sustained positive and strong EBITDA generation coupled with continued debt reduction drove ODL's gross leverage down to 3.0x in 2022 from 4.5x in 2019. Concurrently, interest cover (measured

as EBITDA / interest expense) strengthened considerably to 6.1x from 3.6x, also reflecting the progressive reduction in the company's interest expense in relation to the amortising debt structure.

Strong FCF generation enables projected deleveraging despite some recontracting risks

Out of ODL's owned rigs, Deepsea Atlantic and Deepsea Aberdeen are firmly contracted at least until the end of 2024 (with the latter working until Q2 2025); Deepsea Nordkapp's firm contract ends in the second half of 2024 while Deepsea Stavanger's firm work terminates in early 2024 before commencing multi-year firm work with Aker BP in 2025 through 2030. Both these rigs are under option with current customers, subject to extension upon pricing agreement. Should customers opt out, we see potential for re-contracting risk materialising in 2024. Absent major contract cancellations and assuming successful replacement of work rolling off with new profitable awards, ODL's profitability is expected to remain healthy through the medium term as increasing days-rates offset some margin dilution arising from managed rigs and slightly lower average utilisation on the back of planned SPSs across 2023 through 2025.

Under Moody's base case, ODL shall continue to generate strong positive free cash flow (FCF) in the range of \$115-\$120 million, despite peak capital investments of \$75 million and \$105 million in 2023 and 2024 and higher interest expense post-refinancing. Nevertheless, we expect FCF generation to comfortably cover debt amortisation requirements while allowing the retention of cash availabilities commensurate with the business requirements. ODL's pro-forma leverage of 3.0x is moderately high for the rating but expected to quickly decline towards 2.0x – 2.5x in the next 12-18 months, assuming moderate but continued increase in revenue and earnings as well as around \$200 million of cumulative scheduled debt reduction through the end of 2024. Interest cover shall weaken, albeit temporarily and moderately to 4.5x - 5.0x driven by higher financing costs in the current high interest rate environment.

Demonstrated commitment to conservative financial policies, expected to continue

Our credit assessment factors in ODL's conservative financial policy along with a strong track record of abiding by the latter. Our qualitative score of Ba reflects historic evidence of the company's (i) prioritisation of balance sheet strength over shareholder remuneration; (ii) prudent funding of newbuilds' acquisitions and (iii) maintenance of cash balances well in excess of the business requirements. As a result, ODL's reported net leverage tracked consistently below 4.0x since 2017. Looking ahead, we expect ODL to maintain a conservative approach to capital allocation, noting the net leverage target of below 2.5x in particular. Despite some uncertainty with regards to the yet to be established longer-term dividend policy, we expect first dividend payments to occur in 2025 at the earliest, past the nearer-term peak capital spending for SPS.

ESG considerations

Odfjell Drilling Ltd.'s ESG Credit Impact Score is Moderately Negative CIS-3

Exhibit 6

ESG Credit Impact Score

CIS-3

Moderately Negative

For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.

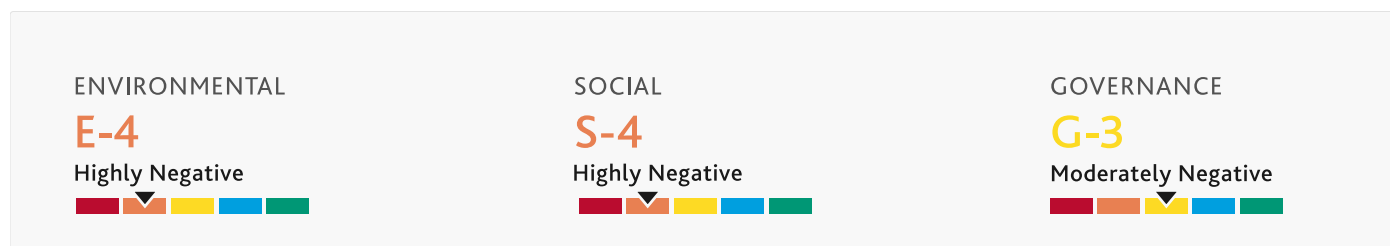


Source: Moody's Investors Service

ODL's **CIS-3** indicates that ESG considerations have a limited impact on the current credit rating with potential for greater negative impact over time driven by carbon transition risks and demographic & societal trend risks. Net of some uncertainty around ODL's future dividend policy (yet to be established), governance considerations reflect the company's conservative financial policies and track record of abiding by the latter, partially offset by a concentrated shareholding structure.

Exhibit 7

ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

ODL faces high exposure to carbon transition, given that its earnings are entirely generated from oil and gas customers. Moreover, given the high breakeven costs for offshore exploration and production, the company is more susceptible to carbon transition risk than the land based OFS companies. ODL faces moderate exposure to physical climate risk stemming from its assets' location in harsh environments. Other environmental risks are moderate as they are largely indemnified by their producer customers.

Social

Similar to most oilfield services companies, ODL faces high exposure to social risks ultimately attributable to increasing demographic & societal pressures to reduce hydrocarbon production. Growing public concern around climate change, including air and water quality could lead to stricter future regulations and/or higher costs for producers limiting demand for oilfield services. This risk is partially offset by the company's low to moderate exposure to other social risk factors such as human capital, customer relations, responsible production and health and safety.

Governance

ODL's **G-3** score reflects the company's conservative financial policies, credible track record and strong liquidity position, partially offset by its concentrated ownership structure with one major shareholder holding around 60% of ODL's capital and a somewhat complex organizational structure that is typical of drilling services companies but entails significant related-party transactions.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on [Moody's.com](https://www.moodys.com). In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

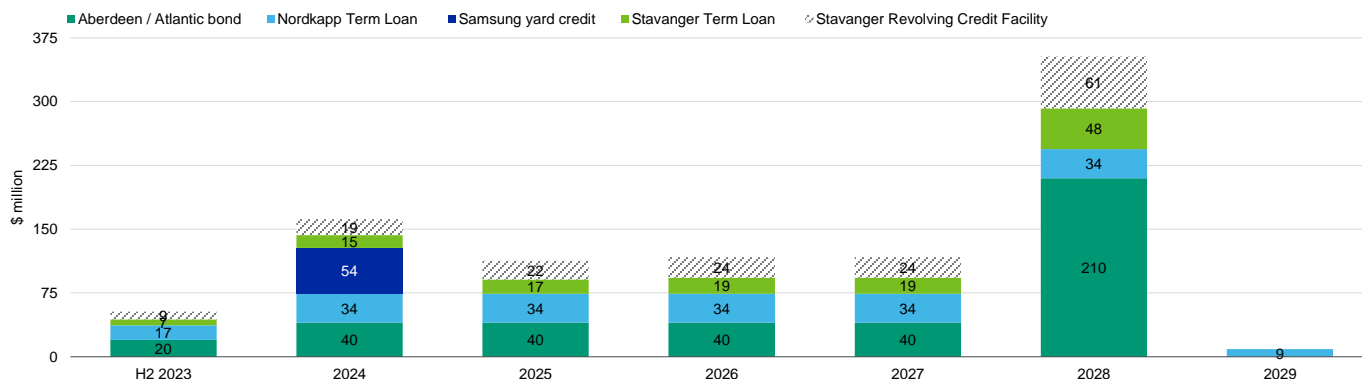
Liquidity analysis

ODL's liquidity is good, assuming the comprehensive refinancing of the company's capital structure concludes successfully as planned. Under our base case, ODL's cashflow generation is projected to cover all basic funding needs over the next 12-18 months including scheduled debt amortisation of \$45 million in the second half of 2023 and \$145 million in 2024. Additionally, the company will have access to a \$160 million senior revolving credit facility (RCF) secured by the Deepsea Stavanger, which is expected to remain largely undrawn. Finally, we expect ODL to maintain good headroom under its financial covenants including maintenance of (i) unrestricted cash balances above \$50 million; (ii) equity to total assets above 30% and (iii) current assets to current liabilities (excluding those related to financial debt) above 1x.

Exhibit 8

Debt maturity schedule

Pro-forma for the refinancing



Note: Revolving Credit Facility represent amortisation of committed amounts.

Source: Company data

Structural considerations

The B2 instrument rating of the \$390 million senior secured notes to be issued by ODL's indirectly wholly-owned subsidiary Odfjell Rig III Ltd. is in line with ODL's CFR. This reflects the notes' (i) first lien claim on the assets of ODL's subsidiaries that own and operate the Deepsea Aberdeen and the Deepsea Atlantic semi-submersibles and (ii) ranking pari passu with other secured obligations of the issuer. The B2 instrument rating also reflects the absence of material claims ranking behind the company's secured obligations.

Rating methodology and scorecard factors

The principal methodology used in assigning the rating to ODL was [Oilfield Services published in January 2023](#). Alternatively, please see the Rating Methodologies page on <https://ratings.moody's.com> for a copy of this methodology. The B2 rating assigned is two notches below the scorecard indicated outcome and reflects ODL's small scale and customer and geographic concentration, as well as medium-term re-contracting risk on select rigs.

Exhibit 9

Rating factors Odfjell Drilling Ltd.

Energy Oilfield Services Industry Scorecard [1][2]	Current FY 12/31/2022		Moody's 12-18 Month Forward View As of 5/2/2023 [3]	
	Measure	Score	Measure	Score
Factor 1 : Scale (20%)				
a) EBITDA (USD Million)	\$301.6	B	\$315 - \$325	B
b) Assets (USD Billion)	\$2.2	B	c. \$2.1	B
Factor 2 : Business Profile (30%)				
a) Business Profile	B	B	B	B
Factor 3 : Profitability and Efficiency (10%)				
a) EBIT Margin	20.0%	A	17% - 18%	Baa
Factor 4 : Leverage and Coverage (20%)				
a) EBITDA / Interest	6.1x	Ba	4.5x - 5x	Ba
b) Debt / EBITDA	3.0x	Ba	2x - 2.5x	A - Baa
Factor 5 : Financial Policy (20%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Rating:				
a) Scorecard-Indicated Outcome		Ba3		Ba3
b) Actual Rating Assigned				B2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. [2] As of 12/31/2022. [3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics™

Ratings

Exhibit 10

Category	Moody's Rating
ODFJELL DRILLING LTD.	
Outlook	Stable
Corporate Family Rating	B2
ODFJELL RIG III LTD.	
Outlook	Stable
Bkd Senior Secured	B2/LGD3

Source: Moody's Investors Service

Exhibit 11

Select credit metrics

(in USD million)	FYE Dec-19	FYE Dec-20	FYE Dec-21	FYE Dec-22	Proj. Dec-23	Proj. Dec-24	Proj. Dec-25
INCOME STATEMENT							
Revenue	823	930	572	650	708	720	732
EBITDA	320	422	271	302	314	318	327
EBIT	135	218	119	130	123	127	135
Interest Expense	89	67	50	50	71	65	56
BALANCE SHEET							
Cash & Cash Equivalents	140	193	159	149	141	117	121
Total Debt	1,445	1,263	1,089	911	781	640	554
Net Debt	1,305	1,070	930	763	640	524	433
CASH FLOW							
Funds from Operations (FFO)	239	347	255	279	207	249	263
Cash Flow From Operations (CFO)	192	349	257	275	213	246	263
Capital Expenditures	(431)	(120)	(109)	(85)	(97)	(127)	(70)
Dividends	4	4	4	2	0	0	100
Retained Cash Flow (RCF)	235	343	251	276	207	249	163
RCF / Debt	16.3%	27.2%	23.1%	30.3%	26.5%	38.9%	29.5%
Free Cash Flow (FCF)	(243)	225	144	188	116	119	93
FCF / Debt	-16.8%	17.8%	13.2%	20.6%	14.8%	18.5%	16.8%
PROFITABILITY							
EBIT margin %	16.4%	23.4%	20.9%	20.0%	17.4%	17.6%	18.4%
EBITDA margin %	38.8%	45.4%	47.3%	46.4%	44.3%	44.2%	44.6%
INTEREST COVERAGE							
EBIT / Interest Expense	1.5x	3.3x	2.4x	2.6x	1.7x	2.0x	2.4x
EBITDA / Interest Expense	3.6x	6.3x	5.4x	6.1x	4.4x	4.9x	5.8x
LEVERAGE							
Debt / EBITDA	4.5x	3.0x	4.0x	3.0x	2.5x	2.0x	1.7x
Net Debt / EBITDA	4.1x	2.5x	3.4x	2.5x	2.0x	1.6x	1.3x

All figures and ratios are calculated using Moody's estimates and standard adjustments. Projections (Proj.) are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™, Moody's Investors Service

Exhibit 12

Peer Comparison

(in USD million)	Odfjell Drilling Ltd. B2 Stable			Noble Finance LLC B1 Stable	Valaris Limited B2 Positive			Vantage Drilling International B3 Stable			Transocean Inc. Caat Positive		
	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22
	Revenue	930	572	650	1,431	1,427	1,232	1,603	127	158	279	3,152	2,556
EBITDA	422	271	302	341	(156)	110	169	(36)	(15)	19	1,196	946	852
Total Assets	2,640	2,515	2,219	5,226	12,873	2,603	2,860	786	699	579	21,757	20,631	20,363
Total Debt	1,263	1,089	911	713	321	761	719	350	350	181	9,053	8,247	7,981
Cash & Cash Equivalents	193	159	149	476	326	609	724	142	73	74	1,154	976	683
EBIT margin %	23.4%	20.9%	20.0%	16.1%	-50.7%	-10.8%	4.7%	-85.6%	-46.4%	-9.6%	6.2%	-0.8%	-0.2%
EBIT / Assets	8.3%	4.7%	5.9%	4.4%	-5.6%	-5.1%	2.6%	-13.8%	-10.5%	-4.6%	0.9%	-0.1%	0.0%
EBITDA / Interest Expense	6.3x	5.4x	6.1x	7.6x	-0.5x	2.2x	2.7x	-1.0x	-0.4x	0.6x	1.8x	1.8x	1.3x
Debt / EBITDA	3.0x	4.0x	3.0x	2.1x	-2.1x	6.9x	4.2x	-9.7x	-23.5x	9.4x	7.6x	8.7x	9.4x

All figures and ratios are calculated using Moody's estimates and standard adjustments.

Source: Moody's Financial Metrics™

Exhibit 13

Moody's-adjusted debt reconciliation

	FYE	FYE	FYE	FYE
(in USD million)	Dec-19	Dec-20	Dec-21	Dec-22
As Reported Total Debt	1,437	1,256	1,083	911
Pensions	8	7	6	1
Moody's Adjusted Total Debt	1,445	1,263	1,089	911

Source: Moody's Financial Metrics™

Exhibit 14

Moody's-adjusted EBITDA reconciliation

	FYE	FYE	FYE	FYE
(in USD million)	Dec-19	Dec-20	Dec-21	Dec-22
As Reported EBITDA	321	421	271	315
Unusual Items - Income Statement	(1)	0	0	(14)
Pensions	0	0	0	0
Moody's Adjusted EBITDA	320	422	271	302

Source: Moody's Financial Metrics™

© 2023 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1365857

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454