

CREDIT OPINION

2 April 2019

Update

 Rate this Research

RATINGS

Norsk Hydro ASA

Domicile	Norway
Long Term Rating	Baa2
Type	LT Issuer Rating - Dom Curr
Outlook	Negative

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.

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Norsk Hydro ASA

Update to Discussion of Key Credit Factors

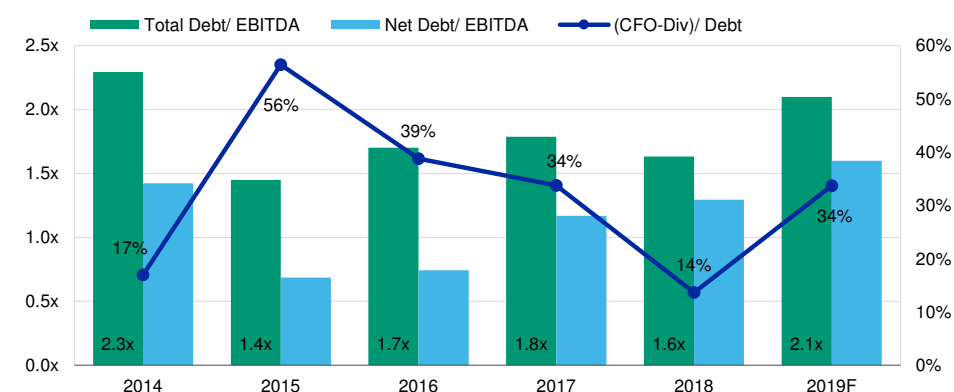
Summary

The recent change in outlook to negative from stable reflects the pressures that have recently weighed on Norsk Hydro ASA (Hydro)'s financial performance, primarily as a result of the 50% production curtailment at the Alunorte alumina refinery ordered by the Brazilian authorities in February 2018, but also the more challenging operating conditions prevailing in the sector in the past few months amid lower aluminium prices and the margin erosion affecting some downstream market segments. This is likely to continue putting pressure on operating profitability and lead Hydro to generate further negative free cash flow in 2019. As a result, we expect further deterioration in financial metrics, with Moody's adjusted leverage likely to be around 2x at year-end 2019, reducing headroom within the current Baa2 rating.

However, Hydro's Baa2 rating continues to be supported by the vertical integration of its operations along the aluminium value chain, first and second quartile positions of its bauxite/alumina and primary aluminium businesses on their respective industry's cost curves, access to low cost energy sources and leading downstream market positions. Also, the rating reflects the group's conservative financial framework and resilience of its cash flow generation capacity throughout industry cycles. While, in the past ten years, Hydro paid out around 60% of its free operating cash flow after capex as dividends, it continues to display moderate financial leverage, with Moody's adjusted total debt to EBITDA of 1.6x at year-end 2018.

Exhibit 1

Leverage and Coverage Metrics



Source: Company Annual Report, Moody's Estimates

Credit Strengths

- » Competitive upstream business benefiting from favourable position on industry's cost curves and stable access to low cost energy sources
- » Leading market positions in downstream markets
- » Resilient cash flow generation despite exposure to volatile aluminium market
- » Conservative financial framework evidenced by moderate leverage and robust liquidity profile

Credit Challenges

- » High sensitivity of EBITDA to aluminium prices, mitigated by devaluation in currencies of NOK-USD and BRL-NOK
- » Exposure to a single metal, aluminium, and a capital and energy intensive sector
- » Persistent challenging operating environment in global aluminium markets
- » Weaker near term operating profitability and cash flow generation and rising leverage

Rating Outlook

The negative outlook reflects our expectation that lower realised aluminium prices, ongoing production curtailments at Alunorte and some margin erosion affecting some downstream market segments may further pressure Hydro's operating profitability and free cash flow generation in 2019. This would lead to further deterioration in Hydro's credit metrics and potential downward pressure on the Baa2 rating.

Factors that Could Lead to an Upgrade

Considering the revision of the outlook to negative, we do not anticipate any upward pressure on the ratings in the near term. An upgrade would likely require a further strengthening of the business profile with segment and metal diversification and improvement in margins with EBIT margin sustained above 10%. Given the inherent volatility of the business, an upgrade would also require Hydro to maintain strong leverage metrics including Moody's adjusted total debt to EBITDA around 1.0x and consistent positive FCF generation.

Factors that Could Lead to a Downgrade

Negative pressure on the Baa2 would result from a prolonged deterioration in operating profitability and cash flow generation leading to some permanent erosion in the group's adjusted EBIT margin below 8%, CFO minus dividends to total debt ratio falling below 30% and total debt to EBITDA rising above 2.5x times for a sustained period of time. A material deterioration in the liquidity position resulting from prolonged negative free cash flow generation would also contribute to downward pressure.

Key Indicators

Exhibit 2

Norsk Hydro ASA

	31/12/2018	31/12/2017	31/12/2016	31/12/2015	31/12/2014
Revenues (USD Billion)	\$19.60	\$13.22	\$9.76	\$10.90	\$12.40
EBIT Margin (EBIT / Revenue)	6.2%	11.6%	8.1%	11.1%	8.2%
EBIT / Interest Expense	7.0x	13.5x	7.9x	11.8x	10.3x
Debt / EBITDA	1.6x	1.8x	1.7x	1.4x	2.3x
Debt / Total Capital	22.7%	26.2%	18.3%	21.1%	23.9%
(CFO - Dividends) / Debt	13.6%	33.8%	38.8%	56.4%	17.0%

Source: Moody's Financial Metrics™

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

Profile

Headquartered in Oslo, Norway, Hydro is a fully integrated aluminum producer with operations throughout the aluminium value chain, including bauxite and alumina production. In 2018, Hydro reported revenues of NOK159.4 billion (\$19.6 billion) and underlying EBITDA of NOK16.3 billion (\$2.0 billion) equivalent to a margin of 10.3% v. 15.9% in 2017.

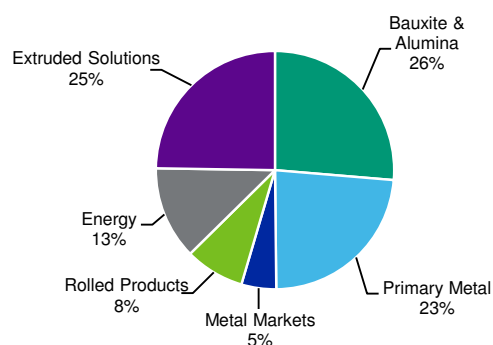
The company produced 2.0 million metric tonnes (mt) of primary aluminium in 2018, including the contribution from Hydro's 50% interest in Qatalum (co-owned by Qatar Petroleum, rated Aa3 stable), a low-cost smelter in Qatar, which has its own gas-based power production. In October 2017, the group completed the acquisition of Sapa from Orkla Group (unrated), which is now reported as the Extruded Solutions business unit. This further strengthened Norsk Hydro's fully integrated business model, as well as extended its product and service offering to a larger customers base.

Hydro's business is divided in six operating segments including:

- » Bauxite & Alumina includes the group's bauxite mining activities comprised of the Paragominas mine and a 5% interest in Mineracao Rio de Norte (MRN), both located in Brazil, as well as Hydro's 92% interest in the Brazilian alumina refinery, Alunorte. These activities also include Hydro's long-term sourcing arrangements and alumina commercial operations;
- » Primary Metal consists of the group's primary aluminium production, remelting and casting activities at its wholly owned smelters located in Norway, and Hydro's share of the primary production in partly-owned companies located in Slovakia, Qatar, Australia, Canada and Brazil;
- » Metal Markets includes all sales and distribution activities relating to products from the group's primary metal plants, the operations of seven stand-alone remelters, as well as metal sourcing and trading activities;
- » Rolled Products division produces value-added products like automotive sheets and coils, lithographic sheets, beverage can bodies and foils. As an important part of Hydro's integrated system, the Neuss aluminium plant in Germany, supplies the nearby Alunorf rolling mill - the world's largest - with primary and recycling-based sheet ingots for processing and subsequent fabrication of rolled products in Grevenbroich;
- » Extruded Solutions division produces extruded aluminium products like the aluminium building systems and precision tubing activities mainly used in construction, transportation and engineering industries; and
- » Energy segment is responsible for managing Hydro's captive hydropower production in Norway, external power sourcing arrangements to the aluminium business, which requires high energy consumption and identifying and developing competitive energy solutions for Hydro worldwide.

Exhibit 3

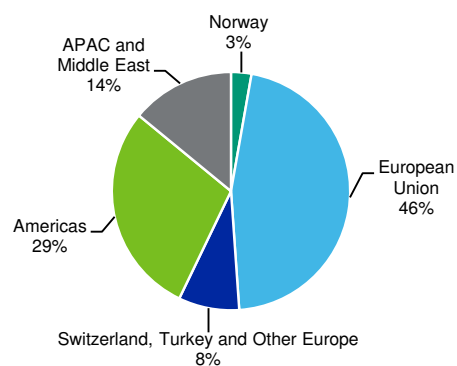
2018 Underlying EBITDA by Business Segment



Source: Company's Annual Report

Exhibit 4

2018 Revenues by Customer Location



Source: Company's Annual Report

Hydro is listed on the Oslo stock exchange with a market capitalization of NOK72.3 billion (\$8.3 billion) as of 29 March 2019. Hydro is 34.3%-owned by the Norwegian government (Aaa, stable), and accordingly falls within the scope of Moody's rating methodology for Government Related Issuers (GRIs) last updated in June 2018.

Detailed Credit Considerations

BUSINESS PROFILE CONSTRAINED BY SINGLE EXPOSURE OF UPSTREAM BUSINESS TO VOLATILE ALUMINIUM MARKET

Hydro's operations are fully integrated and span the entire value chain of the aluminium sector. In 2018, the group reported revenues of NOK159.4 billion (\$19.6 billion) and Moody's adjusted EBITDA of NOK17.7 billion (\$2.2 billion), equivalent to a margin of 11.1% v. 17.5% in 2017.

The group's competitive position has improved in recent years, benefiting from various restructuring and efficiency initiatives. Hydro's primary smelter portfolio holds a low second-quartile cost position benefiting from its cost-efficient primary aluminium facilities, which includes the Sunndal plant in Norway, which is the largest and most modern primary metal plant in Europe, and the Qatalum smelter in Qatar, which sits in the first quartile of the industry's cost curve.

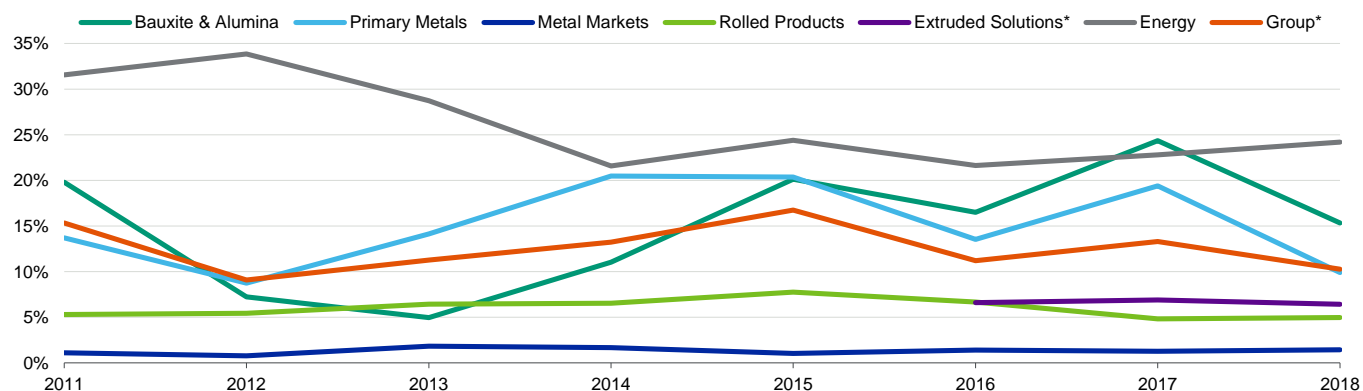
Hydro's cost position is further underpinned by the first quartile cost position of its integrated Alunorte refinery and Paragominas bauxite mine (70% of bauxite requirements). Additional bauxite volumes are sourced under off-take agreements for Vale's 40% interest in MRN, while alumina is also purchased from a number of external sources including a long-term supply contract with Rio Tinto Alcan for 900,000 mt of alumina p.a. until 2030. When operating at full production capacity, Hydro has a long position in bauxite of 3-4 million mt and in alumina of approximately 2-3 million mt. Any excess bauxite and alumina not used internally is sold to third parties.

Backward integration into energy production, which typically accounts for 25-30% of Hydro's primary metal cost base, benefits upstream activities. Hydro is the third largest power plant operator in Norway, where its hydropower plants cover nearly 80% of the energy requirements of its domestic aluminum smelters (representing slightly less than 40% of its global smelting capacity).

However, Hydro's business profile is constrained by its exposure to the highly cyclical, capital and energy-intensive commodity sector with a focus on a single metal, aluminium. Despite its integrated business model, Hydro derives the majority of its earnings (50% of 2018 underlying EBITDA before Other & Eliminations) from its upstream business, including Bauxite & Alumina and Primary Metal, which typically yield EBITDA margins in the 15-20% range.

Exhibit 5

Underlying EBITDA Margin by Business Segment



* based on pro forma information for 2016-2018

Source: Company's Annual Reports

Downstream, Hydro is the European leader in rolling operations, and the world's largest extruded solutions provider, enjoying market leadership in North America and Europe. The acquisition of SAPA in October 2017, rebalanced Hydro's business profile towards the downstream end of the aluminium value chain and, to some extent, reduced the relative weight of its more volatile, LME price exposed upstream business in its overall earnings. However, we note that Hydro's downstream EBITDA margins currently in mid single-digits lag behind downstream peers such as Arconic Inc. (Ba2 stable), Novelis Inc. (B1 negative) and Constellium N.V. (B2 stable).

ALUNORTE PRODUCTION CURTAILMENT AND LOWER ALUMINIUM PRICES PRESSURE HYDRO'S NEAR-TERM OPERATING PROFITABILITY

In the past year, Hydro's financial performance has come under pressure primarily as a result of the 50% production curtailment at the Alunorte alumina refinery, but also the more challenging operating conditions prevailing in the sector in the past few months amid lower aluminium prices.

In February 2018, following allegations that flooding caused by two days of extreme rainfall might have led to harmful spills into the surrounding areas, the Brazilian authorities ordered that production at the Alunorte alumina refinery be reduced by 50%. Consequently, Alunorte's primary source of bauxite, the Paragominas mine, and Hydro's part-owned subsidiary Albras aluminium plant, both in the state of Pará in Brazil, also reduced their production by 50%.

This led to some significant increase in raw material costs for Hydro, as it had to source alumina from third parties. Hydro's implied all-in primary cost (i.e. price minus EBITDA per tonne) rose 26% year-on-year in US dollar terms. While realised alumina and aluminium prices as well as premiums above LME were 32%, 12% and 31% higher respectively in 2018 v. 2017, the Bauxite & Alumina and Primary Metal operating segments posted year-on-year declines in underlying EBITDA of 29% and 45% in 2018 respectively, equivalent to a combined profit shortfall of just under NOK5 billion (\$615 million) compared to 2017.

Overall, despite the incremental NOK1.9 billion EBITDA contribution from Extruded Solutions reflecting the full year consolidation of Sapa AS following Hydro's buy-out of Orkla ASA's 50% interest in October 2017, and strong Energy results, Hydro reported a 7% drop in Moody's adjusted EBITDA to NOK17.7 billion in 2018 (v. NOK19.1 billion in 2017).

Looking ahead, we note that all the investigations and inspections to date conducted by Brazil's authorities following allegations that flooding caused by two days of extreme rainfall might have led to harmful spills into the surrounding areas to the refinery, confirmed that there were no leaks or overflow from Alunorte's bauxite residue deposits. Also, several favourable decisions taken by the federal and state environmental agencies, Ibama and Semas, as well as the agreements reached by Hydro with the Government of Pará and Ministério Público in recent months, may be viewed as positive steps towards the resumption of full operations at Alunorte. However, to date, the embargoes imposed by Brazil's federal court on production and the use of the new DRS2 bauxite deposit area, remain in force, and it is uncertain when they may be lifted.

In the meantime, aluminium prices weakened by around 9% during Q4 2018, down to NOK 1,868/mt at year-end, and have failed to recover since, pressured by the weakening global economic outlook, in particular decelerating aluminium demand growth in China, and raw material cost deflation (e.g. alumina, pet coke, caustic soda).

Therefore, further supply cuts will likely be required to prop up prices. In this context, Hydro estimates that around 40% of aluminium producers (and 70% of the Chinese) are currently burning cash. Also, the global aluminium market is forecast to remain in net deficit in 2019, which should lead to further reduction in inventories from level of 60 days at year-end 2018, i.e. close to pre-global financial crisis levels. That said, the near-term price outlook for aluminium remains clouded.

We believe that the combination of lower realised aluminium prices, the continued effect of production curtailment at Alunorte and margin erosion affecting Rolled Products owing to softening demand conditions in some market segments such as foil and general engineering, are likely to further pressure Hydro's operating profitability in 2019. Also, it is uncertain at this stage whether the group's insurance coverage will fully mitigate the effect on financial results of the cyber attack that has recently hit the group. Assuming LME aluminium prices average around \$1850/mt in 2019 and full production at Alunorte resumes during Q3 2019, Moody's expects Hydro to generate lower Moody's adjusted EBITDA of around NOK14-15 billion in 2019.

MODERATE LEVERAGE PROVIDES CUSHION FOR NEAR TERM WEAKER CASH FLOW

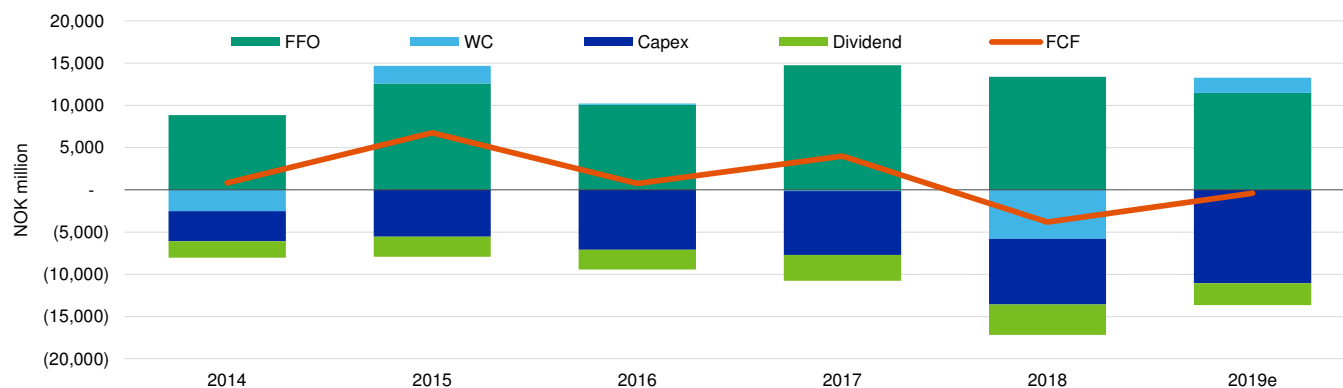
While Hydro's funds from operations (as adjusted by Moody's) decreased 9% to NOK13.4 billion in 2018, in line with EBITDA generation, operating cash flow was affected by a large increase in working capital of NOK5.6 billion. This reflected uncertainty and price increases, which was further compounded by the reclassification of indirect taxes in Brazil, previously considered part of investments (decrease in PP&E and increase in long-term VAT receivables of around NOK800 million).

For the first time since 2008, Hydro generated negative FCF after capex and dividend. This resulted in a NOK4.2 billion increase in funded net debt. However, total debt reduced by NOK1.6 billion and NOK5.2 billion on a reported and Moody's adjusted basis accordingly.

Hydro's unfunded pension obligations of NOK9.2 billion attracted a higher equity credit in 2018 than in 2017, owing to lower year-end cash balances. Hydro's financial leverage remained moderate at year-end 2018, with Moody's adjusted total debt to EBITDA of 1.6x.

Looking forward, assuming projected capex of around NOK 10-10.5 billion (70% of which is considered by management as sustaining capex) and a proposed dividend of NOK2.6 billion, we expect Hydro to report further negative FCF in 2019. In turn, this should lead to further deterioration in financial metrics, with Moody's adjusted leverage projected to be around 2x at year-end 2019, reducing headroom within the current Baa2 rating.

Exhibit 6

Free Cash Flow Development

Source: Moody's Investors Service

The Baa2 rating continues to be supported by the group's relatively conservative financial framework and the resilience of its cash flow generation throughout industry cycles. That said, in the past ten years, Hydro has paid on average around 60% of free operating cash flow after capex as dividends. In the period 2014-2018, its ordinary pay-out ratio averaged 57% of reported net income, in excess of the 40% over-the-cycle target set by management, which has publicly committed to provide a competitive cash return to shareholders. However, we take some comfort from Hydro's decision to propose a near 30% cut in the annual dividend to be paid in May 2019, down to NOK 1.25 per share (a floor under Hydro's dividend policy).

Other - GRI Considerations

Hydro's Baa2 rating combines: (i) the company's standalone credit quality, or Baseline Credit Assessment ("bca"), of baa2 and; (ii) Moody's assessment of the low co-dependency and low support of the Norwegian government in a distress situation, in accordance with Moody's rating methodology for GRIs.

The bca of baa2 in line with the final rating of Baa2 demonstrates no uplift for government ownership and reflects the global nature of Norsk Hydro's business profile driven by industry fundamentals in the aluminium sector with no direct dependence on the Norwegian economy. Norwegian government (Aaa, stable) retains a 34.3% stake in the company to satisfy the minimum requirement of 33.33% of government ownership to maintain negative control. Moody's notes that there are no current plans to increase this stake. No uplift also reflects the absence of a strong link to the government and Moody's expectations of low potential extraordinary support from the government. As with other leading industrial companies with strong international franchise and head office in Norway, benefitting from the state ownership, the government expects Hydro to be run on a commercial basis and to deliver a competitive return on the government's investment.

Liquidity Analysis

At the end of 2018, Hydro had cash balances of NOK6.0 billion (around \$690 million) while its \$1.7 billion (NOK14 billion) revolving credit facility maturing in November 2020 was fully undrawn.

In 2019, the group has total debt maturities of NOK8.5 billion (\$980 million), including NOK5.7 billion under short-term bank facilities, which the company expects to be rolled over. In addition, it has debt maturities of approximately NOK1.3 billion (\$150 million) in 2020,

including a SEK1.0 billion (NOK970 million) bond redemption. While we expect Hydro to generate a modest negative FCF in 2019, we believe that it will continue to display a robust liquidity position, which should further benefit from the company's recently proposed bond issuance.

Rating Methodology and Scorecard Factors

Exhibit 7

Rating Factors				
Norsk Hydro ASA				
Mining Industry Grid [1][2]				
			Current	Moody's 12-18 Month
			FY 12/31/2018	Forward View
				As of 3/27/2019 [3]
Factor 1 : Scale (20%)	Measure	Score	Measure	Score
a) Revenues (USD Billion)	\$19.60	Baa	\$16.80	Baa
Factor 2 : Business Profile (25%)				
a) Business Profile	Baa	Baa	Baa	Baa
Factor 3 : Profitability and Efficiency (10%)				
a) EBIT Margin (EBIT / Revenue)	6.2%	B	4.8%	Caa
Factor 4 : Leverage and Coverage (30%)				
a) EBIT / Interest Expense	7.0x	A	4.7x	Baa
b) Debt / EBITDA	1.6x	Baa	2.1x	Baa
c) Debt / Total Capital	22.7%	Aa	24.1%	Aa
d) (CFO - Dividends) / Debt	13.6%	B	33.7%	Ba
Factor 5 : Financial Policy (15%)				
a) Financial Policy	Baa	Baa	Baa	Baa
Rating:				
a) Indicated Outcome from Scorecard		Baa2		Baa3
b) Actual Rating Assigned		Baa2		Baa2
Government-Related Issuer			Factor	
a) Baseline Credit Assessment			baa2	
b) Government Local Currency Rating			Aaa	
c) Default Dependence			Low	
d) Support			Low	
e) Final Rating Outcome			Baa2	

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 12/31/2018

[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 8

Category	Moody's Rating
NORSK HYDRO ASA	
Outlook	Negative
Issuer Rating - Dom Curr	Baa2
Senior Unsecured	Baa2

Source: Moody's Investors Service

Appendix

Exhibit 9

Norsk Hydro ASA peer comparison

	Norsk Hydro ASA			Anglo American plc			Arconic Inc.			Novelis Inc.		
	Baa2 Negative			Baa2 Stable			Ba2 Stable			B1 Negative		
\$ million	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	LTM
Revenue	9,758	13,221	19,598	21,378	26,243	27,610	12,394	12,960	14,014	9,591	11,462	12,308
EBITDA	1,414	2,310	2,179	5,853	8,329	8,860	2,092	2,228	2,076	1,090	1,237	1,354
Total Debt	2,347	4,170	3,342	16,964	13,864	10,888	11,216	10,429	9,653	5,450	5,053	5,048
Cash & Cash Equiv.	1,323	1,446	692	6,051	7,800	6,567	1,863	2,150	2,277	594	920	797
EBITDA Margin	14%	17%	11%	27%	32%	32%	17%	17%	15%	11%	11%	11%
ROA - EBIT / Avg. Assets	5.2%	8.6%	6.0%	6.9%	10.8%	11.1%	5.0%	7.7%	6.9%	8.4%	9.5%	10.3%
EBITDA / Int. Exp.	14.0x	20.3x	12.7x	7.4x	13.3x	14.2x	3.2x	3.9x	3.7x	3.4x	4.4x	4.6x
Debt / EBITDA	1.7x	1.8x	1.6x	2.9x	1.7x	1.2x	5.4x	4.7x	4.6x	5.0x	4.1x	3.7x
Net Debt / EBITDA	0.7x	1.2x	1.3x	1.9x	0.7x	0.5x	4.5x	3.7x	3.6x	4.5x	3.3x	3.1x
RCF / Debt	38%	34%	34%	29%	38%	40%	14%	18%	16%	11%	16%	18%
RCF / Net Debt	88%	52%	42%	45%	88%	102%	17%	23%	21%	13%	19%	21%

Source: Moody's Financial Metrics™

Exhibit 10

Norsk Hydro ASA historical Moody's adjusted total debt breakdown

NOK million	2014	2015	2016	2017	2018
As Reported Debt	11,168	7,531	6,680	17,257	15,623
Pensions	12,421	12,782	12,871	14,745	10,832
Operating Leases	2,108	1,464	654	2,110	2,486
Analyst Adjustments	26				
Moody's Adjusted Debt	25,723	21,777	20,205	34,112	28,941

Source: Moody's Financial Metrics™

Exhibit 11

Norsk Hydro ASA historical Moody's adjusted EBITDA breakdown

NOK million	2014	2015	2016	2017	2018
As Reported EBITDA	7,679	9,156	15,285	17,906	14,789
Pensions	22	12	3	26	63
Operating Leases	341	347	202	311	657
Interest Expense Discount	(164)	(189)	(199)	(216)	(122)
Unusual Adjustments	2812	5183	(3264)	338	1880
Non-Standard Adjustments	527	525	(149)	720	454
Moody's Adjusted EBITDA	11,217	15,034	11,878	19,085	17,721

Source: Moody's Financial Metrics™

Exhibit 12

Norsk Hydro ASA historical and projected Moody's adjusted financial data

in NOK million	2014	2015	2016	2017	2018	2019e
INCOME STATEMENT						
Revenues	77,907	87,694	81,953	109,220	159,377	143,439
EBITDA	11,217	15,034	11,878	19,085	17,721	14,781
EBIT	6,388	9,721	6,661	12,693	9,808	6,851
Interest Expense	622	821	847	941	1,397	1,469
BALANCE SHEET						
Cash & Cash Equivalents	9,753	11,467	11,387	11,828	5,995	7,745
Total Debt	25,723	21,777	20,205	34,112	28,941	31,592
Net Debt	15,970	10,310	8,818	22,284	22,946	23,847
CASH FLOW						
Funds from Operations	8,846	12,593	10,083	14,749	13,367	11,490
Change in Working Capital items	(2,532)	2,068	118	(166)	(5,798)	1,768
Cash Flow from Operations	6,314	14,661	10,201	14,583	7,569	13,258
Capital Expenditures (CAPEX)	(3,559)	(5,542)	(7,089)	(7,532)	(7,763)	(11,044)
Dividends	(1,943)	(2,370)	(2,362)	(3,069)	(3,622)	(2,600)
Free Cash Flow (FCF)	812	6,749	750	3,982	(3,816)	(386)
Retained Cash Flow (RCF)	6,903	10,223	7,721	11,680	9,745	8,890
RCF / Debt	26.8%	46.9%	38.2%	34.2%	33.7%	28.1%
FCF / Debt	3.2%	31.0%	3.7%	11.7%	-13.2%	-1.2%
PROFITABILITY						
% Change of Sales (YoY)	20%	13%	-7%	33%	46%	-10%
EBIT Margin %	8.2%	11.1%	8.1%	11.6%	6.2%	4.8%
EBITDA Margin %	14.4%	17.1%	14.5%	17.5%	11.1%	10.3%
INTEREST COVERAGE						
EBIT / Interest Expense	10.3x	11.8x	7.9x	13.5x	7.0x	4.7x
EBITDA / Interest Expense	18.0x	18.3x	14.0x	20.3x	12.7x	10.1x
LEVERAGE						
Debt / EBITDA	2.3x	1.4x	1.7x	1.8x	1.6x	2.1x
Net Debt / EBITDA	1.4x	0.7x	0.7x	1.2x	1.3x	1.6x
(CFO-Div) / Debt	17.0%	56.4%	38.8%	33.8%	13.6%	33.7%

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

2019e 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™

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