

## CREDIT OPINION

12 March 2021

Update

 Rate this Research

### RATINGS

#### Norsk Hydro ASA

Domicile	Oslo, Norway
Long Term Rating	Baa3
Type	LT Issuer Rating - Dom Curr
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.

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## Norsk Hydro ASA

Update to credit analysis following stabilisation of the outlook

### Summary

The recent outlook stabilisation reflects the strong recent performance of Norsk Hydro, compared to our initial expectations at the beginning of the coronavirus outbreak, and the expected improvement in the company's leverage and profitability following the disposal of its rolled products division to KPS Capital Partners for EUR 1,380 million, announced on the 5 March 2021.

In 2020, Norsk Hydro reported an underlying EBITDA of NOK14.3 billion, compared to NOK11.8 billion in 2019, when the company's performance was heavily affected by the curtailment of the production at the Alunorte alumina refinery. The curtailment of the production, lifted in May 2019, led Norsk Hydro to source alumina on the open market at higher costs, directly affecting the company's profitability.

We also highlight the better than expected conditions of the primary aluminium market, driven by the sustained demand in China. We expect the aluminium market to remain in surplus in 2021, although of a reduced quantity compared to 2020, as the growth in demand will be offset by capacity increases, in particular in China, scheduled to come in production in the second half of 2021.

Demand in key end markets for aluminium products, such as automotive or construction, suffered a milder impact compared to our expectations and the company was able to keep a stable downstream EBITDA compared to 2019, thanks to the operational savings achieved and to the structural dynamics supporting the demand for aluminium extruded solutions, in particular the growing demand for electric vehicles.

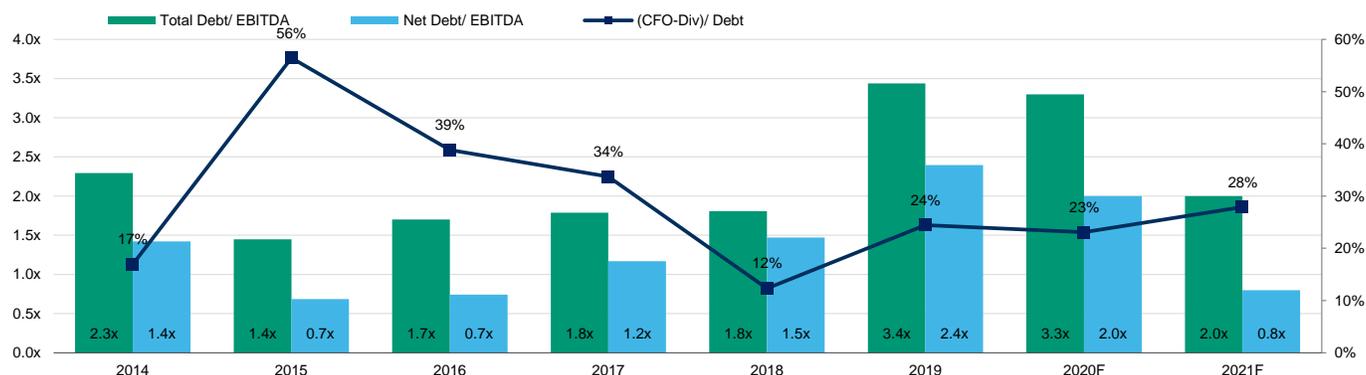
We view the disposal of the rolled products division as a positive credit development, as this division had been under strategic review since 2019, following several years of weak profitability and cash flow generation. The disposal comes with a reduction in the pension deficit of approximately of €856 million, leading to a net 0.4x reduction in the Moody's adjusted leverage, after having deducted the low EBITDA contribution of the rolled products division. In addition, the reduction in capex commitments frees up resources to be invested in activities with higher growth prospects, which are more in line with the company's strategy focused on greener aluminium products.

In 2021, we expect the EBITDA and free cash flow generation of Norsk Hydro to moderately grow, on the back of the continuous recovery of the wider economy and cost savings delivered in the context of the company's NOK8.5 billion improvement program to 2025.

The Baa3 rating continues to reflect the company's cost-competitive upstream operations, market leadership position in extruded solutions and its strong liquidity profile.

Exhibit 1

### Leverage and cash flow generation metrics will be strongly positioned in the range for a Baa3 rating in 2021



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 position in extruded solutions
- » Resilient cash flow generation despite exposure to volatile aluminium market
- » Conservative financial framework 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 the global aluminium markets

## Rating Outlook

The stable outlook reflects our expectation of a continuous gradual recovery of the aluminium market in 2021, as well as the successful execution of the cost improvement program and the company's adjusted metrics remaining comfortably within the guidance for the Baa3 rating. The stable outlook also reflects the expectation that the company will maintain a strong liquidity profile.

## Factors that Could Lead to an Upgrade

An upgrade would require a sustained improvement in operating profitability with EBIT margin rising in the high single digits as well as a reduction in leverage with Moody's adjusted total debt to EBITDA falling back towards 2.0x, CFO minus dividends to total debt rising above 30% and consistent positive FCF generation.

## Factors that Could Lead to a Downgrade

Negative pressure on the Baa3 would result from a prolonged deterioration in operating profitability and cash flow generation resulting in negative FCF, weakening liquidity and deterioration in leverage metrics leaving CFO minus dividends to total debt ratio around 20% and/or total debt to EBITDA rising above 3.0x times for a sustained period of time. Any weakening of the company's conservative financial policy would also likely pressure the ratings.

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](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Key Indicators

### Norsk Hydro ASA

	12/31/2016	12/31/2017	12/31/2018	12/31/2019	2020F	2021F
Revenues (USD Billion)	\$9.8	\$13.2	\$19.6	\$17.0	\$16.4	\$16.8
EBIT Margin (EBIT / Revenue)	8.1%	9.6%	6.2%	2.1%	3.0%	7.9%
EBIT / Interest Expense	7.9x	11.2x	7.0x	2.5x	3.2x	9.9x
Debt / EBITDA	1.7x	2.0x	1.8x	3.4x	3.3x	2.0x
Debt / Total Capital	18.3%	26.2%	24.5%	31.4%	34.4%	29.1%
(CFO - Dividends) / Debt	38.8%	33.8%	12.3%	24.4%	23.1%	27.9%

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

Source: Moody's Financial Metrics™

## 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 2020, Hydro reported revenues of NOK138.1 billion (\$16.4 billion) and underlying EBITDA of NOK14.3 billion (\$1.7 billion).

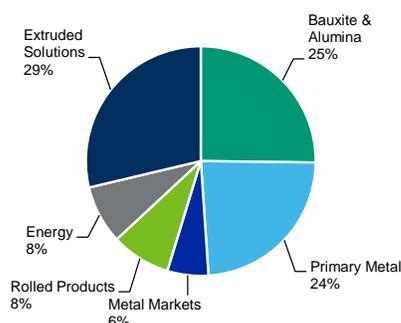
The company produced 2.1 million metric tonnes (mt) of primary aluminium in 2020, including the contribution from Hydro's 50% interest in Qatalum (co-owned by [Qatar Petroleum](#), Aa3 stable), a low-cost smelter in Qatar, which has its own gas-based power production.

In March 2021, Norsk Hydro announced that it had reached an agreement to dispose its rolled products division to KPS Capital Partners for EUR1,380 million. The transaction is subject to customary competition approvals and closing of the transaction is expected for H2 2021. The Rolled Products operations will be treated as an asset held for sale and discontinued operations in Hydro's financial reporting from the first quarter of 2021.

Excluding rolled products, Hydro's business is divided in five operating segments including:

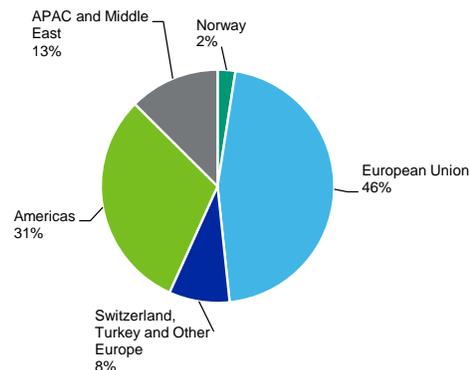
- » Bauxite & Alumina includes the group's bauxite mining activities comprised of the Paragominas mine and a 5% interest in Mineracao Rio de Norte (MRN), both located in Brazil, as well as Hydro's 92% interest in the Brazilian alumina refinery, Alunorte. These activities also include Hydro's long-term sourcing arrangements and alumina commercial operations;
- » Aluminium 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;
- » Extruded Solutions division produces extruded aluminum products like the aluminum 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  
2020 Underlying EBITDA by Business Segment



An agreement to dispose Rolled Products has been reached and we expect the transaction to close in the second half of 2021  
Source: Company's Data

Exhibit 4  
2020 Revenues by Customer Location



Source: Company's Data

Hydro is listed on the Oslo stock exchange with a market capitalization of approximately NOK104 billion (\$12.3 billion) as of 10 March 2021. Hydro is 34.3%-owned by the [Government of Norway](#) (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 the volatile aluminium market

Hydro's operations are fully integrated and span the entire value chain of the aluminium sector. 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.

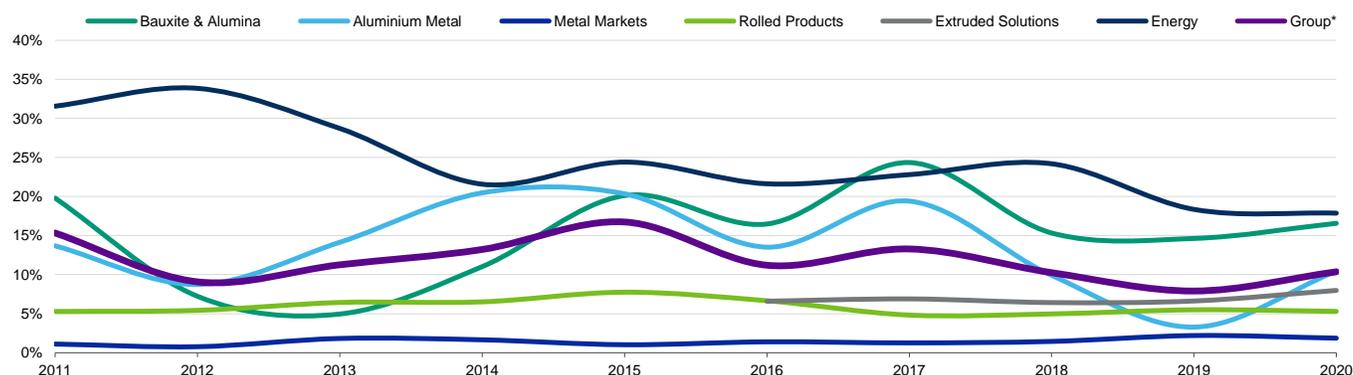
Hydro's cost position is further underpinned by the first quartile cost position of its integrated Alunorte refinery and Paragominas bauxite mine (70% of bauxite requirements). Additional bauxite volumes are sourced under off-take agreements for Vale's 40% interest in MRN, while alumina is also purchased 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 25-35% 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 aluminium smelters (representing slightly less than 40% of its global smelting capacity). In 2020, Norsk Hydro completed the merger of its RSK hydroelectric assets into Lyse, forming a new company, Lyse Kraft and avoiding that the RSK assets revert to state ownership in 2022. Hydro will own 25.6% of the combined entity, which will be accounted as an associate.

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 generally derives the majority of its earnings from its upstream Bauxite & Alumina and Primary Metal, businesses, 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 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 Corporation](#) (Ba3 stable), [Novelis Inc.](#) (B1 stable) and [Constellium N.V.](#) (B2 negative).

#### Disposal of the rolled products division is credit positive

On the 5 March, Norsk Hydro announced the disposal of its rolled products division to KPS Capital Partners for EUR1,380 million (approximately NOK13.8 billion). The consideration of €1,380 million can be broken down in a cash consideration of EUR 435 million, the transfer of a pension liability of EUR856 million and EUR90 million to cover for asset retirement obligations. The transaction is subject to customary approvals from competition authorities and is expected to be completed during H2 2021.

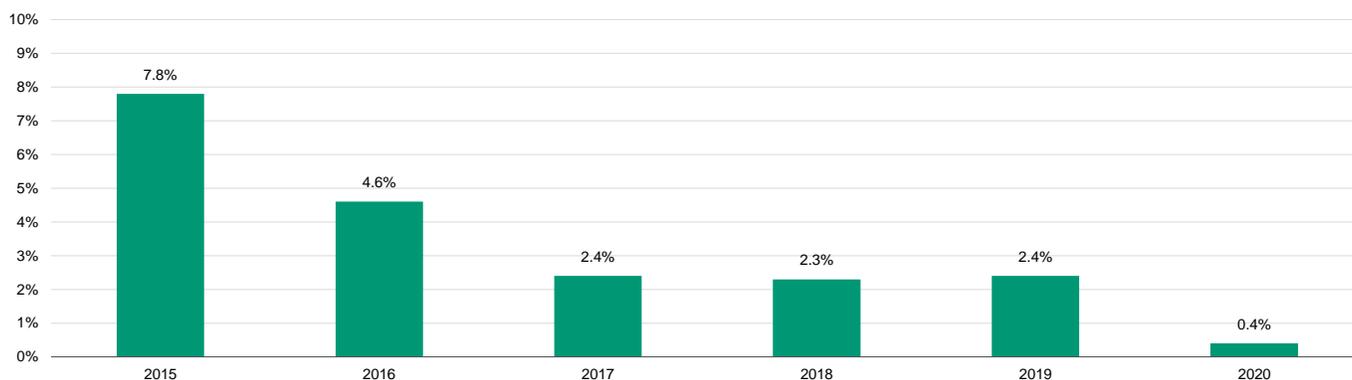
We view positively the disposal as it results in a reduction in adjusted leverage and it frees up up to NOK 1 billion per year of capital investments that Norsk Hydro can redirect towards more profitable investment opportunities.

The rolled products division contributed around NOK 24 billion in revenue (17% of Hydro's total) and NOK 1.3 billion underlying EBITDA (9% of Hydro's total) in 2020. The low profitability of the division was already mitigated by NOK500 million of cost improvements and also affected by the antidumping measures that the US and China had put in place with respect to certain EU rolled products.

The restructuring and strategic review of the rolled operations was initiated in 2019, following several years of weak profitability and cash flow generation. The division failed for several years to deliver a Return on average Capital employed in line with the company's targets of a return above 10% for its operations (and a 7-8% RoaCE specific target for Rolled Products).

Exhibit 6

**Rolled products failed to deliver 10% RoaCE for several years in a row**  
**Rolled Products Return on average Capital Employed (2015-2020)**



Source: Company data

Norsk Hydro has entered into agreements for the continued supply of sheet ingot, liquid metal and raw materials, thus there would be a limited impact, if any, on Norsk Hydro's other businesses.

We expect the bulk of the proceeds to be primarily invested in the growth segments for the company: recycling, renewable energy or batteries, where Norsk Hydro has several early stages initiatives ongoing.

The company has announced that it won't distribute the cash proceeds as an extraordinary dividend or share buy-backs. Given the reduction in the pension deficit, the transaction will result in an approximate 0.4x reduction in Moody's adjusted Debt/EBITDA.

**Lower impact of the coronavirus compared to expectations; aluminium market will remain in surplus in 2021**

In 2020, the coronavirus outbreak had a significant impact on the company's operations and on the wider aluminum market. However, after the trough seen in Q2, the market has been gradually recovering, resulting in volume declines which were lower than the market expectations.

For what concerns the downstream markets, the automotive and building and construction sectors, which together account for around 50% of global aluminum demand, were initially heavily impacted by the consequences of the coronavirus outbreak but, since then, have recovered more quickly than we had originally expected. In 2020, volume sales of rolled products and extruded solutions declined by respectively 10% and 12%, but Q4 2020 trading was broadly in line with the same levels of the same period a year earlier, with Norsk Hydro performing better than the wider market, in particular in extruded solutions.

The monthly sales of cars at the end of 2020 were at levels similar to the ones before the coronavirus outbreak, although the recovery was not uniform across the regions and across various product classes. The recovery has been more resilient for the higher-end segment, where aluminium is primarily utilized and this has helped sustain its demand. In addition, the temporary stoppages to manufacturing, especially during the first wave of lockdowns, led to a destocking of raw materials for OEMs. Since then, they have increased demand for aluminium extruded solutions and rolled products in the second part of the year, in order to restock.

The building and construction segment (in particular residential, due to substantial refurbishing activities) has also reacted positively and the wider industrial end-market has performed well, in line with the recovery in industrial production.

In 2021, we expect the downstream markets to return to grow by mid-to-high single digits percentages, driven by the recovery following the pandemic and to be sustained by the structurally increasing demand for electric vehicles, that have a higher need for lightweight aluminium frames and batteries.

Upstream activities followed a similar trend. After an initial decline in Q2, the prices of aluminum have significantly rebounded in the second part of 2020 and in early 2021, exceeding the pre-pandemic levels.

LME prices were approximately \$2,200/tonne at the end of February 2021, a 60% increase from the lowest levels around \$1400/tonne seen in April 2020. The increase in prices was driven by a strong rebound of demand in China, on the back of significant fiscal stimulus,

and the improved prospects for the wider economy after the development of the coronavirus vaccines. The increase in demand was so significant that China, which accounted for 57% of the global aluminium production in 2020, has become a net importer of aluminium for the first time since 2009.

Prior to the coronavirus outbreak, the global primary aluminium market was already expected to shift into a surplus of approximately 1 million tonnes in 2020, compared to the overall deficit position recorded in 2019, amid several large plant closures in China. New supply was forecast to outpace modest demand growth in both China and the rest of the world in 2020. Strong demand for aluminium in China resulted in capacity remaining on stream to benefit of the high prices.

At the end of 2020, the surplus was approximately 3 million tonnes, higher than what expected at the beginning of 2020, but significantly lower than the revised market expectations, following the coronavirus outbreak, of 5 million tonnes. We, however, highlight the higher uncertainty on the unreported stock volumes in the aluminium market.

In 2020, Norsk Hydro's upstream activities performed better than in 2019, as it benefitted from increased production at Alunorte and Paragominas, following the lifting of the embargo in 2019. The company's activities were relatively unaffected by the coronavirus outbreak and benefitted of the suspension of mining activities in several countries.

In 2021, we expect the aluminum market to remain in surplus (1.5/2 million tonnes), on an improving trend compared to 2020, as the growing demand will be partially absorbed by new capacity to come on stream, especially in China. In that regard, we highlight that in November 2020, Norsk Hydro restarted a production line at its smelter in Husnes (Norway) in order to deal with the demand increase, in particular to satisfy the growing demand for greener aluminium.

### **Alunorte ramp-up and cost improvement program offset coronavirus impact in 2020; strong growth in EBITDA expected in 2021**

In 2018-2019, Hydro's financial performance came under pressure primarily because of the 50% production curtailment imposed at the Alunorte alumina refinery, but also the more challenging operating conditions prevailing in the global aluminium sector. 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 a 50% production curtailment at the Alunorte alumina refinery in February 2018. Consequently, Hydro's 100%-owned Paragominas mine, which is Alunorte's primary source of bauxite, and its part-owned Albras aluminium plant also reduced their production by 50%. During the 15-month embargo that was eventually lifted in May 2019, Hydro had to source alumina from third parties, which led to some significant increase in raw material costs, strongly impacting the profitability margin.

In 2020, Hydro's revenue and EBITDA were moderately affected by the coronavirus pandemic. However, the underlying EBITDA grew by NOK 2.5 billion to NOK14.3 billion, as 2019 was a very weak comparable given the operational issues at Alunorte. In addition, Norsk Hydro was affected by a cyber-attack in March 2019, that had an impact of approximately NOK400-500 million after having accounted for insurance compensation.

In 2020, the upstream activities saw a decline in the average realised prices of alumina and aluminium respectively by 18% and 8%, and in the premia above LME prices (-29%). These declines were mitigated by a decline in raw material costs (primarily fuel and carbon coke) and by the positive effect of a weaker Norwegian krone relative to the US dollar. However, the increase in volumes and the lower alumina cost (directly sourced rather than from third parties) led to an increase in EBITDA of approximately NOK3 billion to NOK7.4 billion.

The EBITDA contribution from Hydro's downstream activities was broadly stable at NOK5.6 billion. This reflected the impact of the coronavirus pandemic and the effect of anti-dumping measures for European rolled products in the US, which were broadly offset by the savings generated by the improvement program.

The growth in EBITDA was also supported by the achievement of its improvement target of NOK4.2 billion in 2020. In November 2021, Hydro raised its improvement target to NOK 8.5 billion by 2025 from the previous one of NOK7.3 billion by 2023.

In 2021, we expect the company to grow its underlying EBITDA to around NOK19-20 billion, as the company benefits of nameplate capacity at Alunorte, an improved business outlook for the broader industry and the improvement program will generate cost savings.

### Expectation of an improvement in leverage and cash flow generation metrics in 2021

In 2020, the group's estimated funds from operations (FFO) increased by 47% to NOK11.3 billion driven by higher underlying EBITDA. This was enhanced by a NOK2.4 billion release of operating working capital, as inventories continued to be liquidated in the course of 2020. Notably, Hydro remained free cash flow (FCF) positive after capex and dividends, as the company reduced its 2020 capex by 25% in order to deal with the effects of the coronavirus outbreak.

Thus, the rise in Moody's-adjusted total debt was primarily driven by an increase in NOK10 billion in cash and cash equivalents and by an approximately NOK2.0 billion increase in the pension adjustment. Net debt, according to Moody's definition, was broadly stable when compared to 2019.

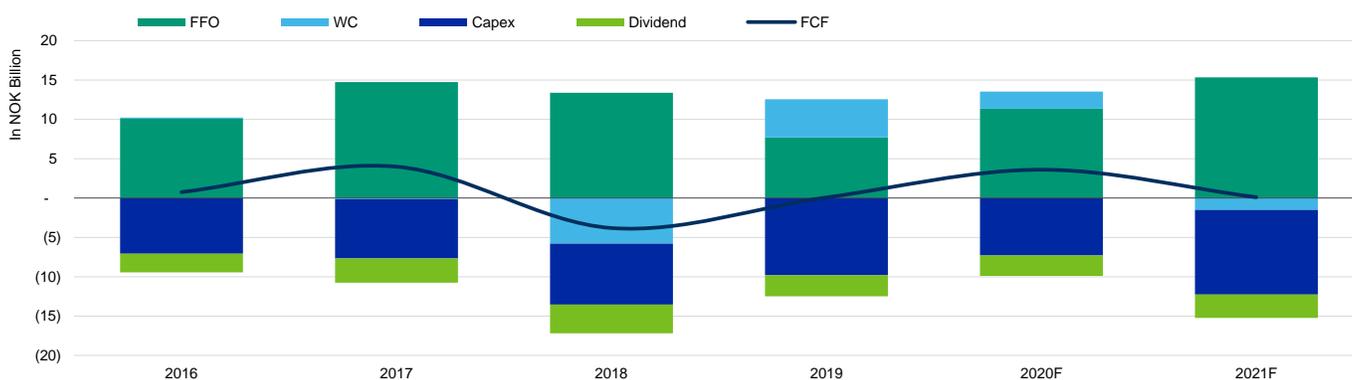
Overall, Moody's-adjusted total debt to EBITDA slightly declined to 3.3x at year-end 2020 against 3.4x in 2019, while cash flow from operations (CFO) minus dividends to total debt remained broadly stable at 23% (v. 24% in 2019).

In 2021, we estimate that Hydro's operating cash flow will continue to grow by about 35%, as operating profitability continues to improve. However, this should be mitigated by a moderate working capital outflow of NOK1-1.5 billion, in order to partially replenish inventories.

We also expect capex of approximately NOK9.75 billion, in line with the mid-point of the public guidance, and dividend of approximately NOK3 billion. This should help keep Moody's adjusted debt to EBITDA around 2.0x in 2021 and CFO minus dividend to total debt around 28%, strongly positioned in the range expected for a Baa3 rating. We continue to highlight the much larger cash balance that the company has compared to historical levels and the stronger net leverage metrics compared to historical values.

Exhibit 7

#### Historical and Projected Evolution of Cash Flow Composition



Source: Moody's Financial Metrics™

### Other - GRI Considerations

Hydro's Baa3 rating combines: (i) the company's stand-alone credit quality, or Baseline Credit Assessment ("bca") of baa3 and; (ii) our assessment of the low co-dependency and low support of the Norwegian government in a distress situation, in accordance with our rating methodology for Government Related Issuers. The bca of baa3, in line with the final rating of Baa3, 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. The [Government of Norway](#) (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. We note that there are no current plans to increase or decrease this stake. No uplift also reflects the absence of a strong link to the government and our 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.

## ESG considerations

### Environmental

While we view the global mining industry as having elevated emerging environmental risk, environmental considerations are not a material factor in this rating action. While aluminium production is highly energy intensive, Hydro is a relatively low-CO<sub>2</sub> aluminium producer compared to the sector's average. It uses hydropower for the majority of its primary aluminium production, with 70% of the electricity used in electrolysis generated from renewable sources. In addition to improving its environmental/ carbon footprint, this should give Hydro an increasing cost advantage in the future.

In February 2018, two days of extreme rainfall led to potentially harmful spills of untreated water into the Para' river, near where the Alunorte refinery is located. This led to the 50% production curtailment at the Alunorte alumina refinery ordered by the Brazilian authorities, which was eventually lifted in May 2019.

More than 90 investigations and inspections were conducted by Brazil's relevant authorities, including the federal environmental agency, Ibama, and the environmental agency in the state Pará, Semas. All confirmed there were no leaks or overflow from Alunorte's bauxite residue deposits. We highlight, however, that Norsk Hydro has been sued by several Brazilian communities in Brazil and in the Netherlands over concerns that the spill has led to contamination of the Murucupi river and of the surrounding areas, exposing local residents to various health problems.

Hydro's new climate strategy -- "30 by 2030" -- calls for reducing its gross CO<sub>2</sub> emissions by 30% and non-GHG emissions by 50% throughout the value chain by 2030. The company has an intermediate goal to reduce emissions by 10% by 2025 and to be carbon neutral by 2050.

Also, Hydro is developing low-carbon and recycled aluminium products such as the CIRCAL and REDUXA brands, which should support its competitive position by helping customers reduce their own carbon footprint.

Norsk Hydro is also working on a project concerning Tailings dry backfill that will eliminate the need for new tailings storage facilities at Paragominas. The tailings dry backfill technology allows inner tailings from bauxite mining to be returned to the already opened and mined areas instead of being deposited in separate permanent storage areas.

### Social

In March 2019, Hydro was subject to an extensive cyber-attack. The attack affected the entire organization, with the most significant operational challenges and financial losses occurring in Hydro's Extruded Solutions business area. Hydro's other business areas were able to maintain normal production levels, albeit based upon work-intensive workarounds and manual procedures.

Hydro has resumed normal operations, and estimates the total cost of the cyber-attack to be in the range NOK650-750mn. The company has robust cyber insurance in place with recognized insurers, which largely covered the cost of the cyber-attack.

Significantly, Hydro was particularly proactive in its response to the attack. It set up a website to disseminate factual information on the ransomware attack, drafted social media posts to detail progress on recovery efforts, and held daily webcasts with senior staff answering questions from a virtual audience. A year later, Hydro has seen no notable customer defections resulting from the event and it is regularly cited as a best-in-class example of how to communicate with the broader public about ransomware events.

### Governance

Hydro is a public limited company organized under Norwegian law with a governance structure based on Norwegian corporate law. Its share listing is on Oslo Børs, which subjects it to Norwegian securities legislation and stock exchange regulations.

Hydro follows the Norwegian Code of Practice on Corporate Governance of October 2018. The corporate assembly elects the board of directors, including its chair and deputy chair. In compliance with Hydro's articles of association, the board of directors consists of 10 members. Seven-member Board are considered independent and there are also three employee representatives sitting at the Board. These are elected for a period of up to two years.

Hydro's views the maintenance of a strong financial position and an investment grade credit rating as important for the strategic development of its businesses and securing access to debt capital on attractive terms. In line with its ambition to retain its credit rating,

Hydro intends to keep its adjusted net debt (excluding net debt of equity accounted investment)/EBITDA below 2x over the cycle (1.9x in 2020).

Hydro's long term dividend policy is to pay out, on average, 50% of net income (raised from 40% in February 2021) as ordinary dividend over the cycle to shareholders. However, its payout ratio averaged ~65% in the period 2015-2020. The dividend policy has a floor of NOK 1.25 per share equivalent to a payout of ~NOK 2.6 billion. Share buy-backs or extraordinary dividends will supplement dividends during periods of strong financials, due considerations being given to the commodity cycle and capital for future growth.

In April 2020, Hydro had suspended its dividend payment for 2019 to boost liquidity and better deal with the consequences of the coronavirus outbreak. Given the improved situation compared to previous expectations, the company decided to distribute the dividend in November 2020.

## Liquidity Analysis

Hydro's liquidity position is robust. At the end of 2020, Hydro had cash balances of NOK17.6 billion (around \$2 billion) and NOK4.1 billion of short-term investments. Its \$1.6 billion revolving multi-currency credit facility maturing in December 2025, with a one-year extension option, was fully undrawn.

In 2021, the group has total debt maturities of NOK4.7 billion, including NOK4.0 billion under short-term bank facilities, which the company expects to be rolled over. In addition, it has no major debt maturity falling due in 2021.

## Rating Methodology and Scorecard Factors

The principal methodology used in these ratings was [Mining](#), published in September 2018, and the [Government Related Issuers](#) rating methodology, published in February 2020.

Exhibit 8

### Norsk Hydro ASA

Mining Industry Scorecard [1][2]			Moody's 12-18 Month Forward View As of 3/9/2021 [3]	
	Current 12/31/2020E	Score	Measure	Score
<b>Factor 1 : Scale (20%)</b>				
a) Revenues (USD Billion)	\$16.4	Baa	\$17 - \$19	Baa
<b>Factor 2 : Business Profile (25%)</b>				
a) Business Profile	Baa	Baa	Baa	Baa
<b>Factor 3 : Profitability and Efficiency (10%)</b>				
a) EBIT Margin (EBIT / Revenue)	3.0%	Caa	6% - 8%	B
<b>Factor 4 : Leverage and Coverage (30%)</b>				
a) EBIT / Interest Expense	3.2x	Ba	8x - 9x	A
b) Debt / EBITDA	3.3x	Ba	2x - 2.3x	Baa
c) Debt / Total Capital	34.4%	A	27% - 29%	Aa
d) (CFO - Dividends) / Debt	23.1%	Ba	24% - 27%	Ba
<b>Factor 5 : Financial Policy (15%)</b>				
a) Financial Policy	Baa	Baa	Baa	Baa
<b>Rating:</b>				
a) Scorecard-Indicated Outcome		Ba1		Baa3
b) Actual Rating Assigned				Baa3
<b>Government-Related Issuer</b>				
	<b>Factor</b>			
a) Baseline Credit Assessment	baa3			
b) Government Local Currency Rating	Aaa			
c) Default Dependence	Low			
d) Support	Low			
e) Actual Rating Assigned	Baa3			

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. 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 9

Category	Moody's Rating
<b>NORSK HYDRO ASA</b>	
Outlook	Stable
Issuer Rating -Dom Curr	Baa3
Senior Unsecured	Baa3

Source: Moody's Investors Service

## Appendix

Exhibit 10

### Selected Rated Peers for Norsk Hydro

(USD millions)	Norsk Hydro ASA			Alcoa Nederland Holding			Howmet Aerospace Inc.			United Company RUSAL Plc		
	Baa3 Stable			Ba1 Stable			Ba3 Negative			Ba3 Stable		
	FYE Dec-18	FYE Dec-19	FYE Dec-20e	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-18	FYE Dec-19	LTM Jun-20
Revenue	\$19,598	\$17,031	\$16,442	\$13,403	\$10,433	\$9,286	\$14,014	\$7,098	\$5,259	\$10,280	\$9,711	\$8,990
EBITDA	\$2,180	\$1,337	\$1,698	\$3,028	\$1,540	\$1,062	\$2,162	\$1,863	\$1,192	\$2,211	\$1,011	\$700
Total Debt	\$3,699	\$4,615	\$5,550	\$3,624	\$3,511	\$4,110	\$9,653	\$7,475	\$6,514	\$8,460	\$8,414	\$8,084
EBIT Margin	6.2%	2.1%	3.0%	16.5%	7.3%	3.7%	10.5%	17.6%	15.1%	16.4%	4.6%	1.5%
EBIT / Int. Exp.	7.0x	2.5x	3.2x	8.1x	3.5x	1.4x	2.6x	2.6x	2.0x	3.3x	0.7x	0.2x
Debt / EBITDA	1.8x	3.4x	3.3x	1.2x	2.3x	3.9x	4.5x	4.0x	5.5x	3.8x	8.3x	11.5x
Total Debt/Capital	24.5%	31.4%	34.4%	31.8%	36.5%	44.1%	61.8%	61.6%	63.9%	60.2%	54.3%	55.7%
(CFO - Dividends) / Debt	12.3%	24.4%	23.1%	17.4%	11.3%	13.1%	15.1%	22.5%	11.4%	13.4%	26.6%	30.6%

All figures and ratios calculated using Moody's estimates and standard adjustments. Howmet Aerospace Inc. is the former Arconic Inc.; RUSAL's EBIT/interest expense and debt/EBITDA metrics calculated including dividends from Norilsk Nickel.

Source: Moody's Financial Metrics™

Exhibit 11

### Norsk Hydro ASA historical Moody's adjusted total debt breakdown

(in NOK Millions)	2016	2017	2018	2019	2020E
<b>As Reported Debt</b>	<b>6,680</b>	<b>17,257</b>	<b>18,715</b>	<b>25,015</b>	<b>29,559</b>
Pensions	12,871	14,745	10,832	15,534	17,602
Operating Leases	654	2,110	2,486	0	0
Non-Standard Adjustments	0	0	0	0	0
<b>Moody's-Adjusted Debt</b>	<b>20,205</b>	<b>34,112</b>	<b>32,033</b>	<b>40,549</b>	<b>47,161</b>

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

Source: Moody's Financial Metrics™

Exhibit 12

## Norsk Hydro ASA historical Moody's adjusted EBITDA breakdown

(in NOK Millions)	2016	2017	2018	2019	2020E
<b>As Reported EBITDA</b>	<b>15,285</b>	<b>17,906</b>	<b>14,789</b>	<b>9,087</b>	<b>15,979</b>
Pensions	3	26	63	(34)	(34)
Operating Leases	202	311	657	0	0
Interest Expense – Discounting	(199)	(216)	(122)	(129)	(129)
Unusual	(3,264)	(1,839)	1,886	2,849	(1,383)
Non-Standard Adjustments	(149)	720	454	(19)	0
<b>Moody's-Adjusted EBITDA</b>	<b>11,878</b>	<b>16,908</b>	<b>17,727</b>	<b>11,754</b>	<b>14,433</b>

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

Source: Moody's Financial Metrics™

Exhibit 13

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

in NOK million	2015	2016	2017	2018	2019	2020E	2021F
<b>INCOME STATEMENT</b>							
Revenues	87,694	81,953	109,220	159,377	149,766	138,118	142,953
EBITDA	15,034	11,878	16,908	17,727	11,754	14,433	19,687
EBIT	9,721	6,661	10,516	9,814	3,181	4,200	11,307
Interest Expense	821	847	941	1,397	1,257	1,323	1,138
<b>BALANCE SHEET</b>							
Cash & Cash Equivalents	11,467	11,387	11,828	5,995	12,286	17,638	23,000
Total Debt	21,777	20,205	34,112	32,033	40,549	47,161	38,601
Net Debt	10,310	8,818	22,284	26,038	28,263	29,523	15,601
<b>CASH FLOW</b>							
Funds from Operations	12,593	10,083	14,749	13,367	7,711	11,340	15,262
Change in Working Capital items	2,328	192	(1,059)	(6,336)	5,609	2,175	(1,500)
Cash Flow from Operations	14,661	10,201	14,583	7,569	12,550	13,515	13,762
Capital Expenditures (CAPEX)	(5,542)	(7,089)	(7,532)	(7,763)	(9,834)	(7,287)	(10,750)
Dividends	(2,370)	(2,362)	(3,069)	(3,622)	(2,649)	(2,628)	(3,000)
Retained Cash Flow (RCF)	10,223	7,721	11,680	9,745	5,062	8,712	12,262
Free Cash Flow (FCF)	6,749	750	3,982	(3,816)	67	3,600	12
RCF / Debt	46.9%	38.2%	34.2%	30.4%	12.5%	18.5%	31.8%
FCF / Debt	31.0%	3.7%	11.7%	-11.9%	0.2%	7.6%	0.0%
(CFO - Dividends) / Debt	56.4%	38.8%	33.8%	12.3%	24.4%	23.1%	27.9%
<b>PROFITABILITY</b>							
EBIT Margin %	11.1%	8.1%	9.6%	6.2%	2.1%	3.0%	7.9%
EBITDA Margin %	17.1%	14.5%	15.5%	11.1%	7.8%	10.4%	13.8%
<b>INTEREST COVERAGE</b>							
EBIT / Interest Expense	11.8x	7.9x	11.2x	7.0x	2.5x	3.2x	9.9x
EBITDA / Interest Expense	18.3x	14.0x	18.0x	12.7x	9.4x	10.9x	17.3x
<b>LEVERAGE</b>							
Debt / EBITDA	1.4x	1.7x	2.0x	1.8x	3.4x	3.3x	2.0x
Net Debt / EBITDA	0.7x	0.7x	1.3x	1.5x	2.4x	2.0x	0.8x
Debt / Book Capitalization	21.1%	18.3%	26.2%	24.5%	31.4%	34.4%	29.1%

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. 2020E 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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