

## Research

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### Summary:

## Norsk Hydro ASA

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### Table Of Contents

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Rationale

Outlook

Our Base-Case Scenario

Company Description

Business Risk

Financial Risk

Liquidity

Government Influence

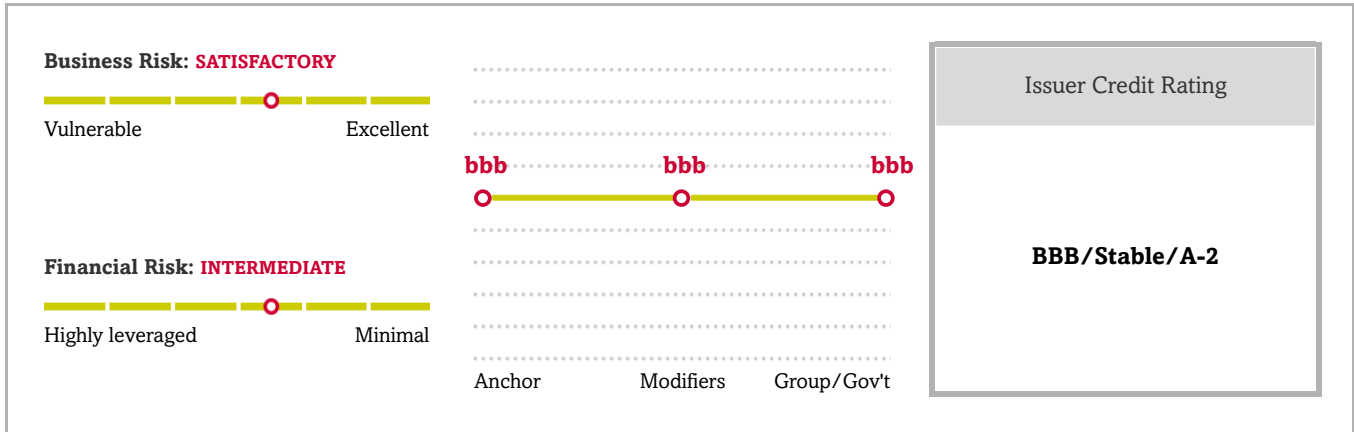
Ratings Score Snapshot

Reconciliation

Related Criteria

Summary:

# Norsk Hydro ASA



## Rationale

Business Risk: Satisfactory	Financial Risk: Intermediate
<ul style="list-style-type: none"> <li>World's 10th-largest producer of primary aluminum (2.1 metric tons [mt] annually), fully integrated into bauxite, alumina, power, and downstream operations.</li> <li>Position in the second quartile of the industry's cost curve.</li> <li>Relatively stable profit and free cash flow contribution from its own electricity generation hydro plants in Norway.</li> <li>Exposure to volatile aluminum industry conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Conservative financial policies and modest leverage, even when proportionally consolidating the Qatalum joint venture (JV) with Qatar Petroleum.</li> <li>Strong liquidity and maturity profile.</li> <li>High cash flow volatility, negatively impacted by some operational issues in Brazil over the last few years and the cyclical nature of aluminum prices.</li> <li>Consistently positive free operating cash flow (FOCF) generation.</li> <li>Limited pressure on dividends.</li> </ul>

## Outlook: Stable

The stable outlook on Norsk Hydro ASA reflects S&P Global Ratings' view that Norsk Hydro's cash flow generation and low debt level would translate into robust credit metrics in the coming years, among others adjusted funds from operations (FFO) to debt of more than 60%. We view an S&P Global Ratings-adjusted ratio of FFO to debt of above 40% through the cycle, together with positive discretionary cash flows (DCF), as in line with the rating. In our view, the ample headroom would allow the company to absorb the volatility of the industry, as well as opportunistic bolt-on acquisitions, before putting a pressure on the rating.

Our base-case, incorporating the 2018-2020 \$2,100 per ton (/ton) aluminum price expected in 2018-2020, translates into an adjusted EBITDA of Norwegian krone (NOK) 20 billion-NOK25 billion in 2018-2020, and DCF (free cash flow after capital spending [capex] and dividends) of NOK6 billion-NOK12 billion in the same period.

### Upside scenario

At this stage, we see a higher rating on Norsk Hydro as unlikely in the coming 12-18 months. A higher rating would need to be supported by a consistent record of Norsk Hydro meeting the following:

- A financial policy that would be consistent with adjusted FFO to debt above 60% over the cycle. As of today, the company's financial policy includes a commitment to maintain an FFO-to-debt ratio above 40% over the cycle.
- Maintaining a low debt level and a positive DCF through the cycle.

### Downside scenario

We may consider lowering our rating if:

- Norsk Hydro's adjusted FFO-to-debt ratio dropped below 40% under normal industry conditions or below 30% at the bottom of the cycle; or
- Norsk Hydro's DCF became materially negative.

In our view, such scenarios are possible if the company's capex or dividends are considerably larger than we currently expect, or as a result of continued sizable merger and acquisition (M&A) activity or pressured aluminum prices.

## Our Base-Case Scenario

Assumptions	Key Metrics																														
<ul style="list-style-type: none"> <li>Our expectations for GDP growth are 3.0% in 2018, 2.5% in 2019, and 1.8% in 2020 in the U.S. and 2.1% in 2018, 1.7% in 2019, and 1.6% in 2020 in the eurozone.</li> <li>Average exchange rates at US\$1/NOK8.3 and US\$1/Brazilian real (R\$) 3.35 in 2018 and US\$1/NOK8.3 and US\$1/R\$3.40 in 2019-2020.</li> <li>Average aluminum prices of \$2,100/ton in the rest of 2018 and in 2019-2020. The current aluminum price is \$2,050/ton. In addition, we factor in a significant physical premium on the London Metal Exchange prices. We think that elevated levels of premiums (around \$450/mt in the U.S., \$120/mt in Europe and Asia) might persist in the medium term.</li> <li>Slightly growing aluminum production to 2.3 million mt in 2019 from 2.1 million mt in 2017.</li> <li>Proportional consolidation of 50% in the Qatalum JV. We estimate Norsk Hydro's share in the venture's EBITDA at NOK2.6 billion-NOK2.7 billion in 2018-2020 (NOK2.2 billion in 2017).</li> <li>Working capital intrayear outflow of NOK2.0 billion.</li> <li>Consolidated capex, including the share in Qatalum, at NOK8.0 billion-NOK8.5 billion per year in 2018-2020 (NOK7.6 billion in 2017).</li> <li>Dividends of about NOK3.5 billion–NOK4.0 billion in line with the stated policy of 40% of net income.</li> <li>No significant M&amp;A activity (apart from the announced acquisition of ISAL, Aluchemie, and Alufluor for \$354 million).</li> </ul>	<table border="1"> <thead> <tr> <th></th> <th style="text-align: center;">2017A</th> <th style="text-align: center;">2018E</th> <th style="text-align: center;">2019E</th> </tr> </thead> <tbody> <tr> <td>Aluminium prices (\$/mt)</td> <td style="text-align: center;">1,915</td> <td style="text-align: center;">2,100</td> <td style="text-align: center;">2,100</td> </tr> <tr> <td>EBITDA (bil. NOK)*</td> <td style="text-align: center;">18.9</td> <td style="text-align: center;">20-22</td> <td style="text-align: center;">23-25</td> </tr> <tr> <td>Debt/EBITDA (x)</td> <td style="text-align: center;">1.3</td> <td style="text-align: center;">1.1</td> <td style="text-align: center;">Less than 1</td> </tr> <tr> <td>FFO/debt (%)</td> <td style="text-align: center;">66</td> <td style="text-align: center;">&gt;60</td> <td style="text-align: center;">&gt;100</td> </tr> <tr> <td>DCF (bil. NOK)</td> <td style="text-align: center;">6.4</td> <td style="text-align: center;">6.5</td> <td style="text-align: center;">12</td> </tr> <tr> <td>debt (bil. NOK)*</td> <td style="text-align: center;">24</td> <td style="text-align: center;">24</td> <td style="text-align: center;">14-17</td> </tr> </tbody> </table> <p>A--Actual. E--Estimate. *S&amp;P Global Ratings adjusted.</p>				2017A	2018E	2019E	Aluminium prices (\$/mt)	1,915	2,100	2,100	EBITDA (bil. NOK)*	18.9	20-22	23-25	Debt/EBITDA (x)	1.3	1.1	Less than 1	FFO/debt (%)	66	>60	>100	DCF (bil. NOK)	6.4	6.5	12	debt (bil. NOK)*	24	24	14-17
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## Company Description

Norsk Hydro is the world's tenth-largest primary aluminum producer and is fully integrated. Norsk Hydro's portfolio includes:

- Nine smelters with capacity of 2.1 mt, of which about 50% is in Norway, and the remainder in Germany, Qatar, Canada, Australia, Brazil, and Slovakia. The smelters are in the second quartile of the global cost curve. In 2017, the division contributed 41% of Norsk Hydro's adjusted EBITDA.
- Bauxite and alumina operations in Brazil, covering their own smelting operations' needs. Norsk Hydro's Alunorte

refinery is positioned in the second quartile of the global cash cost curve. In 2017, the division contributed 36% of Norsk Hydro's adjusted EBITDA.

- Hydro power plants with 11 terawatt hours production covering about one-third of Norsk Hydro's internal needs. In 2017, the division was responsible for 10% of the company's EBITDA.
- Downstream business, including recycling, rolling, and extruded products. After the acquisition of its partner, Norsk Hydro consolidated 100% of SAPA in 2017. We anticipate SAPA will contribute about 20%-25% to Norsk Hydro's S&P Global Ratings-adjusted EBITDA in 2018-2020.

## Business Risk: Satisfactory

Norsk Hydro's competitive advantage stems from the company's leading global position in the aluminum market, an industry that is characterized by high barriers to entry (being very capital-intensive) and a moderate degree of concentration among the biggest producers. The company is fully integrated into bauxite, alumina, power, and downstream, and has strong global presence throughout the aluminum value chain, notably No.2 in the European rolled products market and NO.1 in extrusion solutions in North America. With the full consolidation of SAPA last year, Norsk Hydro has become the world leader in extruded aluminum products used in construction and car-making.

Most operations are in the first or second quartiles of the global cash cost curve, ahead of Norsk Hydro's main competitors from China, such as Aluminum Corp. of China Ltd. (Chalco). Another important factor is the company's hydro power plants in Norway, which are uncorrelated with the aluminum business and provide stable cash flows.

At the same time, the company's business strengths are challenged by the certain operating and regulatory risks typical for the industry. That is evident, for example, by halved production at Norsk Hydro's bauxite mine and alumina refinery assets in Brazil since heavy rainfalls in February 2018. As we understand, the company is focused on remedial actions and is in constant dialogue with the Brazil government on restoring the production to full capacity, though when this will happen is still unclear. Although Norsk Hydro's 2018 results will be pressured by these events, and also linked to higher production costs due to raw material purchases from third parties, we think higher aluminum prices this year (which we expect to be at \$2,100/mt compared with \$1,915/mt in 2017) and the favorable impact for the company of the weakening Brazilian real will largely compensate for this impact.

### Peer comparison

The primary aluminum industry is fairly fragmented. In this respect, Norsk Hydro's capacity (2.1mt) is in line with Alcoa Corp (about 2.2mt), but smaller than Chalco (3.8mt).

We believe that Norsk Hydro's position along the aluminum value chain makes it more diversified than its immediate peers, which are mainly focused on primary aluminum. However, Norsk Hydro's exposure to the downstream activities translates into overall lower EBITDA margins.

We understand the Alcoa's smelters are better positioned on the global cash cost curve, while Chalco's smelters are positioned in the third and fourth quartiles. On the other hand, we view Alcoa's operating efficiency to be somewhat inferior versus Norsk Hydro's which results in our stronger assessment of the competitive position of Norsk Hydro.

Arconic has a strong footprint in the high-value added aerospace and automotive sectors, and benefits from the solid positions of many of its products and long-standing customer relations. This, we think, should stabilize the earnings through diversification and economies of scale. Norsk Hydro, in comparison, is more exposed to market and prices volatility, in our view, but also enjoys relatively stable earnings and cash flows from its energy division.

Table 1

<b>Norsk Hydro ASA -- Peer Comparison</b>				
<b>Industry Sector: Metals</b>				
	<b>Norsk Hydro ASA</b>	<b>Alcoa Corp.</b>	<b>Aluminum Corp. of China Ltd.</b>	<b>Arconic Inc</b>
Rating as of Aug. 22, 2018	BBB/Stable/A-2	BB+/Stable/--	BBB-/Stable/--	BBB-/Stable/A-3
<b>--Fiscal year ended Dec. 31, 2017--</b>				
<b>(Mil. \$)</b>				
Revenues	16,731.6	11,652.0	27,676.3	12,960.0
EBITDA	2,311.5	2,225.0	2,226.2	1,991.5
Funds from operations (FFO)	1,935.3	1,528.5	1,232.2	1,217.3
Net income from cont. oper.	1,073.8	217.0	211.8	(74)
Cash flow from operations	2,082.5	1,376.5	1,169.9	917.3
Capital expenditures	922.6	388.0	1,378.7	574.0
Free operating cash flow	1,159.9	988.5	(208.8)	343.3
Discretionary cash flow	784.7	726.5	(256.4)	167.3
Cash and short-term investments	1,606.4	1,358.0	4,264.9	2,150.0
Debt	2,942.1	3,800.6	15,310.7	8,350.8
Equity	11,279.0	6,996.9	8,538.1	5,217.8
<b>Adjusted ratios</b>				
EBITDA margin (%)	13.8	19.1	8.1	15.4
Return on capital (%)	11.4	11.9	5.3	10.0
EBITDA interest coverage (x)	18.9	8.6	2.3	3.0
FFO cash int. cov. (X)	46.5	15.3	2.4	3.5
Debt/EBITDA (x)	1.3	1.7	6.9	4.2
FFO/debt (%)	65.8	40.2	8.1	14.6
Cash flow from operations/debt (%)	70.8	36.2	7.6	11.0
Free operating cash flow/debt (%)	39.4	26.0	(1.4)	4.1
Discretionary cash flow/debt (%)	26.7	19.1	(1.7)	2.0

## Financial Risk: Intermediate

We forecast that Norsk Hydro will generate S&P Global Ratings-adjusted FFO to debt of more than 60% in 2018-2020 (66% in 2017), complemented by positive DCF generation through the cycle. In our base case, we take into account Norsk Hydro's track record of maintaining headroom over the 40% FFO-to-debt target stated in the financial policy, as well as modest leverage and limited pressure on dividends.

We think the company sees its credit metrics headroom as a buffer against the potentially adverse market conditions.

The aluminum industry suffered from the global capacity oversupply for years and has been extremely volatile recently, affected by the consequences of several large-scale events, such as eco-driven capacity shutdowns in China, U.S. sanctions against one of the largest aluminum producers globally, UC Rusal, and the imposition of Section 232 tariffs on aluminum imports to the U.S. In addition, there has been rising pressure from alumina price growth, which might squeeze the industry margins in case the industry fundamentals for end-user aluminum products deteriorate.

In the past two years, the company has made several acquisitions of varied materiality, the largest of which was the NOK11.9 billion-worth acquisition of a 50% stake in the SAPA JV from Orkla. As we understand, in its M&A activities, Norsk Hydro is pursuing its strategy of strengthening its market positions in the high-value added segment of the value chain, but the company also prioritizes in decision-making the impact of such M&A on its financial stability. As such, we would expect moderation in capex and dividends, if needed to support the credit metrics. This view is supported, inter alia, by Norsk Hydro's historical track record of modest dividend payout even under improving industry conditions.

## Financial summary

Table 2

Norsk Hydro ASA -- Financial Summary					
Industry Sector: Metals					
	--Fiscal year ended Dec. 31--				
	2017	2016	2015	2014	2013
Rating history	BBB/Stable/A-2	BBB/Stable/A-2	BBB/Stable/A-2	BBB/Stable/A-2	BBB/Stable/A-2
<b>(Mil. NOK)</b>					
Revenues	136,849.0	111,045.0	117,764.0	103,366.0	85,058.0
EBITDA	18,909.5	14,057.0	16,990.0	12,115.0	7,346.0
Funds from operations (FFO)	15,831.5	11,565.2	14,787.4	9,623.8	5,486.3
Net income from continuing operations	8,783.0	6,388.0	2,020.0	797.0	(1,110)
Cash flow from operations	17,035.5	13,110.2	17,198.4	8,196.8	7,213.3
Capital expenditures	7,546.0	7,985.0	6,377.0	4,141.0	3,484.0
Free operating cash flow	9,489.5	5,125.2	10,821.4	4,055.8	3,729.3
Discretionary cash flow	6,420.5	2,763.2	8,451.4	2,112.8	1,754.3
Cash and short-term investments	13,139.0	12,648.0	12,669.0	11,039.0	10,892.0
Debt	24,063.9	14,111.6	18,174.3	24,436.5	19,112.6
Equity	92,252.0	87,639.0	79,329.0	79,941.0	75,264.0
<b>Adjusted ratios</b>					
EBITDA margin (%)	13.8	12.7	14.4	11.7	8.6
Return on capital (%)	11.4	7.1	10.0	5.9	1.9
EBITDA interest coverage (x)	18.9	11.4	16.4	9.7	8.9
FFO cash int. cov. (x)	46.5	33.8	46.8	23.0	14.5
Debt/EBITDA (x)	1.3	1.0	1.1	2.0	2.6
FFO/debt (%)	65.8	82.0	81.4	39.4	28.7
Cash flow from operations/debt (%)	70.8	92.9	94.6	33.5	37.7
Free operating cash flow/debt (%)	39.4	36.3	59.5	16.6	19.5
Discretionary cash flow/debt (%)	26.7	19.6	46.5	8.6	9.2

## Liquidity: Strong

We view Norsk Hydro's liquidity as strong. We estimate that liquidity sources will cover uses by about 2.4x in the next 12 months. Our assessment is supported by high cash balances, availability of US\$1.7 billion under the committed credit line expiring in 2020, and minimal short-term maturities. Our assessment is further supported by Norsk Hydro's generally prudent liquidity management, good access to capital markets, and well-established relationships with banks.

We believe that Norsk Hydro's liquidity and its ability to generate free cash flow through the cycle provide it material headroom to absorb high-impact, low probability events without the need for refinancing.

In our view, a stronger liquidity assessment would need to be supported a track record of maintaining the liquidity ratio above 2.0x when incorporating a potential acquisition. In 2017-2018, the company completed a number of acquisitions, including the sizable purchase of the 50% stake in the SAPA JV for the cash consideration of NOK11.9 billion, which resulted in a temporary deterioration of the liquidity ratio.

Principal Liquidity Sources	Principal Liquidity Uses
<p>In the 12 months commencing July 1, 2018, Norsk Hydro had the following sizable liquidity sources:</p> <ul style="list-style-type: none"> <li>• Cash and cash equivalents of NOK5.7 billion;</li> <li>• FFO of NOK15 billion-NOK17 billion in our base-case scenario and</li> <li>• Availability under the committed credit line of \$1.7 billion (about NOK14 billion) maturing in 2020.</li> </ul>	<p>In the same period, the company has the following liquidity uses:</p> <ul style="list-style-type: none"> <li>• Minimal short-term debt maturities of NOK0.3 billion;</li> <li>• Capex of about NOK7 billion–NOK8 billion; and</li> <li>• Dividends of NOK3.5 billion-NOK4.0 billion.</li> </ul>

## Government Influence

We continue to view Norsk Hydro as a government-related entity (GRE) with a low likelihood of extraordinary state support. This view reflects the purely commercial nature of the company's business, being one investment in Norway's diversified portfolio. In the past few years, Norsk Hydro has invested in mining assets in Brazil and a new smelter in Qatar (the Qatalum JV). Moreover, the company's potential growth projects are outside of Norway. This makes it more of a global player, with a smaller proportion of its total business connected to the Norwegian economy than in the past. We also understand that the government has no plan to increase its current 34.3% stake. In our view, other Norwegian GREs where we factor in one notch of uplift for extraordinary state support, such as Equinor (67% government-owned) and Telenor (54%), benefit from a stronger link with or role for the Norwegian government. On the other hand, we see the company's Norwegian hydro power plants as an important factor that differentiates Norsk Hydro from other state-owned companies that we do not consider to be GREs, such as Yara (36%).



## Ratings Score Snapshot

### Issuer Credit Rating

BBB/Stable/A-2

### Business risk: Satisfactory

- **Country risk:** Low
- **Industry risk:** Moderately high
- **Competitive position:** Satisfactory

### Financial risk: Intermediate

- **Cash flow/Leverage:** Intermediate

Anchor: bbb

### Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Strong (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

### Stand-alone credit profile : bbb

- **Related government rating:** AAA
- **Likelihood of government support:** Low (no impact)

## Reconciliation

Table 3

Reconciliation Of Norsk Hydro ASA Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. NOK)

--Fiscal year ended Dec. 31, 2017--

#### Norsk Hydro ASA reported amounts

	Debt	Shareholders' equity	Revenues	EBITDA	Operating income	Interest expense	EBITDA	Cash flow from operations	Capital expenditures
Reported	17,257.0	87,074.0	109,220.0	18,350.0	12,189.0	302.0	18,350.0	14,347.0	7,296.0
<b>S&amp;P Global Ratings' adjustments</b>									
Interest expense (reported)	--	--	--	--	--	--	(302.0)	--	--
Interest income (reported)	--	--	--	--	--	--	481.0	--	--

Table 3

Reconciliation Of Norsk Hydro ASA Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. NOK) (cont.)									
Current tax expense (reported)	--	--	--	--	--	--	(2,575.0)	--	--
Operating leases	1,949.7	--	--	457.5	89.2	89.2	368.3	368.3	--
Postretirement benefit obligations/deferred compensation	7,895.0	--	--	--	--	129.0	(144.4)	48.6	--
Surplus cash	(12,139.0)	--	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	--	76.0	(76.0)	--	--
Deconsolidation / consolidation	5,800.0	--	27,629.0	3,789.0	2,125.0	234.0	3,555.0	1,923.0	250.0
Asset retirement obligations	3,301.2	--	--	--	--	171.0	(138.5)	348.5	--
Non-operating income (expense)	--	--	--	--	481.0	--	--	--	--
Non-controlling Interest/Minority interest	--	5,178.0	--	--	--	--	--	--	--
EBITDA - Income (expense) of unconsolidated companies	--	--	--	(1,527.0)	(1,527.0)	--	(1,527.0)	--	--
EBITDA - Gain/(Loss) on disposals of PP&E	--	--	--	(30.0)	(30.0)	--	(30.0)	--	--
EBITDA - Derivatives	--	--	--	466.0	466.0	--	466.0	--	--
EBITDA - Business Divestments	--	--	--	(2,177.0)	(2,177.0)	--	(2,177.0)	--	--
EBITDA - Inventory	--	--	--	(419.0)	(419.0)	--	(419.0)	--	--
D&A - Impairment charges/(reversals)	--	--	--	--	5.0	--	--	--	--
EBIT - Income (expense) of unconsolidated companies	--	--	--	--	1,527.0	--	--	--	--
Total adjustments	6,806.9	5,178.0	27,629.0	559.5	540.2	699.2	(2,518.5)	2,688.5	250.0
<b>S&amp;P Global Ratings' adjusted amounts</b>									
	<b>Debt</b>	<b>Equity</b>	<b>Revenues</b>	<b>EBITDA</b>	<b>EBIT</b>	<b>Interest expense</b>	<b>Funds from operations</b>	<b>Cash flow from operations</b>	<b>Capital expenditures</b>
Adjusted	24,063.9	92,252.0	136,849.0	18,909.5	12,729.2	1,001.2	15,831.5	17,035.5	7,546.0

## Related Criteria

- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers,

Dec. 16, 2014

- Criteria - Corporates - Industrials: Key Credit Factors For The Metals And Mining Upstream Industry, Dec. 20, 2013
- Criteria - Corporates - Industrials: Key Credit Factors For The Metals And Mining Downstream Industry, Dec. 20, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - Industrials: Methodology For Standard & Poor's Metals And Mining Price Assumptions, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

### Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
<b>Satisfactory</b>	a/a-	bbb+	<b>bbb/bbb-</b>	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

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