

## CREDIT OPINION

3 August 2017

### Update

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#### RATINGS

##### Yara International ASA

Domicile	Norway
Long Term Rating	Baa2
Type	LT Issuer Rating - Fgn 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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## Yara International ASA

### Update to Discussion of Key Credit Factors

#### Summary

Yara's Baa2 rating is underpinned by the significant scale and high degree of integration of its operations, its leading position in the nitrogen fertilizer markets, both as a producer and a distributor, and its global footprint, albeit with a more limited presence in North America. The assessment of the group's operating and business risks also takes into account the relatively high cyclicity of the fertiliser industry, as well as its high exposure to energy and commodity markets (natural gas, agriculture).

In the context of Yara's integrated business model, we view the group's strong distribution capabilities (boosted in recent years by acquisitions in Latin America and Africa) as a stabilising factor outweighing their dilutive effect on its EBITDA margin. On the production side, the focus of Yara's product offering on premium-priced complex fertilisers (such as NPK) also helps mitigate its inherent exposure to the cyclicity affecting the global nitrogen fertiliser sector.

With urea prices under pressure in supply-driven markets, and the group's investment spend projected to peak around NOK18 billion (\$2.2 billion) as various growth projects near completion, we expect Yara to generate substantial negative free cash flow in 2017. This will lead its credit metrics to shift towards the weak end of our guidance for the Baa2, with total debt to EBITDA around 2.5x and retained cash flow (RCF) to total debt in the mid to low twenties in percentage terms.

Looking ahead, we expect that incremental earnings accruing from efficiency improvement initiatives and the start-up/ ramp-up of new projects will support a recovery in Yara's operating profitability starting 2018 under a range of price scenarios. Combined with reduced investments and the maintenance of a prudent shareholder distribution policy, this should allow Yara to return to positive free cash flow in 2019 and restore headroom within its credit metrics relative to our rating guidance.

## Credit Strengths

- » Resilient business model underpinned by significant scale and leading positions in fertiliser markets as well as an extensive global distribution network and sizeable marketing operations of nitrogen chemicals and gases for industrial use
- » Yara's growth strategy is flexible and tempered by conservative funding policies and strong track-record at integrating acquisitions
- » Robust balance sheet to accommodate large ongoing committed growth capex amid current market cyclical downturn

## Credit Challenges

- » Yara's fertiliser business is cyclical, subject to capacity additions, demand and pricing trends in agri-commodities
- » Recent urea capacity additions put pressure on nitrogen pricing and profitability albeit mitigated by lower natural gas prices
- » Large planned capex amid market pressures to result in some substantial negative free cash flow and deterioration in credit metrics in 2017-18

## Rating Outlook

The stable outlook reflects our expectation that contributions from efficiency initiatives and the start-up of growth projects will support the recovery in Yara's cash flow and credit metrics within the next eighteen months.

## Factors that Could Lead to an Upgrade

At present time, we see limited upside pressure on Yara's Baa2 ratings, considering the pressure on operating profitability and the substantial cash outlays associated with its various growth projects.

## Factors that Could Lead to a Downgrade

Downward pressure on the Baa2 rating could arise should Yara:

- » suffer a more severe and prolonged deterioration in operating results and cash flow generation, leading to some pronounced weakness in credit metrics, including debt to EBITDA rising above 3x and RCF to debt falling into the low twenties in percentage terms for an extended period of time and/or
- » embark upon a more aggressive acquisitive strategy

## Key Indicators

Exhibit 1

### KEY INDICATORS [1]

	12/31/2016	12/31/2015	12/31/2014	12/31/2013	12/31/2012
Revenues (USD Billion)	\$11.3	\$13.4	\$15.1	\$14.4	\$14.4
PP&E (net) (USD Billion)	\$7.5	\$6.6	\$6.5	\$6.4	\$5.6
EBITDA Margin %	17.1%	18.7%	18.3%	15.2%	19.8%
ROA - EBIT / Average Assets	7.0%	10.9%	11.2%	9.1%	15.1%
Debt / EBITDA	1.6x	1.1x	1.3x	1.2x	1.0x
EBITDA / Interest Expense	11.7x	15.2x	17.5x	13.3x	18.4x
Retained Cash Flow / Debt	37.7%	56.0%	55.0%	50.7%	65.6%
Retained Cash Flow / Net Debt	43.8%	63.6%	63.9%	84.6%	157.7%

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

Source: Moody's Financial Metrics™

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## Corporate Profile

Headquartered in Oslo, Norway, Yara International ASA is the largest European producer and marketer of nitrogen fertilisers. In 2016, it produced around 27.0 million tonnes and sold around 36.2 million product tonnes. It reported revenues of NOK95.2 billion (\$11.3 billion) and EBITDA (excluding special items) of NOK14.4 billion (\$1.72 billion).

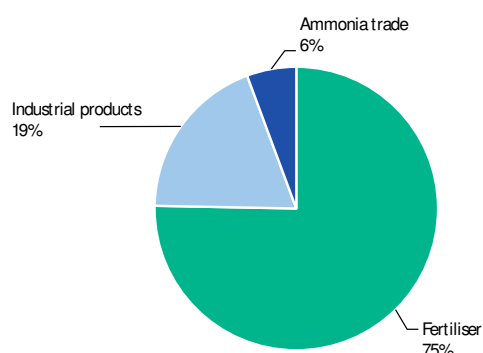
Yara enjoys broad operational and geographic diversification within the nitrogen fertiliser sector and has maintained its leadership as the world's largest nitrogen fertiliser producer by revenues. It holds number one positions in nitrates and NPK complex fertilisers and is the world's second largest producer of ammonia behind CF Industries Holdings, Inc (Ba2 stable). Also, Yara is a market leader in industrial nitrogen applications and air pollution abatement solutions.

The group's activities are organized around three operating segments supported by a global supply chain function:

- » Production runs large-scale production of nitrogen-based products
- » Crop Nutrition is responsible for the sales, marketing and distribution of crop nutrition products worldwide
- » Industrial develops and markets environmental solutions and essential products for industrial applications

Exhibit 2

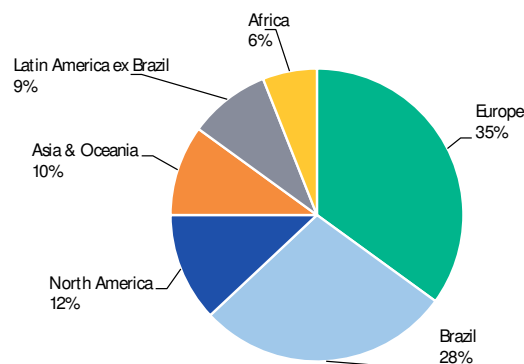
FY2016 Sales by Product



Source: Company's Filings; Moody's Investors Service

Exhibit 3

FY2016 Revenues by Region



Source: Company's Filings; Moody's Investors Service

## Detailed Credit Considerations

### YARA'S INTEGRATED MODEL AND GLOBAL NETWORK HELP REDUCE EARNINGS VOLATILITY

As the world's largest producer of nitrogen fertilisers, Yara's business profile is underpinned by the significant scale and high degree of integration of its operations, its diversified and distribution-focused business model, and leading positions in global fertiliser markets. This is tempered by the relatively high earning volatility characterising its core nitrogen-based fertiliser business, that is affected by chronic market imbalances resulting from extended periods of investment into capacity additions, the seasonality and cyclicity of agricultural markets as well as exposure to swings in energy and raw material costs.

Yara's extensive global distribution network and sizeable marketing operations of nitrogen chemicals and gases for industrial use add flexibility to manage volumes and margins through the cycle. Nevertheless, the company's profitability remains volatile. It is exposed to fluctuations in ammonia and urea prices - the latter largely driven by Chinese marginal cost producers, whose exports help balance the global market. In addition, Yara's revenue line also reflects nitrate and NPK premiums, which are influenced by crop prices driving farmers' demand. In the past five years, Yara's return on assets (calculated as EBIT / Average Total Assets) fluctuated between a peak of 18% in 2012 and a low of 8% in 2016.

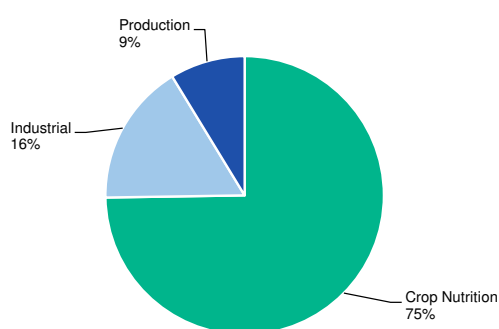
Yara also has a material exposure to feedstock costs, particularly natural gas, which accounts for 50%-80% of total input cost for urea production (depending on gas prices). Its European operations are disadvantaged relative to North American peers in terms of access

to low cost natural gas. In this context, we expect Yara to continue to manage its capacities (particularly commodity plants in Europe) with a view to maximising profitability.

That said, Yara's margins have, in the past three years, benefited from lower energy costs reflecting a marked decline in both European spot prices for gas and oil-linked products, and ammonia-linked gas costs outside Europe. In 2016, Yara's average gas cost was 30% and 19% lower year-on-year in Europe and outside Europe respectively, although this has partially reversed in H1 2017, due to higher European prices and a contractual gas price step-up in Yara's Pilbara ammonia plant in Australia.

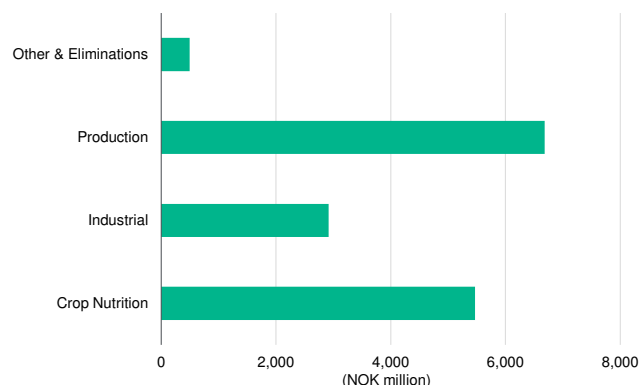
Yara benefits from a relatively low level of fixed cash costs (around 10-15%), underpinned by the significant economies of scale of its operations. The favourable logistics of Yara's ammonia facilities in Europe and the relatively low capital intensity of its distribution-focused business model should help defend margins during downturns.

Exhibit 4

**FY2016 External Revenues & Other Income**

Source: Company's Filings; Moody's Investors Service

Exhibit 5

**FY2016 EBITDA breakdown**

Source: Company's Filings; Moody's Investors Service

**YARA BALANCES GROWTH OBJECTIVES WITH FINANCIAL DISCIPLINE**

Since its inception as an independent publicly listed company in 2004, Yara's growth strategy has sought to leverage its integrated business model by undertaking some organic projects (including expansion/reconfiguration of existing facilities, greenfield projects), but also through establishing partnerships and making bolt-on acquisitions.

In recent years, Yara's growth strategy has spanned the whole fertiliser value chain including building large-scale, cost advantaged production facilities, securing access to low-cost raw material supplies and growing its sales of premium fertiliser and industrial products. In 2012, Yara completed a major capacity expansion of its joint venture with QAFCO (unrated) of Qatar, whereby it benefits from the agreement to market up to fifty percent of the JV's volumes. In October 2015, Yara took full ownership of the Australia-based Pilbara ammonia plant to strengthen its position in Asia.

Meanwhile, Yara has grown its presence in the strategically important Latin American markets. In 2013, it acquired the fertiliser mixing and distribution capabilities of Bunge in Brazil, which helped double its deliveries to the continent. This was followed in October 2014 by the acquisition of Colombian OFD Holdings, which added some production capacity in Colombia and further distribution capabilities across Latin America. In December 2014, Yara acquired a 60% stake in Galvani. This gave it access to phosphate resources and fertilizer capacity in Brazil, and enabled it to address the imbalance between its production and distribution operations in this key market.

To date, Yara's production capabilities in LatAm remain limited compared to peers, with a focus on mixing and distribution activities. However, it has plans to invest NOK3.9 billion in 2017-18 in the Salitre greenfield phosphate mining and processing project (2018 completion), and NOK1.3 billion on doubling the annual fertiliser production and blending capacity of its Rio Grande fertilizer production and blending operations (2020 completion).

In total, Yara expects to invest nearly NOK 18 billion in 2017 (NOK10.4 billion of which are growth investments). In addition to the two Brazil-based projects, this includes the acquisition of Tata Chemicals' urea plant and distribution business in India, which is expected to close in Q3 and will give Yara an integrated position in the world's second largest fertiliser market.

Yara is also undertaking several brownfield expansion projects in the Nordic countries and the Netherlands. In the US, where Yara remains under-represented in terms of production following its failed merger discussions with CF Industries in 2014, it has teamed up with BASF (A1 stable) to build a 750,000 tonnes p.a. ammonia plant (owned 68% by Yara and 32% by BASF) at a total cost of \$600 million (2018 completion).

Significantly, more than 50% of the group's total deliveries are now derived from value-added products such as calcium nitrate (CN), compound fertilizer (NPK), which contains all of the three major plant nutrients (i.e. nitrogen (N), phosphorus (P) and potassium (K)), and differentiated products (e.g. calcium ammonium nitrate (CAN), ammonium nitrate (AN)), for which Yara enjoys solid price premiums. This step-up in contribution from premium products and a sustained short position in ammonia in Europe should somewhat reduce the group's earnings volatility compared to historical measures.

#### LOWER FERTILISER PRICE ENVIRONMENT TO CONSTRAIN YARA'S HEADROOM WITHIN Baa2 RATING CATEGORY IN THE NEXT TWO YEARS

In the past five years, Yara funded total investments of NOK59 billion (nearly 60% of which related to growth/new build projects and acquisitions) and cash distributions to shareholders of around NOK20 billion (dividends: 82%; buybacks: 18%) in full out of operating cash flow, which averaged NOK14 billion p.a., and disposal proceeds of NOK10 billion.

However, Yara posted weaker results in 2016, owing to lower commodity upgrading margins and lower premiums for nitrates and NPKs. Fertiliser and compound NPK prices declined around 25% and 10% accordingly. This decrease was only partially compensated by higher volumes (+8% year-on-year), lower cost of gas and a stronger US dollar. Moody's adjusted EBITDA was down 20% to NOK16.2 billion, albeit against record 2015 results and broadly in line with the 2012-16 average of NOK16.7 billion.

Still, Yara exhibited strong credit metrics at year-end 2016 relative to the guidance for the Baa2 rating, including Moody's adjusted total debt to EBITDA of 1.6x and retained cash flow (RCF) to debt of 38%, while it held cash balances of around NOK3.5 billion.

In 2017, we expect Yara's operating profitability to further deteriorate. New cost advantaged capacity coming on stream (with the US and the Middle East accounting for 40% of net capacity additions in 2017-18) will keep downward pressure on urea prices. Despite the increase in production costs experienced by Chinese swing producers in the past twelve months as a result of higher coal prices, the price of exported urea from China, which acts as a floor for global urea prices, has failed to rise materially. Some Chinese marginal cost producers have been displaced by the new low cost capacity, while relatively slow demand further reduced the need for Chinese urea exports.

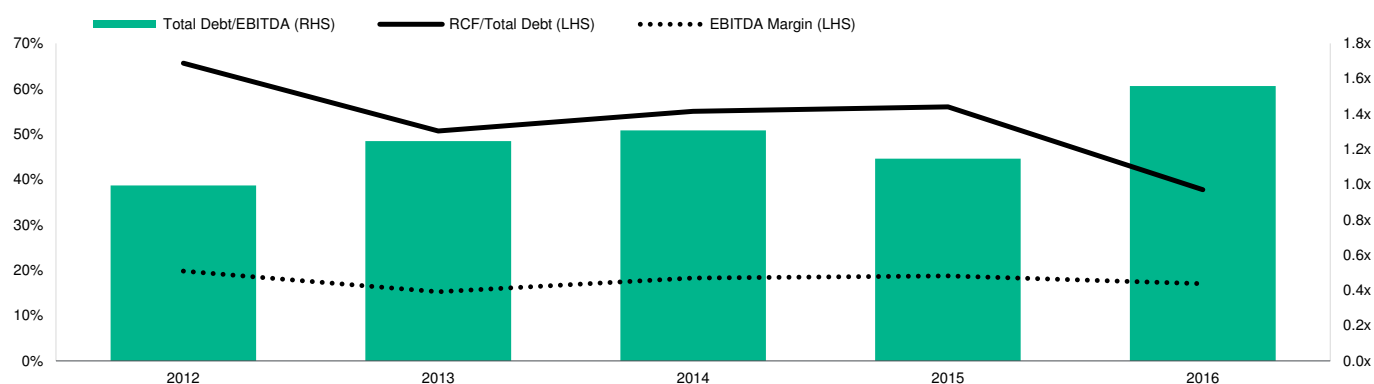
In addition, European nitrate premiums over urea are likely to remain significantly below historical levels, even though they have recently bounced back from the lows of Q4 2016/Q1 2017. Also, based on current forward natural gas prices, Yara's energy costs should be about NOK1.9 billion higher in 2017 v. 2016, with 40% of the increase due to the contractual gas price step-up in Yara's Pilbara ammonia plant in Australia.

All in all, we expect Yara's EBITDA to fall 20-25% in 2017 compared to 2016. With capital spending projected to peak around NOK18 billion (of which NOK10.4 billion relate to committed growth projects and the acquisition of Tata Chemicals' urea plant and distribution business in India), Yara is likely to generate a substantial cash deficit of around NOK11-12 billion.

This should drive credit metrics towards the low end of our guidance for the Baa2 with total debt to EBITDA around 2.5x and RCF to total debt in the mid to low twenties in percentage terms.

Exhibit 6

## FY2016- FY2012 Total Debt/EBITDA, Retained Cash Flow/Total Debt and EBITDA Margin



Source: Company's Filings; Moody's Investors Service

### IMPROVEMENT PROGRAMME IN PARALLEL WITH RAMP-UP OF GROWTH PROJECTS TO PAVE THE WAY TO RETURN TO POSITIVE FREE CASH FLOW

Looking ahead, while we do not expect any major recovery in urea prices in the near to medium term, Yara's operating profitability should benefit from incremental earnings accruing from efficiency improvement initiatives and the start-up/ ramp-up of new projects.

Management targets that Yara's corporate-wide improvement programme launched in 2016 will achieve at least \$500 million of annual EBITDA improvement by 2020 (compared to 2015 EBITDA of \$2.35 billion and measured at 2015 market conditions). It recently confirmed that the roll-out of the programme was on track. As of Q2 2017, the annualised run-rate reached \$120 million (equally split between procurement and reliability/energy efficiency); this should rise to \$150 million at year-end 2017. In addition, management forecasts new projects to generate an additional EBITDA of \$650 million by 2020 (based on 2015 market conditions).

Even after discounting the effect on the above EBITDA targets of assumed future urea prices lower than in 2015, we expect Yara's EBITDA and operating cash flow to start recovering in 2018. Combined with much reduced growth investments (NOK3.1 billion in 2018 v. NOK 7.1 billion in 2017) and the maintenance of a prudent shareholder distributions policy (to pay out total cash returns of 40-45% of net income on average through the cycle, including a minimum 30% of net income via dividends), this should allow Yara to return to positive free cash flow in 2019 under a range of price scenarios and restore headroom within its credit metrics relative to our rating guidance.

### Liquidity Analysis

Yara maintains a sound liquidity position, supported by a \$1.25 billion (NOK10 billion) committed revolving credit facility that was fully undrawn at the end of June 2017 and expires in July 2020. It also held cash balances of NOK2.3 billion at the end of Q2 2017 and has access to approximately NOK2.6 billion of local credit lines.

At the end of June 2017, Yara had debt falling due within the next 12 months of around NOK4.4 billion. Its next bond maturity is a \$500 million bond due in June 2019. However, considering the sizeable growth investments planned by the group in the next 18 months (including the acquisition of Tata Chemicals' India-based urea business) and its lower projected operating cash flow reflecting current market conditions, we expect that in H2 2017 Yara will term out in the bond market various short-term facilities it contracted since the start of the year.

### Rating Methodology and Scorecard Factors

The principal methodology used in rating Yara is Moody's Global Chemical Industry rating methodology, which can be found at the [www.moody.com](http://www.moody.com) website and was updated in December 2013. Moody's Global Chemical Industry Methodology grid indicates a Baa2 rating for the year ended December 2016. For the forecast period, the grid also indicates a Baa2 rating. For illustrative purposes the chart on the last page of this publication maps the company utilizing the full year 2016 historical financials as well as our projections for the next 12-18 months.

Given its 36% ownership by the Norwegian government, Yara qualifies as a GRI under our methodology for such entities ("The Application of Joint Default Analysis to Government-Related Issuers", originally published in April 2005 and updated on 22 July 2010). Under this methodology we continue to assume Low dependency, considering Yara's broadly diversified international operations and modest financial and operational links between Yara and the government. Furthermore, our assumption of Low support from the Government of Norway reflects (i) the absence of guarantees or formal obligations on behalf of the Norwegian government to support Yara's obligations; (ii) the government's track record of supporting capital raising, jointly with other shareholders; (iii) no precedent of direct government intervention; and (iv) the relative importance of Yara to the domestic economy, not least because it is a large employer.

Exhibit 7

#### Chemical Industry Grid [1][2]

Current FY 12/31/2016		
Factor 1 : Scale (20%)	Measure	Score
a) Revenues (USD Billion)	\$11.3	Baa
b) PP&E (net) (USD Billion)	\$7.5	Baa
Factor 2 : Business Profile (20%)		
a) Business Profile	Baa	Baa
Factor 3 : Profitability (10%)		
a) EBITDA Margin %	17.1%	Baa
b) ROA - EBIT / Average Assets	7.0%	Ba
Factor 4 : Leverage & Coverage (30%)		
a) Debt / EBITDA	1.6x	A
b) EBITDA / Interest Expense	11.7x	Baa
c) Retained Cash Flow / Debt	37.7%	A
Factor 5 : Financial Policy (20%)		
a) Financial Policy	Baa	Baa
Rating:		
a) Indicated Rating from Grid		Baa2
b) Actual Rating Assigned		

#### Moody's 12-18 Month Forward View As of the report release date [3]

Measure	Score
\$11.0 - \$12.0	Baa
\$8.0 - \$8.2	A
Baa	Baa
14.0% - 16.0%	Baa
4.0% - 5.0%	B
2.5x - 2.8x	Baa
8.0x - 9.0x	Baa
22.0% - 25.0%	Baa
Baa	Baa
	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 12/31/2016.

[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
<b>YARA INTERNATIONAL ASA</b>	
Outlook	Stable
Issuer Rating	Baa2
Senior Unsecured	Baa2

Source: Moody's Investors Service



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