

4Q 2018 AND 12M 2018

FINANCIAL RESULTS PRESENTATION



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# **AGENDA**



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## **OVERVIEW: RUSAL's PROGRESS OVER THE YEAR**



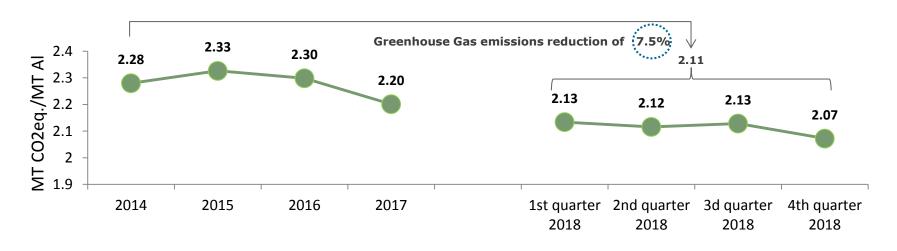
		2018	2017	Change
	Average Aluminium Price	\$2,111/t	\$1,969/t	7.2%
Macro parameters	Average Nickel Price	\$13,122 /t	\$10,411/t	26.0%
	Average USD / RUB Exchange Rate	62.71 RUB / USD	58.35 RUB / USD	7.5%
	Total sales, kt	3,671 kt	3,955 kt	(7.2%)
Sales	VAP sales, kt	1,664 kt	1,869kt	(11.0%)
	VAP sales, share of total sales	45%	47%	
	Revenue	\$10,280 mn	\$9,969 mn	3.1%
	Adjusted EBITDA	\$2,163 mn	\$2,120 mn	2.0%
Financial parameters	Adjusted EBITDA Margin	21.0%	21.3%	•
	Cash at the end of the year	\$844mn	\$831mn	1.6%
	Net Debt	\$7,442mn	\$7,648 mn	(2.7%)

Source: Company data, Blooomberg

# ENVIRONMENTAL ACHIEVEMENTS: REDUCTION OF GREENHOUSE GAS EMISSIONS



#### SPECIFIC GREENHOUSE GAS EMISSIONS FROM RUSAL'S ALUMINIUM PLANTS



#### **RUSAL REMAINS COMMITTED TO CONTINUOUS IMPROVEMENT OF ENVIRONMENTAL FOOTPRINT**

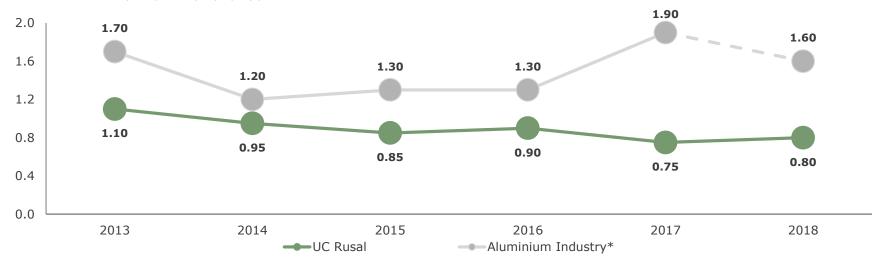
- One of UC Rusal's strategic goals is to reduce direct specific greenhouse gas emissions at its existing aluminium smelters by 15% by 2025 compared 2014's levels. The Company continues to reduce emissions and during 12M18 our level of emissions amounted to 2.11 MT CO2eq./MT, 7.5% lower than the levels registered in 12M14 (2.28 MT CO2eq./MT).
- During 12M18 UC Rusal has completed the implementation of the ASI (Aluminium Stewardship Initiative) Performance standard and Chain of Custody standard at pilot sites (Headquarter, Bauxite Timana, UAZ and IrkAZ).
- In 2018 UC Rusal launched pilot projects for reforestation and forest protection in the Krasnoyarsk and Irkutsk regions of Russia to further compensate for the carbon footprint from aluminium production.
- The Company is committed to playing on an active role in reducing the aluminium industry's greenhouse gas emissions globally. To that end, during 2018 UC Rusal assisted with improvement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

### **HEALTH AND SAFETY**



#### LTAFR DYNAMICS





\* Source International Aluminium Institute and Company internal data

Note: LTAFR is calculated per 1 000 000 man-hours worked

#### **COMPANY'S INITIATIVES IN HEALTH AND SAFETY DURING 2018**

- In 2018 UC Rusal has launched work to update its Occupational Health and Safety management system to align with the requirements of the new international standard ISO 45001:2018.
- Throughout the year UC Rusal continued to integrate the existing programs "Safe mine", "100% unification of workplace", "Safety culture in production" at production sites. In April 2018 the Company launched a new project "Safe pot rooms", that will improve safety conditions in pot rooms to further reduce risks of injury at smelters.
- During the year UC Rusal developed a new type of winter overall, which provide better protection against high temperatures and metal splashes and provide more comfort for employees. As a result the Company had zero injuries associated with metal splashes in 2018.
- Also in April 2018 UC Rusal has launched a pilot project "Automated information system of production safety", with the aim creating an integrated information system between all departments, to handle issues related to Occupational and Industrial Safety measures.

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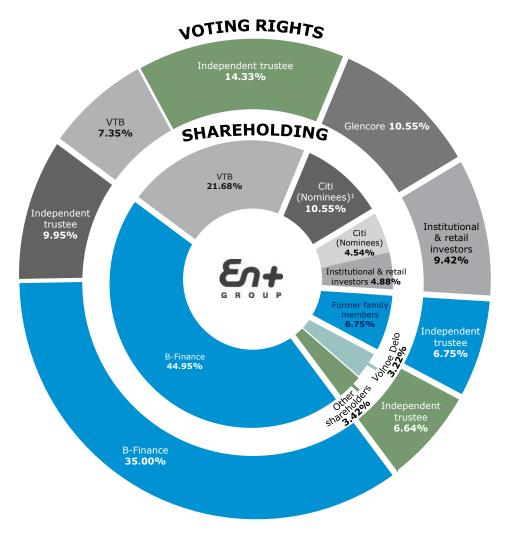
# **SANCTIONS REMOVAL**



#### **BARKER PLAN**

- On 27 January 2019 the Office of Foreign Assets Control (OFAC) lifted sanctions from EN+, UC Rusal and EuroSibEnergo upon successful implementation of core elements of the plan, developed by Lord Barker of Battle, En+ Independent Chairman ("Barker Plan").
- As a result of carrying out the set of measures under Barker Plan major shareholder of En+ reduced its holding to 44.95%.
- As one of the measures, En+ diluted its share capital by issuing new shares to complete Glencore swap. As a result of this securities exchange agreement Glencore shall transfer the 8.75% of Rusal's shares to En+. This will be done in two stages, with approximately 2% already transferred and the remaining 6.78% to be automatically transferred no later than February 2020.
- Under the new governance regime Mr. Deripaska surrendered control over En+. Now he can nominate to En+ BoD no more than 4 directors out of 12.

#### **EN+ NEW VOTING AND SHAREHOLDERS STRUCTURE**



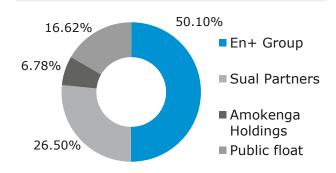
(1) GDRs issued as a part of Glencore swap transaction
Source: En+ disclosure (https://www.enplusgroup.com/en/investors/voting-and-shareholders-structure/)

# RUSAL CORPORATE GOVERNANCE



As per the requirements of the Barker Plan, shareholder structure and corporate governance of UC Rusal have changed. The Company will continue to maintain world class corporate governance standards:





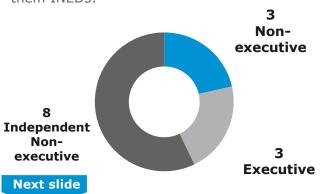
#### **ONGOING COMPLIANCE**

In accordance with the obligations, undertaken by UC Rusal, the Company is committed to:

- Ongoing reporting to OFAC, including, inter alia, submitting copies of Board minutes and regular Company quarterly reports
- All candidates to become Directors of the Board will be reviewed by the En+ Nominations Committee
- Immediately notify OFAC of any anticipated changes in the composition of its Board

#### **BOARD OF DIRECTORS**

The Board of Directors in its current composition was formed on 14.02.2019 and consists of 14 members, with 8 of them INEDs:



#### **NON-EXECUTIVE DIRECTORS**



Member of the Board since December 2016

Marco

Musetti



Member of the Board since June 2018



Member of the Board since June 2018

Timur

**Valiev** 

#### **EXECUTIVE DIRECTORS**



Evgenii **Nikitin** CEO Member of the Board since June 2018



Member of the Board since June 2018

Evgenii



Member of the Board since February 2019

Evgenii

# INDEPENDENT NON-EXECUTIVE DIRECTORS RUSAL





**Bernard Zonneveld** 

Mr. Zonneveld was born in 1956. He holds a Master degree in Business Law from Erasmus University. Since June 2016 he has been an independent, nonexecutive Director of the Company.



**Christopher Burnham**<sup>(1)</sup>

Mr. Burnham is the Chairman and CEO of Cambridge Global Capital, headquartered in Washington, D.C. He cofounded Cambridge after a distinguished career in government, diplomacy, banking, and private equity



Nick Jordan(1)

Mr. Jordan has more than 30 years experience in senior positions in leading global financial institutions. Prior to this he was the Co-CEO of Goldman Russia, and Vice Chairman and Head of the Russian Office of Deutsche Bank.



Elsie Leung Oi-sie

Mrs. Leung was born in 1939 in Hong Kong. She was educated in the University of Hona Kong. Elsie Leung was appointed as the acting INED of the Company in December 2009.



Kevin Parker(1)

Mr. Parker received a BS Finance from New York University in 1981. Kevin is the Managing Partner of Sustainable Insight Capital Management, the New York based global assetmanagement firm. He has over 35 years of investment experience.



Maxim Poletaev(1)

Mr. Poletaev was born in 1971. Since 1995 he has been holding various positions with Sberbank of Russia, including as Adviser to the Chairman of the Executive Board and First Deputy Chairman of the Executive Board.



Randolph N. Reynolds(1)

Mr. Reynolds was born in 1941 and is a Co-founder and Principal of Revnolds Development. He served in Revnolds Metals Company as Vice Chairman and Executive Officer, was a member of the Board of Directors.



**Dmitry Vasiliev** 

Mr. Vasiliev was born in 1962. He graduated from Leningrad Financial and Economic Institute. Mr. Vasiliev was appointed as the acting INED of the Company in June 2015.

10 (1) Appointed on 14.02.2019

# **AGENDA**

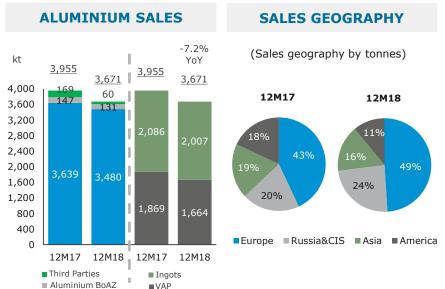


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## **ALUMINIUM PRICE AND SALES STRUCTURE**



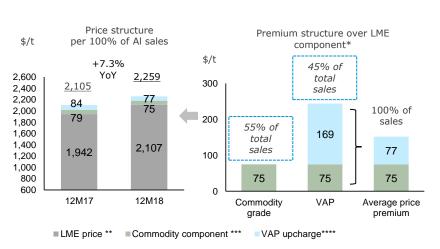
- Total aluminium sales for 12M18 amounted to 3,671 kt, including VAP sales of 1,664 kt.
- 12M18 average realized price increased to \$2,259/t (7.3% YoY). The LME component reached \$2,107/t, which traditionally lags behind LME prices. Commodity grade premium was \$75/t\*. Average upcharge per tonne of VAP sales was ~\$169/t\* for 12M18.
- Regional sales mix in 12M18 has adjusted due to OFAC sanctions with more weight on European destinations which maintained the largest share in the mix (increased from 43% to 49% YoY) and on Russia & CIS region (increased from 20% to 24% YoY).



Auminium Rusal



#### **REALISED PRICE STRUCTURE**

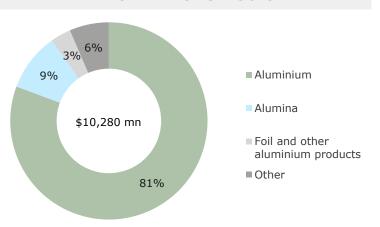


<sup>\*</sup> Excluding sales of secondary alloy \*\* LME cash price adjusted by quotation period. \*\*\* Estimated average commodity premium over LME component \*\*\*\* VAP component is applicable only to VAP products and represents an upcharge over LME price and commodity premium.

## FINANCIALS OVERVIEW: REVENUE STRUCTURE

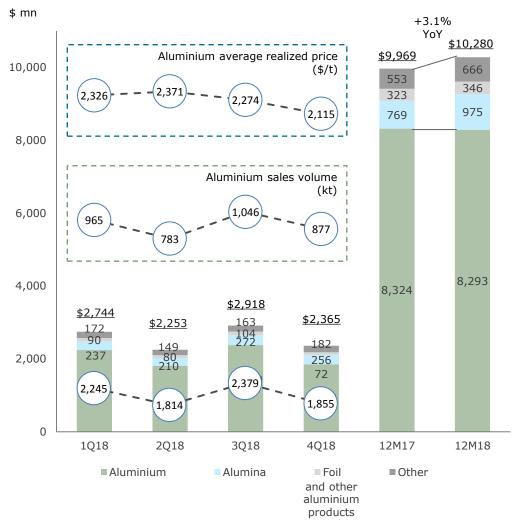


#### 12M18 REVENUE STRUCTURE



- Total revenue for 12M18 was \$10.3 bn (+3.1% YoY)
- Revenue from aluminium sales in 12M18 remained similar to 12M17, at \$8.3 bn.
- Remaining revenues totaled almost \$2 bn.
  - Revenue from alumina sales to third parties was \$975 mn (+26.8% YoY)
  - Revenue from sales of foil and other aluminium products was \$346 mn (+7.1% YoY)
  - Revenue from other sales\* increased by 20.4% to USD665 mn. This was due to a 14.1% increase in sales of other materials (such as anode blocks by 18.4%, aluminium powder by 23.7%, silicon by 23.8%).

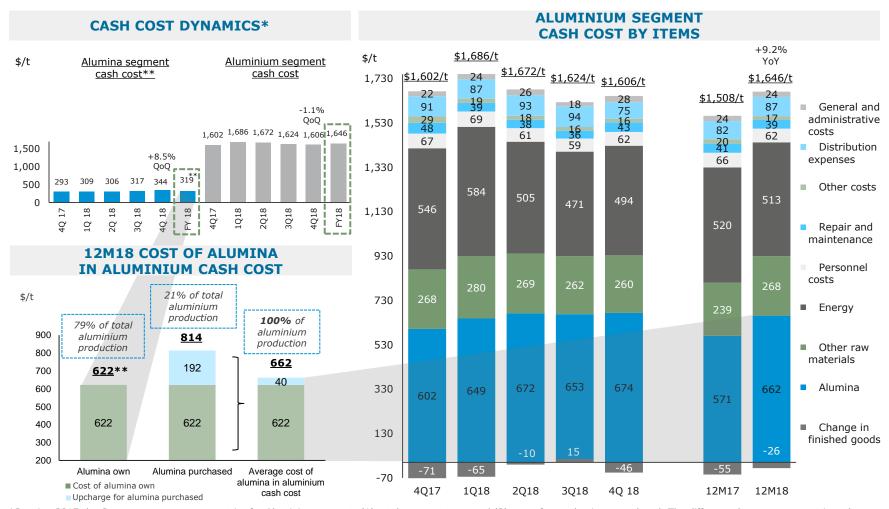
#### REVENUE DYNAMICS



# FINANCIALS OVERVIEW: KEY SEGMENTS CASH COST



• In 12M18 Rusal's cash cost per 1 tonne of aluminium produced amounted to \$1,646/t (+9.2% YoY on comparable basis). The cash cost of aluminium was primarily affected by an increase in other raw material and alumina costs.



<sup>\*</sup>Starting 2017 the Company presents two metrics for Aluminim segment: (1) total segment costs and (2) cost of own aluminum produced. The difference between two metrics relates to the intersegment margins (primarily - between the Alumina and Aluminium), margin on sales of third parties metal and other non-production costs and expenses. See Segment reporting details in appendix

<sup>\*\*</sup> To calculate cost of alumina in aluminium cash cost, the alumina segment cash cost is multiplied by alumina consumption ratio and adjusted by the effect of the cost of alumina stock

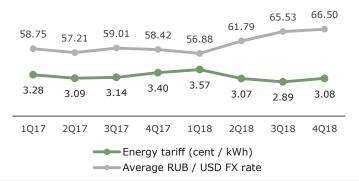
## **ENERGY COST DYNAMICS**



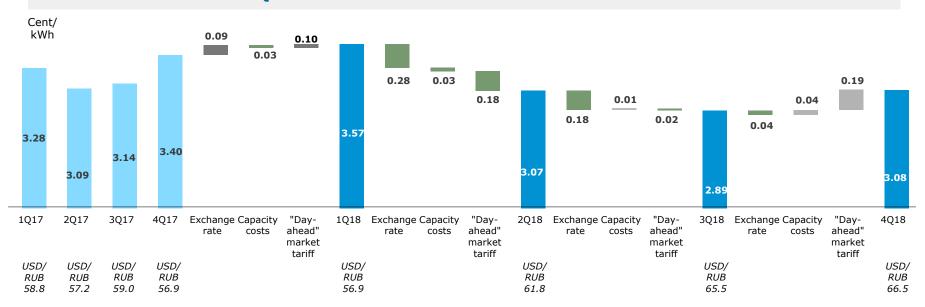
- The growth of the average energy tariff in 2Q17-1Q18 was mitigated by the subsequent decrease in 2Q18 3Q18, driven mainly by exchange rates. In 4Q18 the energy tariff has increased up to 3.08 USc/KWh driven mostly by seasonal factors.
- As a result, the average energy purchase price for UC Rusal in 12M18 stood at 3.14 USc/KWh, 3% lower than in 12M17 (3.23 USc/KWh).

#### **ENERGY COST DYNAMICS 1Q17-4Q18**

Cost of energy purchased in the period (purchased energy tariff impact to aluminium cash cost with  $\sim$ 3 month lag)



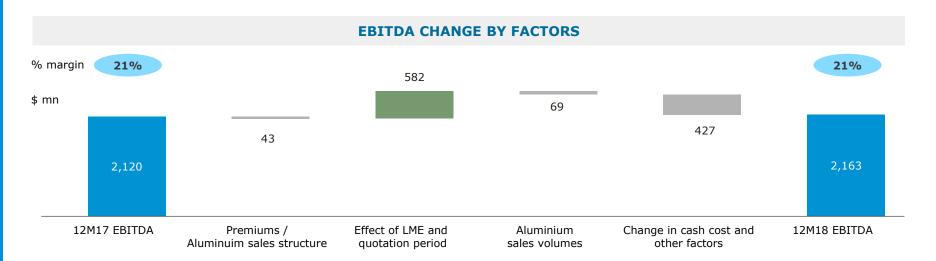
#### **QUARTERLY ELECTRICITY PURCHASE PRICE ANALYSIS**

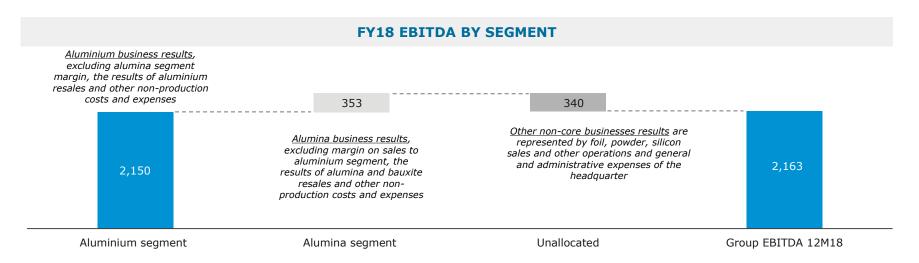


## **FINANCIAL OVERVIEW: EBITDA**



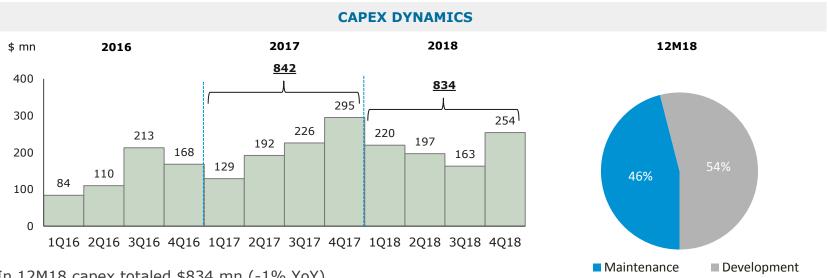
- 12M18 EBITDA totaled \$2,163 mn (+2.0% YoY);
- Aluminium segment remained the largest contributor to the Group EBITDA;





## CAPITAL EXPENDITURES





- In 12M18 capex totaled \$834 mn (-1% YoY)
- Throughout the year, maintenance amounted to c. 46% of the aggregate CAPEX
- The Company continued its investment into key development projects as per its strategic priorities of preserving its competitive advantages of vertical integration into raw materials and product mix enhancements:
- Bauxite self-sufficiency: Dian-Dian bauxite deposit, 1st stage (capacity of 3 mtpa) was launched in June 2018;
- Alumina capacities expansion: Friguia alumina refinery complex (a bauxite mine and alumina refinery) was restarted in June 2018 (after the full ramp up, production will increase up to 600 ktpa);
- Carbon materials self-sufficiency:
  - Volgograd anode plant (up to 105 ktpa of baked anodes) with own calcined coke capacity was launched in August 2018;
  - Taishet anode plant (1st stage) construction of anode baking furnace with a capacity of up to 217.5 ktpa of baked anodes\* - is expected to be launched in December 2019;
- Aluminium capacities expansion: Taishet aluminium smelter\*\* (1st line, 428.5 ktpa).

<sup>\*</sup> For baking of SAZ green anodes during modernization of anode baking furnaces

<sup>\*\*</sup>Please see following slides for further details on Taishet aluminium smelter

## **BEMO PROJECT**



# BEMO PROJECT: UNIQUE INDUSTRIAL COMPLEX IN SIBERIA COMBINING BOGUCHANSK HPP AND BOGUCHANSK SMELTER\*

Project partner

■ 50/50 JV with RusHydro

**Technology** 

■ RA-300 (optionality available for the 2<sup>nd</sup> stage)

Capacity/ status

- Since the end of 3Q15 the first half (~149 ktpa) of the 1<sup>st</sup> stage (~298 ktpa) is in operation in test mode
- The total projected capacity of the smelter is ~600 ktpa

Further development

- The other half (~149 ktpa) of the 1<sup>st</sup> stage is being finalized.
- 2nd stage (~300ktpa) to be considered with our strategic partner RusHydro

Product portfolio

 Up to ~360 ktpa of VAP, including 120 ktpa for the 1st stage

Financing for further development

■ The financing for the 1<sup>st</sup> stage (~300 ktpa) is provided by VEB on project financing basis







<sup>\*</sup>Data from preliminary management estimates as part of an overall project feasibility study under subject to further evaluation and review.

## TAISHET ALUMINIUM SMELTER



Location

Irkutsk region

Capacity\*

- 1st line 428.5 ktpa, 352 potcells RA-400, amperage 440 kA
- 2nd line 536 ktpa, 352 potcells RA-550, amperage 550 kA (equipment purchased for power supply, infrastructure, maintenance)

Power consumption\*

 14.2 billion kWh a year (including 6.4 billion kWh for 1<sup>st</sup> line)

Project timescale\*

2006; suspended in 2009 and restarted in 1Q 2017

Financing for further development

- During the course of 2018 the Company continued financing the construction using its own funds.
- Going forward the financing for the 1<sup>st</sup> stage is likely to be provided under a project financing scheme

Construction site location

Russia

Taishet aluminium smelter

#### TAISHET CONSTRUCTION SITE





\* Data from preliminary management estimates as part of an overall project feasibility study under subject to further evaluation and review.

# **AGENDA**

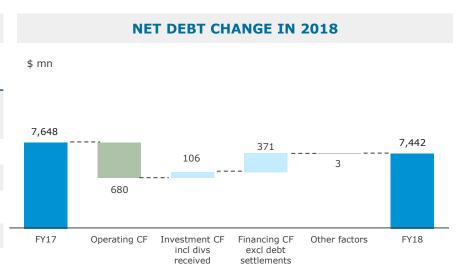


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## **DEBT PROFILE**

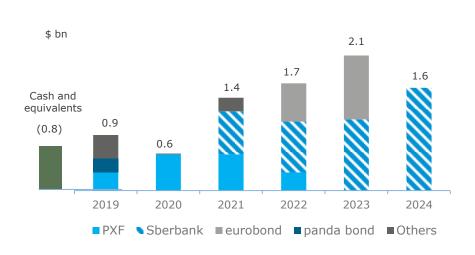


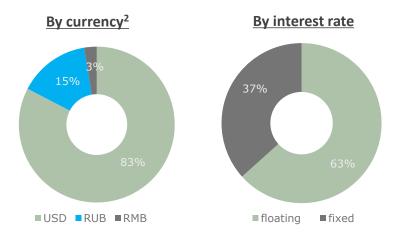
KEY DEBT METRICS							
\$ mn	31 Dec 2018	31 Dec 2017					
Total debt, IFRS	8 286	8 479					
Cash and cash equivalents	844	831					
Net debt, IFRS	7 442	7 648					
Adjusted Total Net Debt <sup>1</sup>	3 156	3 568					
Adjusted Total Net Debt / EBITDA (covenant) <sup>1</sup>	1.4x	1.6x					
Leverage covenants <sup>1</sup>	3.0x	3.0x					



#### **DEBT MATURITY AS OF FY2018**

### **DEBT STRUCTURE AS OF FY2018**





<sup>(1)</sup> For the Leverage ratio calculation the financial indebtedness secured by NN shares is excluded from the total net debt and the Group's EBITDA is net of the impact of NN shareholding (i.e. excludes dividends paid on any of the NN Shares). The leverage ratio is, thus, tested on the basis of the Group's core operations.

<sup>(2)</sup> As of 31 Dec 2018 the Company partially converted the principal outstanding amount of the Loan (US\$850 mln) into RUB with the interest rate 9.15%. In January 2019 the Company has finalized the conversion process and now it stands at ½ of the loan (US\$2.1 bln).

### **INVESTMENT IN NORILSK NICKEL**

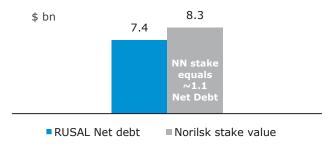


#### **NORILSK NICKEL OVERVIEW**

- Norilsk Nickel (NN) is the world's largest high-grade nickel and palladium producer
- NN shares are listed on MOEX, and ADRs are traded on the US OTC market and in the electronic trading system of OTC markets on the London, Berlin and Frankfurt stock exchanges
- Norilsk Nickel is among most profitable global major diversified miners with EBITDA margin of 53% for FY2018
- Norilsk Nickel enjoys extra-low leverage with Net Debt / EBITDA at 1.1x as of 31 December 2018
- Norilsk Nickel is focused on creating shareholder value and remains committed to pay significant dividends at leading dividend yields

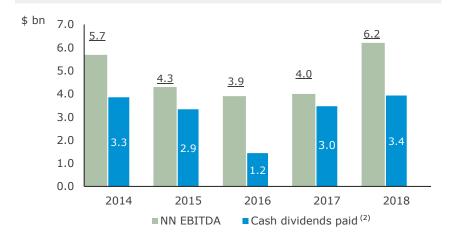
#### NN STAKE VALUE VS RUSAL NET DEBT

- A 27.8% stake in Nornickel equity remains a strategic investment for UC Rusal. It diversifies the Company's exposure to base metals and at the same time yields lucrative and sustainable cash returns
- Dividends from Nornickel cover all of UC Rusal's interest payments and contribute to the Company's accelerated deleveraging process



Updated as of 31 December 2018

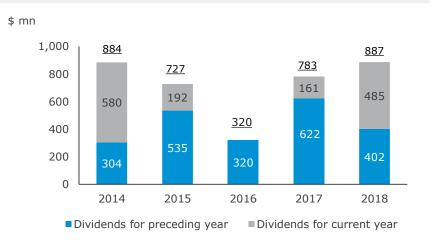
#### **DIVIDENDS PAID BY NORILSK NICKEL**



Source: NN public data, Company data

#### (1) Cash dividends net of tax; (2) Cash dividends paid for current and preceding year

#### **DIVIDENDS**(1) RECEIVED BY RUSAL



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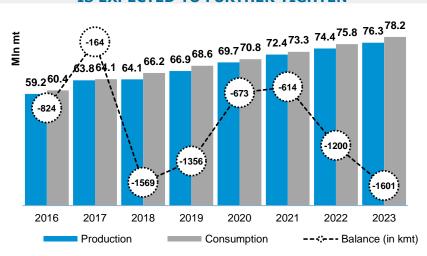
## **GLOBAL ALUMINIUM MARKET TO STAY IN DEFICIT**



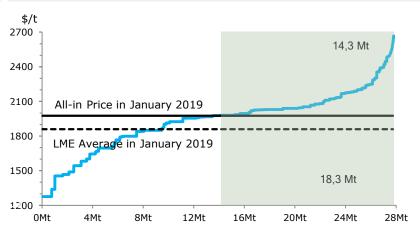
- The company estimates that the global aluminium market turned into heavy deficit of 1.6 mn tonnes in 2018 and would remain in deficit of about 1 mn tonnes per annum in 2019-23
- Global aluminium demand CAGR is forecasted at 4% pa over 2019-23
- On the supply side:
  - There are no new significant supply projects outside of China (excluding UC Rusal)
  - 14 18 mln t of ROW smelting capacity is lossmaking at average LME price for January 2019
- Through 2017-2018 ROW reported stocks have declined to pre-2008 crisis level as production grew at moderate pace

#### **ROW REPORTED STOCKS** days kt 8000 120 7000 100 6000 80 5000 60 4000 40 3000 2000 20 ROW public stocks — Days of consumption (rhs)

# GLOBAL SUPPLY AND DEMAND BALANCE IS EXPECTED TO FURTHER TIGHTEN



#### **ROW LIQUID METAL COSTS**

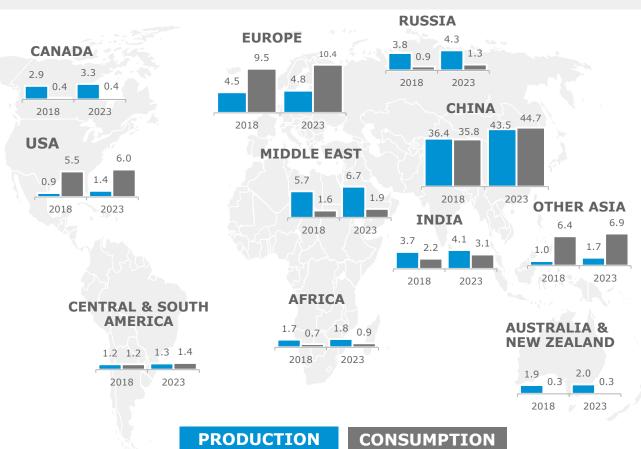


Source: CRU, LME, companies data, RUSAL analysis



# GLOBAL MARKET DEFICIT IS SET TO REMAIN DUE TO LIMITED PRODUCTION GROWTH





- Middle East continues to be a major aluminium supply growth region. North America will rank the 2nd in growth contribution on planned restarts
- Russian domestic consumption is expected to expand at CAGR of 7.8% between 2018-2023
- The Chinese market is expected to fall into deficit during the forecast period as stricter environmental regulations and easing domestic demand
- India exports are expected to decline, thanks to robust domestic demand
- In general the North American, European and Asian markets deficit will increase

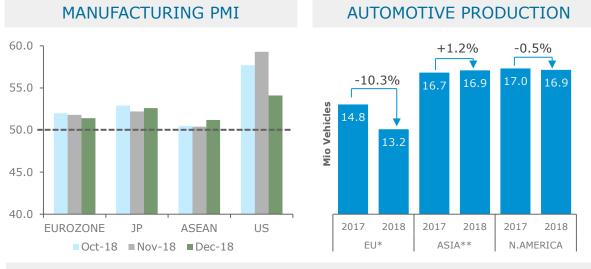
Majority of newly built capacity ex-China will be consumed domestically in form of VAPs

Source: UC RUSAL analysis

# **KEY FOREIGN MARKETS: EUROPE, ASIA EX-CHINA AND NORTH AMERICA**



# PRIMARY ALUMINIUM DEMAND GROWTH REMAINS FIRM BACKED BY INTENSIVE USE OF ALUMINIUM IN THE AUTOMOTIVE INDUSTRY



#### **ALUMINIUM DEMAND**



\*EU includes Germany, Spain, UK, Turkey, Poland (annualized data on 11 month), Italy (annualized data on 11 month)

#### **HIGHLIGHTS**

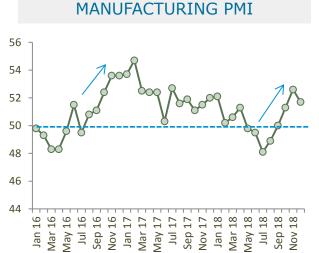
- Manufacturing activity ended the year in the positive territory in the regions in question what points to expanding business activity. In the last quarter, the indicators showed mixed directions across the board signalling about economy slowdown.
- The automotive sector faced significant disruption in Europe in the latter part of 2018 as automakers scrambled to address the change to the WLTP test cycle. This constrained production and led to vehicle output dropping by over 10% in 2018. In North America, vehicles production remained relatively flat, while in Asia ex-China it rose by 1.2% due to the strong contribution of ASEAN countries.
- In Europe and North America, there was a an increase in aluminium content per car which offset the decline in production. This resulted in increased demand from automotive sector which is the main driver of consumption.
- In all regions, primary aluminium consumption growth was solid. In Europe, it increased by 2.0% in 2018. Asia ex-China benefited from the public infrastructure investment as well as the higher aluminium density in light weighted vehicles which saw demand increase by 1.3.%. In North America, consumption increased by 1.6%.

<sup>\*\*</sup>ASIA includes Japan, S.Korea, Taiwan, ASEAN-4

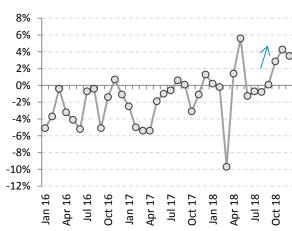
## **RUSSIA & CIS**



#### ALUMINUM DEMAND IS RISING DUE TO MANUFACTURING GROWTH



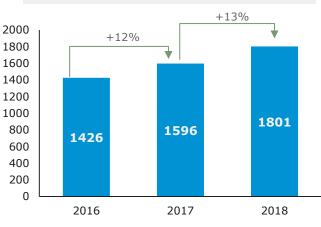
#### CONSTRUCTION WORKS

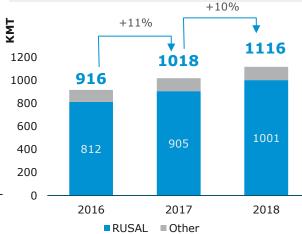


**HIGHLIGHTS** 

- Russian economic growth slowed towards the end of the year, GDP rose by an estimated 1.8% in 2018. Industrial production index growth amounted to 2.9%. Investment in Russian fixed assets also rose by 3.0%, was most pronounced in 3Q2018, when construction works growth rates accelerated.
- Since September PMI index returned to the level 50 and stayed positive for the rest of the year
- Vehicle production in Russia continue to grow, as well as sales of light vehicles. In 2018 sales increased by 13%, whereas output was up by 18%
- The volume of construction works represented a recovery but still remain lower than before the crisis
- Primary aluminium demand in Russia and CIS countries grew by 9.9% to 1.1 million tonnes (including 0,9 million tonnes in Russia) in 2018

#### CAR SALES IN RUSSIA



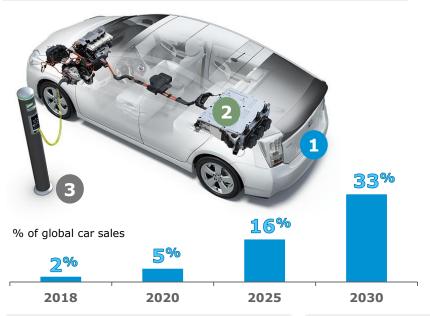


PRIM AL DEMAND RUSSIA & CIS

# FAVOURABLE AUTOMOTIVE INDUSTRY PROSPECTS FOR ALUMINIUM AND NICKEL



#### **EV SALES PENETRATION FORECAST\***

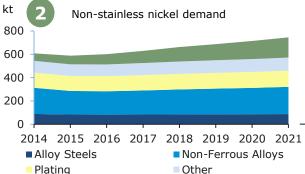


- Trend for lighter and more energy efficient car bodies is expected to accelerate, thus increasing Al content in vehicles
  - For example in 2014 Ford switched to an all aluminium design for the F-150, the US's most popular pickup truck in the last 38 years. Ford joined many other brands offering all aluminium models
- NCA batteries (Nickel Cobalt Aluminium) are becoming the product of choice for the rapidly growing EV industry
  - Global EV sales in 2018 surged by 63% (up to 2m) and are predicted to reach 12-14m in 2025\*
  - Global EV stock is expected to reach up to 200m in 2030
  - · UK is expected to ban combustion engines from 2040
- As EV's market share grows, the entire power generation and distribution infrastructure will need to adapt
  - Global installation base of EV charging stations is forecast to grow to more than 12.7m by 2020 from ~2.5m in 2018
  - Power supply to houses and charging stations will need to be rewired to accommodate higher voltages and currents

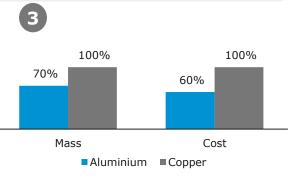
#### GLOBAL DEMAND FOR ALUMINIUM SHEETS IN THE AUTOMOTIVE INDUSTRY IS INCREASING



# NICKEL DEMAND FROM BATTERIES IS SET TO SIGNIFICANTLY INCREASE



## ALUMINUM CABLE IS LIGHTER AND LESS EXPENSIVE THAN COPPER



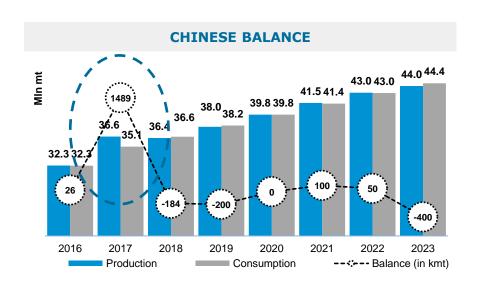
■ Batteries

## **ALUMINIUM OVERSUPPLY HIT MARKETS IN CHINA IN 2017-18**

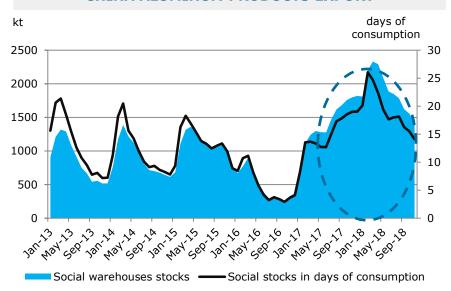


# Sharp increase in aluminum production and slower demand caused an oversupply in China in 2017

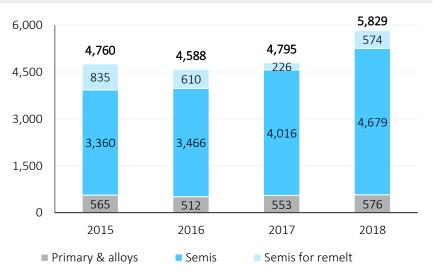
- The Chinese market was oversupplied in 2017 as smelting capacities increased by 19.8% YoY but demand grew by just 8.7%
- Demand slowdown in 2018 to 4.2% in 2018 YoY was caused by trading wars and Chinese-US tensions
- These factors led to significant rise in domestic stocks and export of Chinese aluminum products
- Market balance has improved in the second half of 2018 with capacity cuts and sharp decline in aluminum stocks



#### **CHINA ALUMINUM PRODUCTS EXPORT**



#### **CHINA ALUMINUM EXPORT**



Source: CRU, LME, companies data, EIU, SMM. UC RUSAL Research

## **EFFECT OF SUPPLY SIDE REFORM**



China continue to implement Supply-side reform in aluminum, first effect seen in 2018. That has put an end to unreasonable supply expansion, as well rebalancing domestic market and thus support for higher aluminum prices

CHINA ANNUALIZED PRODUCTION

annualized production

- The government has identified ~4.5 mt of illegal capacity
- Around 6 mn tonnes of projects under construction was frozen as considered illegally constructed
- Around 3 mlnt tonnes of capacity was cut due to low SHFE price in 2018 YTD and 2 mln tonnes expected to be cut in 2019

+1.0%

36.4

2.2

In addition to the supply cuts policy, starting from October, 2017, MEP has applied "special air emission standard" to "2+26" area. Stricter permissible air pollutants concentration put additional environmental pressure on refineries, smelters and their captive power plants

### CHINA CAPACITY EVOLUTION

mt

38.0

36.0

35.0

34.0

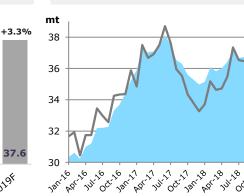
33.0

32.0

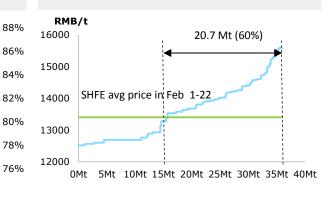
31.0

30.0

37.0 +19.8% -0.2%



#### **CHINESE SMELTERS COSTS**



Full Costs ex. depreciation, December 2018

- Negative growth of operating capacity in 2018 nullified capacity expansion, YTD capacity growth is flat
- Companies strictly follow governmental orders and maintain production discipline
- The established capacity replacement quota mechanism effectively controls the overcapacity issue
- There are clear signs of supply will be matching demand over next 2-3 years

Source: Aladdiny, MEP, UC RUSAL Research.



# **APPENDIX**

# **KEY OPERATING AND FINANCIAL DATA**

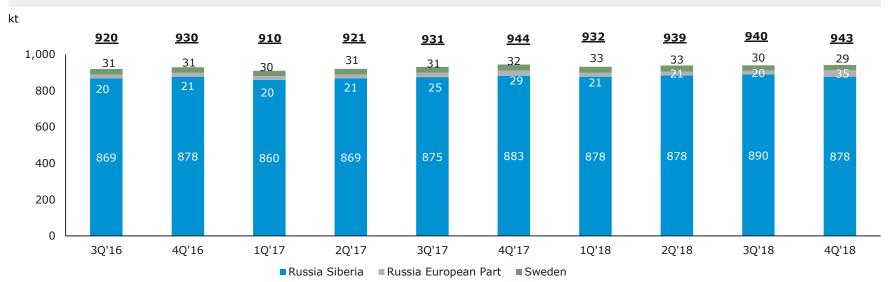


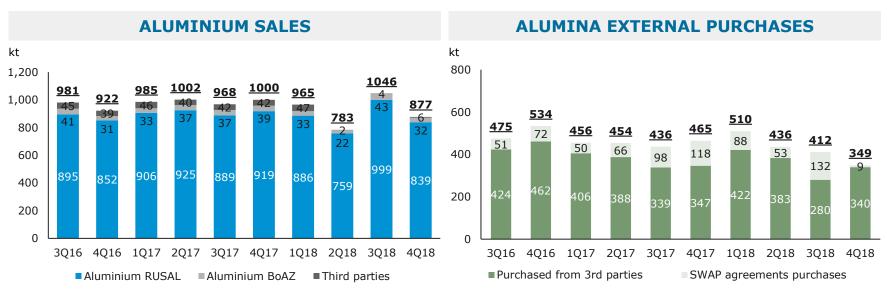
GROUP OPERATING HIGHLIGHTS							GRO	UP FI	NAN	CIAL	HIGH	ILIGH	TS		
	4Q 18	3Q 18	2Q 18	1Q 18	FY18	FY17	YoY chg		4Q 18	3Q 18	2Q 18	1Q 18	FY18	FY17	YoY chg
Aluminium production (kt)	943	940	939	931	3,753	3,707	1.2%	Revenue, \$mn	2,365	2,918	2,253	2,744	10,280	9,969	3.1%
Aluminium sales	077	1.046	700	0.65	2.674	2.055	(7.20()	EBITDA, \$mn*	363	676	552	572	2,163	2,120	2.0%
(kt)	877	1,046	783	965	3,671	3,955	(7.2%)	margin (%)	15.3%	23.2%	24.5%	20.8%	21.0%	21.3%	-
Aluminium av realized sales price (\$/t)	2,115	2,274	2,317	2,326	2,259	2,105	7.3%	Net debt, \$mn	7,442	7,468	7,875	7,878	7,442	7,648	(2.7%)
	ALUI	MINI	UM SI	EGME	NT			ALUMINA SEGMENT							
(\$ mn)	4Q 18	3Q 18	2Q 18	1Q 18	FY18	FY17	YoY chg	(\$mn)	4Q 18	3Q 18	2Q 18	1Q 18	FY18	FY17	YoY chg
(\$ mn)  Aluminium sales (kt)					<b>FY18</b> 3,800		chg	(\$mn) Alumina sales (kt)	18				<b>FY18</b> 9,061	<b>FY17</b> 9,051	
Aluminium sales (kt)	18	1,076	18	18		4,057	chg		18	18	18	18	-		chg
Aluminium sales (kt)  Avg. realised price (\$/t)	911	1,076 2,263	812	1,001	3,800	4,057	<b>chg</b> (6.3%) 6.7%	Alumina sales (kt)  Avg. realised price	2,247 545	2,275	2,219	2,320	9,061	9,051	<b>chg</b> 0.1%
Aluminium sales (kt)  Avg. realised price (\$/t)	911 2,112	1,076 2,263	812 2,317	1,001 2,320	3,800 2,253	4,057 2,112 8,570	<b>chg</b> (6.3%) 6.7%	Alumina sales (kt)  Avg. realised price (\$/t)  Revenue	2,247 545	2,275 585	2,219 516	2,320 433	9,061 519	9,051	0.1% 35.9% 36.1%
Aluminium sales (kt)  Avg. realised price (\$/t)  Revenue	911 2,112 1,924	1,076 2,263 2,435 234	812 2,317 1,881	1,001 2,320 2,322	3,800 2,253 8,562	4,057 2,112 8,570 1,837	chg (6.3%) 6.7% (0.1%)	Alumina sales (kt)  Avg. realised price (\$/t)  Revenue	2,247 545 1,225	2,275 585 1,332 503	2,219 516 1,145 375	2,320 433 1,004 159	9,061 519 4,706 1,359	9,051 382 3,457	0.1% 35.9%

## **ALUMINIUM SEGMENT OPERATING DATA**



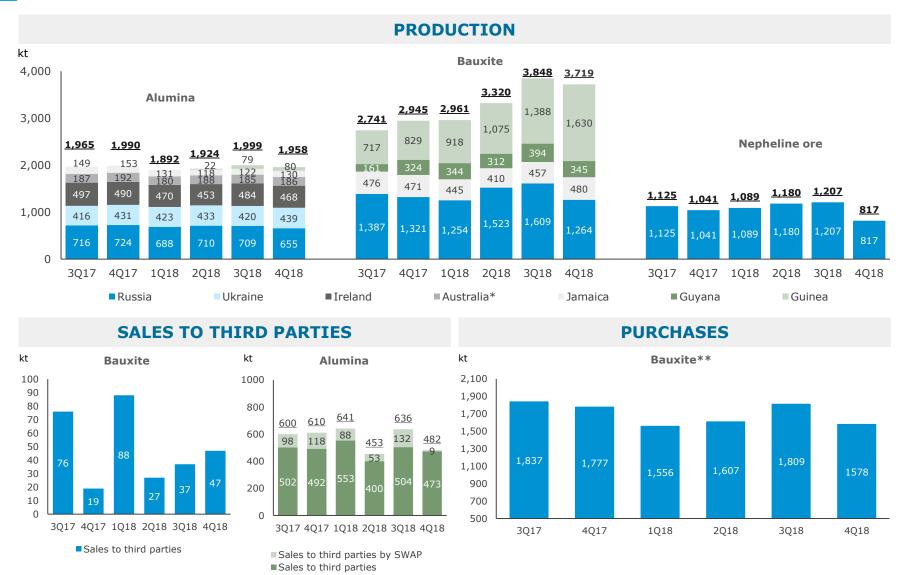
#### **ALUMINIUM PRODUCTION**





## **ALUMINA SEGMENT OPERATING DATA**





<sup>\*</sup>Australia output (QAL) is presented on the ownership pro rata basis. In the income statement alumina sourced from QAL operations are reflected as bauxite purchases from third parties and tolling fee RUSAL pays to QAL for processing bauxite into alumina \*\* Bauxite purchases includes purchases of bauxite for QAL operations.

# INCOME STATEMENT AND EBITDA RECONCILIATION



#### **INCOME STATEMENT**

\$ mn	4Q18	3Q18	2Q18	1Q18	FY18	FY17	YoY chg
Revenue	2,365	2,918	2,253	2,744	10,280	9,969	3.1%
Cost of sales	(1,774)	(2,068)	(1,582)	(2,022)	(7,446)	(7,183)	3.7%
Other operating expenses	(357)	(357)	(310)	(329)	(1,353)	(1,263)	7.1%
Operating income (Results from operating activities)	234	493	361	393	1,481	1,523	(2.8%)
Net finance expense	(120)	(133)	(174)	(56)	(483)	(855)	(43.5%)
Other income*	146	316	255	238	955	620	54.0%
Income tax	(111)	(79)	(34)	(31)	(255)	(66)	286.4%
Net profit	149	597	408	544	1,698	1,222	40.0%
Adjusted net profit **	(17)	338	218	317	856	1,007	(20.5%)
Recurring net profit **	101	623	440	531	1,695	1,573	7.8%

### **EBITDA RECONCILIATION**

\$ mn	4Q18	3Q18	2Q18	1Q18	FY18	FY17	YoY chg
Operating income (Results from operating activities)	234	493	361	393	1,481	1,523	(2.8%)
Depreciation and amortisation ***	130	139	116	128	513	488	5.1%
Impairment of non-current assets	(9)	43	74	49	157	84	86.9%
Loss on disposal of property plant and equipment	8	1	1	2	12	25	(52.0%)
Adjusted EBITDA	363	676	552	572	2,163	2,120	2.0%
EBITDA margin	15.3%	23.2%	24.5%	20.8%	21.0%	21.3%	(1.1%)

<sup>\*</sup>Other income includes Share of profits of associates and JVs, FX translation gain \*\* Adjusted and recurring net profit reconciliation is presented on the next slide.

\*\*\* Depreciation and amortisation includes depreciation and amortisation of other operating expenses (incl SG&A).

# **BALANCE SHEET AND CASH FLOW**



#### **BALANCE SHEET**

\$ mn	4Q18	3Q18	2Q18	1Q18	FY18	FY17	YoY chg
Cash and Cash Equivalents	844	943	645	938	844	831	1.6%
Inventory	3,006	2,739	2,880	2,558	3,006	2,414	24.5%
Trade and other accounts receivables	1,102	1,008	1,054	1,074	1,102	984	12.0%
Equity Attributable to Shareholders of the Company	5,209	5,313	4,928	5,011	5,209	4,444	17.2%
Trade and other accounts payable	1,274	1,208	1,652	1,543	1,274	1,658	(23.2%)
Total Liabilities	10,568	10,665	11,234	11,452	10,568	11,330	(6.7%)
Net Debt	7,442	7,468	7,875	7,878	7,442	7,648	(2.7%)

### **CASH FLOW**

\$ mn	4Q18	3Q18	2Q18	1Q18	FY18	FY17	YoY chg
Net cash generated from operating activities	(62)	342	284	116	680	1,702	(60.0%)
Net cash generated from /(used in) investing activities	174	189	(244)	(225)	(106)	2	-
o/w CapEx	(254)	(163)	(197)	(220)	(834)	(842)	(1.0%)
Net cash used in financing activities	(190)	(207)	(332)	212	(517)	(1,421)	(63.3%)
o/w interest paid	(127)	(126)	(114)	(123)	(490)	(493)	(0.6%)
Net change in cash and cash equivalents	(78)	324	(292)	103	57	283	(79.9%)

# **ALUMINIUM SEGMENT EBITDA RECONCILIATION**



Other non-

FY18	Aluminium produced	Aluminium purchased	Alumina segment margin	production costs and margin on other intra-group services	Total Aluminium segment (unaudited)	
\$ mn	(unaudited)	(unaudited)	(unaudited)	(unaudited)		
Revenue						
kt	3,596	204	-	-	3,800	
USD million	8,068	453	-	41	8,562	
Cost of sales, including:	5,856	446	986	40	7,328	
Alumina	2,484	-	986	-	3,470	
incl. purchased	642	-	-	-	642	
Primary aluminum and alloys purchased	2	446	-	-	448	
Other raw materials	1,003	-	-	25	1,028	
Energy	1,927	-	-	8	1,935	
Depreciation and amortization	337	-	-	9	346	
Personnel costs	234	-	-	4	238	
Repair and maintenance	147	-	-	2	149	
Other costs	65	-	-	(1)	64	
Change in finished goods	(343)	-	-	(7)	(350)	
Distribution expenses	314	22	-	5	341	
General and administrative costs	85	-	-	12	97	
Other operating expenses	-	-	-	5	5	
Total segment costs	6,255	468	986	62	7,771	
Segment EBITDA	2,150	(15)	(986)	(12)	1,137	

# **NET INCOME RECONCILIATION**

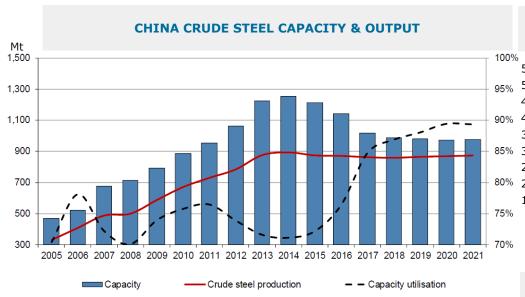


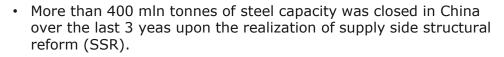
## RECONCILIATION OF ADJUSTED NET PROFIT/(LOSS)

\$ mn	4Q18	3Q18	2Q18	1Q18	FY18	FY17	YoY chg
Net profit for the period	149	597	408	544	1,698	1,222	39.0%
Adjusted for:							
Share of profits and other gains and losses attributable to Norilsk Nickel, net of tax effect, with	(118)	(285)	(222)	(214)	(839)	(496)	69.2%
Change in the fair value of derivative financial liabilities, net of tax (20%)	(39)	(17)	(42)	(62)	(160)	267	-
Impairment of non-current assets, net of tax	(9)	43	74	49	157	84	86.9%
Adjusted Net Profit	(17)	338	218	317	856	1,077	(20.5%)
Add back:							
Share of profits of Norilsk Nickel, net of tax	118	285	222	214	839	496	69.2%
Recurring Net Profit	101	623	440	531	1,695	1,573	7.8%

# RESULTS OF SUPPLY SIDE STRUCTURAL REFORM IMPLEMENTATION IN CHINESE STEEL INDSUTRY



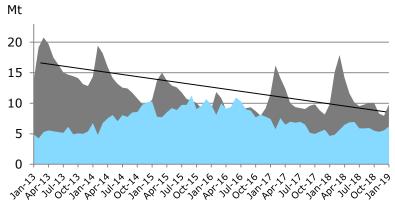




- Steel production was stable and amid the implementation of SSR, capacity utilization rate naturally restored to the highest level of 87%.
- Steel prices more than doubled creating a very strong profitability for steel producers.
- Steel inventories were at low levels and exports fell significantly.
- We believe similar approach can be effectively applied to the aluminium industry over the next 1-2 years.



#### **CHINA STEEL INVENTORIES & EXPORTS**



■ Total inventory of steel products

## **BARRIERS FOR NEW CAPACITY IN CHINA**



## Two areas of pressure



#### **Economics**

#### **Supply-Side Reform:**

- Strict shut down of illegal capacity
- Implementation of the system of capacity swap quotas
- No approval of new projects in aluminium and captive power

# Environmental Initiatives:

- Shut down of capacity that breaches environmental regulations
- Massive winter cuts and stricter air emissions standards in "2+26" territory in 2018-19
- Wide implementation of ultra-low emission standard for coal power plants
- Cap on total coal consumption (4.2 bln tons)
- Launch of national carbon market

#### **Logistics limitations:**

- Relocation of capacity to the Western provinces will inevitably increase transportations costs (up to 3 times higher than the national average)
- During high agricultural season aluminium cannot get transported for up to 2 months

#### **Energy rising prices:**

- Coal price surge
- Stricter emission standards require additional CAPEX
- Captive power plants are obligated to pay government surcharges and repay previously unpaid, equalizing power tariff to grid power

#### Bauxite rising price:

- Shut down of illegal mines
- Strict supervision of open-pit mines
- Orders to stop mines during big events such as NPC meeting
- Exported bauxite has significantly higher CAPEX and logistics cost
- Switch to exported bauxite requires additional CAPEX for alumina refineries

- Due to the above-mentioned factors, the era of massive unreasonable capacity expansions in China has now come to an end.
- Future wide-scale capacity expansions are very unlikely. All will be connected to market demand factors and supply side reform regulation

Source: UC RUSAL Research



www.rusal.com
www.rusal.ru/en/investors/

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