ANNUAL REPORT 2018

PACE THROUGH THE RACE

CONTENTS

FINANCIAL AND OPERATIONAL HIGHLIGHTS

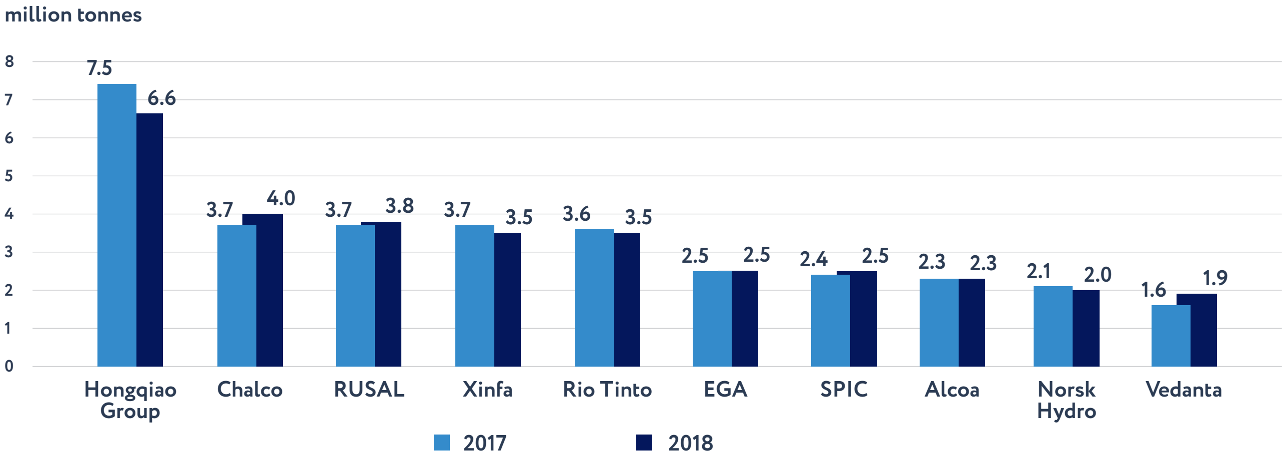
USD million (unless otherwise specified)	2018	2017	2016	2015	2014
Revenue	**10,280**	**9,969**	**7,983**	**8,680**	**9,357**
Adjusted EBITDA	**2,163**	**2,120**	**1,489**	**2,015**	**1,514**
Adjusted EBITDA Margin	**21.0%**	**21.3%**	**18.7%**	**23.2%**	**16.2%**
EBIT	**1,481**	**1,523**	**1,068**	**1,409**	**942**
Share of Profits from Associates and joint ventures	955	620	848	368	536
Pre Tax Profit	1,953	1,288	1,354	763	147
Profit/(Loss)	1,698	1,222	1,179	558	(91)
Profit/(Loss) Margin	16.5%	12.3%	14.8%	6.4%	(1.0%)
Adjusted Net Profit	856	1,077	292	671	17
Adjusted Net Profit Margin	8.3%	10.8%	3.7%	7.7%	0.2%
Recurring Net Profit	1,695	1,573	959	1,097	486
Basic Earnings/(Loss) Per Share (in USD)	0.112	0.080	0.078	0.037	(0.006)
Total Assets	15,777	15,774	14,452	12,809	14,857
Equity Attributable to Shareholders of the Company	5,209	4,444	3,299	1,391	2,237
Net Debt	**7,442**	**7,648**	**8,421**	**8,372**	**8,837**


ENDURING
THE
DISTANCE
Reduced weight
Manoeuvring and speedy

01 CORPORATE PROFILE

CORPORATE PROFILE

RUSAL is a low-cost, vertically integrated aluminium producer with core smelting operations located in Siberia, Russia. In 2018, RUSAL remained among the largest producers of primary aluminium and alloys globally.



* China producers 2018 output wasn't published/publicly available at the time of Annual Report preparation, therefore Aladdiny source was used for the volumes estimation.

Source: Based on RUSAL's internal company report, and peer companies' publicly available results, announcements, reports and other information.

RUSAL's production chain includes bauxite and nepheline ore mines, alumina refineries, aluminium smelters and casting houses, foil mills, packaging and wheels production centers.

Secured access to green, renewable electricity

Electricity is a key component of the aluminum production process. RUSAL's core smelting operations are favorably located close to the Siberian hydro power plants sourcing from them approximately 93% of the Group's total electricity needs. The Company has long term agreements with the region's hydro-power energy suppliers. Using renewable and environmentally friendly hydro generated electricity, RUSAL is targeting the lowest CO_2 footprint in the industry.

Captive raw material supplies

RUSAL alumina production capacities are located in Russia and abroad. These operations cover over approximately 100% of the Group's total alumina needs.

Our alumina refineries bauxite needs are covered by up to 75% with supplies from the Group's bauxite mining operations. Our existing bauxite resource base is sufficient to supply for over 100 years of operations.

Efficient midstream, proprietary R&D and internal EPCM expertise

RUSAL aluminum smelting operations go through regular upgrades. RUSAL has developed its own in-house R&D, design and engineering centers and operates RA-300, RA-400 and Green Soederberg smelting technologies. A new energy efficient and environmentally friendly RA-500, RA-550 smelting technology has been designed and currently RUSAL is testing it, targeting the best energy efficiency yields in the industry.

RUSAL is actively developing a groundbreaking inert anode technology. Introducing this state-of-art technology into the production process will lead to complete elimination of greenhouse gas and polyaromatic hydrocarbon emissions coupled with 10% cut in operational costs through reducing anode and energy consumption and over a 30% cut in Greenfield projects expenditure costs.

Cost efficiency

The efficient smelting technologies together with low cost input material and utilities mix secures the Company's global leadership on the cost curve.

Focus on higher margin downstream business

RUSAL has a diversified product mix with a strong share of VAP in the portfolio (1.66 million tonnes per annum out of 3.67 million tonnes of total sales).

Diversified sales geography

RUSAL sales mix is represented by a diversified portfolio of regions. The Company delivers aluminium products to the domestic market and to all key global consuming regions (Europe, America, South East Asia).

Growth potential of the RUSAL platform

The BEMO Project (RUSAL and Rushydro JV) includes the 3,000 megawatt BEMO HPP (the construction of which was completed in 2014) and Boguchansky aluminium smelter in the Krasnoyarsk region of Russia. In March 2019, the launch of the second part of the first stage brought the total production capacity to almost 300 thousand tonnes per annum.

One of RUSAL's other major projects is the Taishet aluminium smelter in the Irkutsk region. The production capacity of the first line once launched will be 428.5 thousand tonnes. During 2018, the Company continued to finance this smelter's construction using its own funds. It is important to note that the launch of these projects is happening when the market is experiencing a growing aluminium deficit.

Implementing environmental initiatives

RUSAL was one of the first Russian companies that joined UN Global Compact. By following its environmental policy and undertaking to regularly review and update its provisions, the Company is constantly developing and improving its environmental management system and implementing its principles at all production facilities. In 2017 RUSAL has launched a new low carbon aluminium brand, ALLOW, which features a significantly lower carbon footprint – specific volume of greenhouse gas emissions – as compared to industry average (4t CO_2/t Al vs 12.3t CO_2/t Al of world average (scope 1 and 2 at the smelter). The Company first verified its ALLOW brand in 2018 with the help of the international auditor KPMG. In 2017, 77% of the Company's output was attributed to this brand. The computations followed the methodology contained in the International Aluminium Institute's carbon footprint reporting guidelines published in February 2018.

Diversification opportunities through investments

- As at the Latest Practicable Date, RUSAL owns an effective 27.82% interest in Norilsk Nickel, the world's largest nickel and palladium producer and one of the leading producers of platinum and copper[1].
- RUSAL's 50/50 LLP Bogatyr Komir coal joint venture in the Ekibastuz coal basin, one of the largest coal basins in the CIS, provides RUSAL with a natural energy hedge.

Key facts

In 2018, RUSAL accounted for approximately 5.8% of the world's aluminium output and about 6.2% of the world's alumina production, generated from the following facilities located around the world.

- 10 aluminium smelters, of which 9 are in Russia, and 1 in Sweden
- 8 alumina refineries, of which 3 are in Russia, 1 in Ireland, 1 in Ukraine, 1 in Jamaica, 1 in Italy and 1 in Guinea
- 7 bauxite mines, of which 2 are in Russia, 1 in Jamaica, 3 in Guinea and 1 in Guyana
- 1 nepheline mine in Russia
- 4 foil mills, of which 3 are in Russia and 1 in Armenia
- 4 powder plants, all of which are in Russia
- 2 silicon factories, all of which are in Russia
- 2 wheels factories situated in Russia

RUSAL's ordinary shares are listed on the Hong Kong Stock Exchange and the Moscow Exchange.

1 Source: www.nornickel.ru

MAP OF OPERATIONS

ARMENIA
01 Armenal

AUSTRALIA
02 QAL

GUINEA
03 Compagnie des bauxites de Kindia (CBK)
04 Dian Dian Project
05 Friguia Bauxite & Alumina Complex

GUYANA
06 Bauxite Company of Guyana (BCGI)

IRELAND
07 Aughinish Alumina

ITALY
08 Eurallumina

JAMAICA
09 WindalcO

KAZAKHSTAN
10 LLP Bogatyr Komir

NIGERIA
11 ALSCON

RUSSIA
12 Achinsk Alumina Refinery
13 Bogoslovsky Alumina Refinery
14 Boguchanskaya HPP (BEMO)
15 Boguchansky Aluminium Smelter (BEMO)
16 Boksitogorsk Alumina Refinery
17 Bratsk Aluminium Smelter
18 Irkutsk Aluminium Smelter
19 Kandalaksha Aluminium Smelter
20 Khakas Aluminium Smelter
21 Kia-Shaltyr Nepheline Mine
22 Krasnoturyinsk Powder Metallurgy
23 Krasnoyarsk Aluminium Smelter
24 Nadvoitsy Aluminium Smelter
25 North Urals Bauxite Mine
26 Novokuznetsk Aluminium Smelter
27 Sayana Foil
28 SAYANAL
29 Sayanogorsk Aluminium Smelter
30 Shelekhov Powder Metallurgy
31 Silicon (ZAO Kremniy), Shelekhov
32 SKAD wheels factory
33 Taishet Aluminium Smelter (project)
34 Timan Bauxite
35 Urals Alumina Refinery
36 Urals Foil
37 Urals Silicon
38 Volgograd Aluminium Smelter
39 Volgograd Powder Metallurgy

SWEDEN
40 KUBAL

UKRAINE
41 Nikolaev Alumina Refinery

Aluminium

Alumina

Bauxite

Foil

Powders

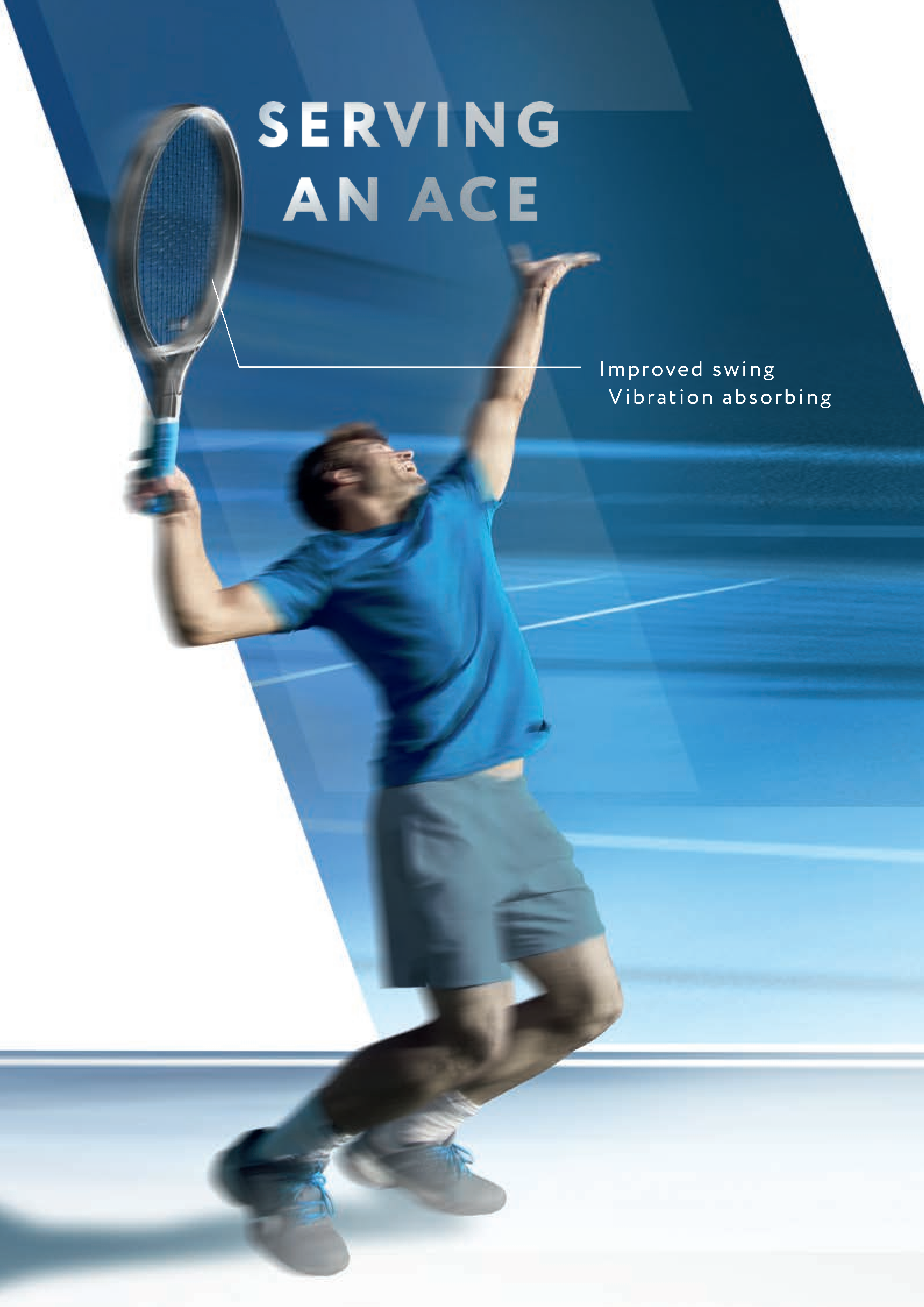
Silicon

Nepheline ore

Other business

Wheels

SERVING AN ACE



02 CHAIRMAN'S STATEMENT

CHAIRMAN'S STATEMENT

Bernard Zonneveld

Chairman of the Board

Dear Shareholders,

I am delighted to welcome you to RUSAL's Annual Report for 2018. It is a pleasure to address you for the first time as Chairman of the new Board of Directors of a leading global aluminium producer.

Firstly, I would like to reassure you that the new Board of Directors represents an international group of extremely qualified and experienced professionals. We are prepared to take any necessary actions, above and beyond what OFAC has required of the Company, to demonstrate the Board's absolute commitment to transparency, accountability and good corporate governance, as we lead the business on to new achievements.

Following the lifting of U.S. sanctions, I can see the Company's immense potential to further grow into a high-performing business with excellent sustainable assets, proprietary technologies and talented personnel. I am pleased to say that RUSAL is in a strong position to face the market challenges, with our innovative technologies and our focus on low carbon footprint production.

The 2018 results demonstrate RUSAL's solid position in its core business: revenue increased by 3.1% to USD10,280 million, and the Company recorded a net profit of USD1,698 million, a 39.0% increase compared to the previous year. In 2018, the average aluminium realized price increased by 7.3% compared to the previous year and amounted to USD2,259 per tonne. The average realized premium component decreased by 6.7% compared to 2017 and dropped to USD152 per tonne.

RUSAL continued to honor interest and coupon payments. During the financial year total debt slightly decreased by USD193 million as a result of scheduled payments.

In January 2018, RUSAL successfully completed its third Eurobond issuance. More than 100 investors from across Europe, America, Russia and Asia, participated in the order book for RUSAL's new Eurobond issuance, which exceeded USD1.5 billion. The successful placement of the issue provides further evidence of RUSAL's compelling investment case, which continues to thrive from a strong support from the global investor community. This transaction further improves the Company's debt profile and its ability to pursue exciting new business opportunities.

RUSAL continued to expand its resource base and ensure its long-term stability. Out of RUSAL's CAPEX in 2018 (USD834 million), 54% was set aside for the development of its key projects, to support the Company's competitive advantages of vertical integration into raw materials and product mix enhancements. As an example, in June 2018, RUSAL launched two key projects aimed at increasing the Company's self-sufficiency in sourcing raw materials: the Dian-Dian bauxite deposit and Friguia alumina refinery complex.

Another example is the BEMO project, a 50/50 joint venture with RusHydro, which is an industrial complex in Siberia combining the BEMO HPP and Boguchansky aluminium smelters. The second part of the first stage was launched in March 2019 and brought the total production capacity to almost 300 kt per annum.

One of RUSAL's other major projects is the Taishet aluminium smelter in the Irkutsk region. The production capacity of the first line is 428.5 thousand tonnes. During the course of 2018, the Company continued to finance this smelter's construction using its own funds.

It is important to note that the launch of these projects is happening when the market is experiencing a growing aluminium deficit. At the same time, there are no new significant supply increase projects currently carried out outside of China (excluding RUSAL).

RUSAL is committed to meeting the market's high demands for low-carbon footprint products, evidenced by the Company's gradual reduction of the CO_2 emissions at its sites. As the challenges of climate change become more threatening, RUSAL continues to enhance its commitment to producing "green aluminium". Total primary consumption of low-carbon aluminium (LCA) is estimated to surpass the 4 million tonnes threshold by 2022, according to the Company's calculations. As more companies ranging from the automobile to technology industries are seeking to reduce their carbon footprint through both their production and supply chains, RUSAL is seeking to gain a 25% share of the market with its ALLOW brand.

The Company pays great attention to the social and economic development of the region in which it operates, both in Russia and overseas. Since 2014, RUSAL has been actively engaged in the process of fighting the spread of the Ebola virus in the Republic of Guinea, through the construction of medical infrastructure and the development of the GamEvac-Combi vaccine. In 2018, during the testing program conducted at the Scientific Diagnostic Center for Epidemiology and Microbiology, RUSAL provided two thousand people with the vaccination against Ebola in the Republic of Guinea. The vaccine is currently in the final round of testing. I hope that the vaccine will help combat the Ebola virus in West Africa and ensure that it becomes a disease of the past.

Finally, I would like to thank all our stakeholders including our shareholders, employees and executive team members for their commitment and support during the past year. I am proud to say that 2018 has proven that the Company is ready to face and overcome unexpected obstacles. Despite the challenges over the last year, RUSAL remains in good shape and is ready to deliver growth and value.

Bernard Zonneveld
Chairman of the Board
29 April 2019

CEO'S REVIEW

Evgenii Nikitin

Chief Executive Officer

Despite the OFAC Sanctions, RUSAL's robust full year results demonstrated skillful crisis management alongside the ability to adapt to a new operations' environment. We maintained a strong market position through high managerial competence and operational flexibility.

In 2018, aluminium production totaled 3,753 thousand tonnes which is a 1.2% increase compared to the prior year. Total production dynamics remained largely stable with capacity utilization reaching 96%. Value-added products (VAP)[2] sales amounted to 1,664 thousand tonnes with the share of VAP sales sitting at 45%.

Production cost per tonne in the aluminium segment amounted to USD 1,646 and increased by 9.2% in 2018 compared to the same period of 2017. This was due to significant price increases in alumina, as well as the increase in the prices of other raw materials.

2 VAP includes alloyed ingots, slabs, billets, wire rod, wheels, high and special purity aluminium.

The Company continues to carry out its strategy to increase share of VAP sales by investing in new alloys. In February 2018, RUSAL completed the feasibility study for the construction of a scandium oxide production unit. The technology processes red mud from alumina refineries and makes scandium oxide as a by-product, which significantly improves the end-user performance of aluminium alloys.

In 2018, RUSAL continued to cut direct specific greenhouse gas emissions at existing aluminium smelters as a part of the corporate strategy to reduce emissions by 15% by 2025 compared to 2014. During 2018 our level of emissions amounted to 2.11 MT CO_2eq./MT, 7.5% lower than the levels registered in 2014 (2.28 MT CO_2eq./MT).

In 2018, KPMG conducted an audit to prove the accuracy of the Company's measurements of CO_2 emissions. Upon verification of the compliance of the aluminium production to the CO_2 emissions requirements of low carbon aluminium brand ALLOW, launched by RUSAL two years ago, the Company has established that 77% of all aluminium produced at the Company's smelters in 2017 could be included in the ALLOW brand.

In December 2018, RUSAL's commitment to sustainability and best international practices was acknowledged by Vigeo Eiris, a reputable international ratings agency. RUSAL was listed among the top 100 Best Emerging Markets performers.

To conclude, the key achievement of the year is that despite the challenging times, the Company has remained operational whilst carefully navigating and avoiding any seismic personnel cuts and managing to save well-established multi-industrial supply chains in the countries where it has operations. 2018 has shown customers and investors that our business model continues to remain efficient and robust.

Evgenii Nikitin
Chief Executive Officer
29 April 2019

SKILFUL MANOEUVRING

03 BUSINESS OVERVIEW

BUSINESS OVERVIEW

Business Unit

Aluminium

RUSAL owns 10[3] aluminium smelters which are located in two countries: Russia (nine plants) and Sweden (one plant). The Company's core asset base is located in Siberia, Russia, accounting for approximately 93% of the Company's aluminium output in 2018. Among those, BrAZ and KrAZ together account for more than half of RUSAL's aluminium production. The Company owns 85% of a smelter located in Nigeria.

During 2018, RUSAL continued to implement a comprehensive program designed to control costs and optimize the production process in order to strengthen the Company's position as one of the world's most cost-efficient aluminium producers.

BEMO project

The BEMO project involves the construction of the 3,000 MW BEMO HPP and the BEMO aluminium smelter in the Krasnoyarsk region in Siberia.

The construction of the BEMO aluminium smelter is divided into two stages (each phase with capacity for 298 kt of aluminium per annum). The first part of the first stage (149 kt of aluminium per annum, 168 pots) was launched in 2015 and the second part of the first stage was launched in March 2019. The second stage of BEMO smelter (approximately 300 kt per annum) is to be considered with strategic partner RusHydro after the full ramp up of the first stage and subject to market situation and availability of project financing.

Taishet Aluminum Smelter

Construction of Taishet Aluminum Smelter was started in 2006. Due to unfavorable market conditions, RUSAL decided to suspend the project in 2009. After the economic recovery and market conditions improvement in 2016, the Board of Directors decided to resume construction of LC-1 (first series) of the Taishet Smelter and approved start of preparatory work to resume construction. Actual construction of the Taishet Smelter resumed in 2017.

The project includes construction of an aluminum smelter in the town Taishet of the Irkutsk Region (Eastern Siberia) with a design production capacity of the LC-1 (first series) is 352 pots or 428.5 kt per annum. Electricity consumed by the LC-1 (first series) is 6,370 million kWh.

As of 31 December 2018, RUSAL invested USD792 million (excluding VAT) in the LC-1 (first series) construction project.

Alumina

The Group owns 8 alumina refineries as at the end of 2018. RUSAL's alumina refineries are located in six countries: Ireland (one plant), Jamaica (one plant), Ukraine (one plant), Italy (one plant), Russia (three plants) and Guinea (one plant). In addition, the Company holds a 20% equity stake in QAL, an alumina refinery located in Australia. Most of the Group's refineries have ISO 9001 certified quality control systems. Four refineries and QAL are ISO 14001 certified for their environmental management and three refineries have received OHSAS 18001 certification for their health and safety management systems.

The Company's long position in alumina capacity helps to secure sufficient supply for the prospective expansion of the Company's aluminium production capacity and allows the Company to take advantage of favorable market conditions through third-party alumina sales.

3 10 aluminium smelters in operation.

The table below[4] provides an overview of RUSAL's aluminium smelters (including capacity) as at 31 December 2018.

Asset	Location	% Ownership	Nameplate capacity (approved casting capacity for 2018), kt	Capacity utilization rate
Siberia				
Bratsk aluminium smelter	Russia	100%	1,009	100%
Krasnoyarsk aluminium smelter	Russia	100%	1,019	100%
Sayanogorsk aluminium smelter	Russia	100%	542	99%
Novokuznetsk aluminium smelter	Russia	100%	215	100%
Khakas aluminium smelter	Russia	100%	297	98%
Irkutsk aluminium smelter	Russia	100%	419	100%
Russia (other than Siberia)				
Kandalaksha aluminium smelter	Russia	100%	76	95%
Volgograd aluminium smelter	Russia	100%	68	94%
Urals aluminium smelter	Russia	100%	75	0%
Nadvoitsy aluminium smelter[5]	Russia	100%	24	25%
Other countries				
KUBAL	Sweden	100%	128	98%
ALSCON	Nigeria	85%	24	0%
Total UCR			**3,896**	**96%**

4 The table presents total nameplate capacity of the plants, each of which is a consolidated subsidiary of the Group.

5 Nadvoitsy aluminium smelter is completely mothballed.
In August 2018 the decision was taken to completely shut down the production (1/2 of the pot room 4 was operated before) followed by mothballing of the smelter.

The table below[6] provides an overview of RUSAL's alumina refineries (including capacity) as at 31 December 2018.

Asset	Location	% Ownership	Nameplate capacity, kt	Capacity utilization rate
Achinsk Alumina Refinery	Russia	100%	1,069	80%
Bogoslovsk Alumina Refinery	Russia	100%	1,030	97%
Urals Alumina Refinery	Russia	100%	900	101%
Friguia Alumina Refinery	Guinea	100%	650	28%
QAL	Australia	20%	3,950	93%
Eurallumina	Italy	100%	1,085	0%
Aughinish Alumina Refinery	Ireland	100%	1,990	94%
Windalco	Jamaica	100%	1,210	41%
Nikolaev Alumina Refinery	Ukraine	100%	1,700	101%
Total nameplate capacity			**13,584**	**79%**
RUSAL attributable capacity			**10,424**	**75%**

6 Calculated based on the pro rata share of the Group's ownership in corresponding alumina refineries (QAL).

The main factors which had an influence on the Group's production performance:

- Achinsk Alumina Refinery. A program of partial substitution of costly bright coal with the ligneous coal for sintering purposes is ongoing. A project of wet exhaust gas scrubbers installation at sintering kilns has been partially completed.
- Bogoslovsk Alumina Refinery. Digester productivity has been increased by means of reciprocating piston pump stock upgrade (GEHO and FELUWA units). Condition of bauxite slurry heaters has been improved. Productivity of sintering kilns has been increased by means of lowering slurry moisture.
- Urals Alumina Refinery. Timan bauxite quality improvement (by Al_2O_3 content), allowing overall production output increase even above the plant's capacity.
- Nikolaev Alumina Refinery. Partial substitution of C.B.K. bauxite with bauxite from other deposits (with higher Al_2O_3 content) led to an overall production increase even above the plant's capacity.
- Aughinish Alumina Refinery. Dian-Dian bauxite consumption successfully started. Also new deep thickener was installed and commissioned.
- Friguia Alumina Refinery. The plant successfully resumed operation after long-term conservation (since 2012). First production unit was put in service in May 2018. The plant reached its 50% capacity in 4Q 2018. It is planned to continue its capacity ramp up in 2019 to achieve full-scaled operations of 600kt per annum.

Bauxite

The Group operates seven bauxite mines. RUSAL's bauxite mines are located in four countries: Russia (two mines), Jamaica (one mine), Guyana (one mine) and Guinea (three mines). The Company's long position in bauxite capacity helps to secure sufficient supply for the prospective expansion of the Company's alumina production capacity and allows the Company to take advantage of favorable market conditions through third-party bauxite sales.

In April 2018, Verkhne-Shugoskoe new mine deposit commenced operation at Timan Bauxite.

In 2018, a mining equipment renovation project was completed at BCGI.

In June 2018, Dian-Dian mine commenced operation.

The increase in Timan bauxite capacity in 2018 relative to 2017 is associated with the launch of mining at the new Verkhne-Shugoskoe deposit and the continued mine development of the current Vezho-Vorykvinskoe deposit.

Capacities of Compagnie des Bauxites de Kindia in 2018 upon the achieved results of extraction of 3,451 thousand tonnes with the same quantity and equipment structure.

Securing the supply of high quality bauxite at adequate volumes and cost competitive prices for its alumina facilities is an important objective for the Company. Additional exploratory work is being undertaken to locate new deposits of bauxite in the Group's existing operational bauxite mining areas and in new project areas. Each of the Group's mining assets is operated under one or more licenses.

As at 31 December 2018, the Group had JORC attributable bauxite Mineral Resources of 1,834.6 million tonnes, of which 489.3 million tonnes were measured, 714.8 million tonnes were indicated and 630.5 million tonnes were inferred. Due to the introduction of new field development projects on Timan and North Urals bauxite mine the reevaluation of resources was made.

Energy assets

BEMO Project

BEMO HPP is the fourth step of the Angara hydroelectric power chain, the biggest major hydro-power plant completed project in Russia. Construction of the power plant was suspended in Soviet times due to the lack of financing and was resumed in May 2006 by RUSAL and RusHydro following the conclusion of their agreement to jointly implement the BEMO project comprising the BEMO HPP (the average annual electricity output reaching 17.6 billion kWh) and an aluminium smelter capable of producing 600,000 tonnes of metal per year.

The project's 79 meters high and 2,587 meters long composite gravity and rock-fill dam was completed at the end of 2011 and nine 333 MW hydropower units of the BEMO HPP commenced operation during 2012-2014. The total installed capacity of all nine hydro-units in operation amounts to 2,997 MW.

The table below provides an overview of RUSAL's bauxite mines (including capacity) as at 31 December 2018.

Asset	Location	% Ownership	Annual capacity mt	Capacity utilisation rate
Timan Bauxite	Russia	100%	3,300	101%
North Urals Bauxite Mine	Russia	100%	3,000	78%
Compagnie des Bauxites de Kindia	Guinea	100%	3,500	99%
Friguia Bauxite and Alumina Complex	Guinea	100%	2,100	34%
Bauxite Company of Guyana, Inc.	Guyana	90%	1,700	82%
Windalco	Jamaica	100%	4,000	45%
Dian-Dian	Guinea	100%	3,000	28%
Total nameplate capacity			**20,600**	**67%**

The plant started commercial supplies to the wholesale electricity and capacity market on 1 December 2012. Since its launch the BEMO HPP has generated 67.623 TWh of electricity. During 2018, the plant supplied 13.610 TWh to the wholesale electricity and capacity market.

Mining Assets

RUSAL's mining assets comprise 15 mines and mine complexes, including bauxite mines (the resources of which are described above), two quartzite mines, one fluorite mine, two coal mines, one nepheline syenite mine and two limestone mines.

The long position in alumina capacity is supported by the Company's bauxite and nepheline syenite resource base.

The Company jointly operates the two coal mines with Samruk-Energo, the energy division of Samruk-Kazyna under a 50/50 joint venture, Bogatyr Coal LLP.

Bogatyr Coal LLP

Bogatyr Coal LLP, which is located in Kazakhstan, is a 50/50 joint venture between the Company and Samruk-Energo.

Bogatyr Coal LLP, which produced approximately 44.87 million tonnes of coal in 2018, has approximately 1.75 billion tonnes of JORC Proved and Probable Ore Reserves and has Measured Mineral Resources and Indicated Mineral Resources in aggregate of approximately 2.09 billion tonnes as at 31 December 2018. Bogatyr Coal LLP generated sales of approximately USD250 million in 2017 and USD265 million in 2018. Russian and Kazakh customers contribute to approximately 25% and 75%, respectively, of our sales.

Investment in Norilsk Nickel

Norilsk Nickel is the world's largest palladium producer, the world's second largest nickel producer and one of the leading producers of platinum, copper and cobalt. RUSAL held 27.82% shareholding in Norilsk Nickel as at the Latest Practicable Date.

RUSAL's shareholding in Norilsk Nickel allows for significant diversification of earnings, through Norilsk Nickel's exposure to PGMs[7] and bulk materials, as well as broadens RUSAL's strategic opportunities. The Company's objective is to maximize the value of this investment for all shareholders.

7 PGMs – platinum group metals.

Asset	Measured MT	Indicated Mineral Resources[(1)] MT	Inferred MT	Total MT
Timan Bauxite	12.3	163.2	13.0	188.6
North Urals Bauxite Mine	18.0	205.4	142.5	365.9
Compagnie des Bauxites de Kindia	0.0	13.5	61.6	75.1
Friguia Bauxite and Alumina Complex	29.9	142.4	152.6	324.9
Bauxite Company of Guyana, Inc.	0.0	39.2	44.2	83.3
Windalco	28.2	80.8	0.0	109.0
Dian-Dian	400.9	70.2	216.6	687.7
Total	**489.3**	**714.7**	**630.5**	**1,834.5**

Company profile and Financial Results[8]

Norilsk Nickel's resource base in Taimyr and Kola Peninsula as at 31 December 2017, consists of 815 million tonnes of Proved and Probable Ore Reserves and 2,047 million tonnes of Measured Mineral and Indicated Mineral Resources. Its key assets are located in the Norilsk region, the Kola Peninsula and the Trans-Baikal Territory in Russia, with foreign production assets located in Finland and South Africa.

In 2018, Norilsk Nickel produced 219 thousand tonnes of nickel, 474 thousand tonnes of copper, 2,729 thousand troy ounces of palladium and 653 thousand troy ounces of platinum. Compared to 2017, it is to be noted that:

1. Growth in production of nickel (+1%) mostly due to the increase in processed volumes of Russian feed as a result of downstream reconfiguration and processing of accumulated work-in-progress inventories (for information: production of nickel from own Russian feed increased by 3%);
2. Growth in production of copper (+18%) mostly due to the ramp up of Bystrinsky Project, increase of processed volumes of concentrate purchased from Rostec and reduced metal losses in recovery of copper into copper concentrate (Talnakh Concentrator reaching its design parameters after modernization) (for information: production of Copper from own Russian feed increased by 19%);
3. Decrease in PGM production (-2% palladium, -3% platinum) mostly due to the decrease of third party feed processing (for information: production of PGM from own Russian feed in 2018 was approximately the same as in 2017).

Notes:

(1) Mineral Resources:

- are recorded on an un-attributable basis, equivalent to 100% ownership; and
- are reported as dry weight (excluding moisture).

Mineral Resources tonnages include Ore Reserve tonnages.

8 Production and operational data in this section is derived from www.nornik.ru/en/

Norilsk Nickel's metal sales are highly diversified
— by the region: Europe, Asia, North and South America, Russia and CIS
— by products: nickel, copper, palladium, platinum, semi-products and other metals:

USD million	Revenue from metal sales	
	Year ended 31 December 2018	Year ended 31 December 2017
Europe	5,868	4,753
Asia	2,929	1,939
North and South America	1,619	1,166
Russian Federation and CIS	546	557
	10,962	**8,415**

USD million	Revenue from metal sales	
	Year ended 31 December 2018	Year ended 31 December 2017
Nickel	3,013	2,416
Copper	2,977	2,422
Palladium	3,674	2,434
Platinum	596	654
Other metals and semi-products	702	489
	10,962	**8,415**

The market value of RUSAL investment in Norilsk Nickel amounted to USD8,286 million as at 31 December 2018, which was almost the same year earlier, USD8,294 million as at 31 December 2017. According to IFRS for the year ended 31 December 2018, Norilsk Nickel has the following key financial indicators:

USD million (unless otherwise specified)	**12M 2018**	**12M2017**	**Change (2018/2017), %**
Revenue	11,670	9,146	+28%
EBITDA	6,231	3,995	+56%
EBITDA Margin	53%	44%	+9 p.p.
Net Profit	3,059	2,123	+44%
Capital Expenditures	1,553	2,002	-22%
Net debt	7,051	8,201	-14%
Net debt/EBITDA	1.1x	2.1x	-1.0x

During 2017 Norilsk Nickel's net working capital significantly increased from USD0.5 billion to USD2.1 billion due to one-off factors (e.g. metal inventory increase, optimization of capital structure, etc.). However, in 2018, the net working capital reduced to normal level (around USD1.0 billion as defined by the management of Norilsk Nickel) by means of sale of metal stocks accumulated in 2017 and optimization of capital structure. As of 31 December 2018, the net working capital reduced by 60% down to USD0.9 billion (from USD2.1 billion as of 31 December 2017).

Company's Strategy and Key Investment Projects

On 19 November 2018, Norilsk Nickel introduced an update of its new strategy in London and confirmed its key strategic priorities:

1. **Focus on Health, Safety and Environment:** annual LTIFR reduction by 20%, zero tolerance for fatalities, and the launch of the comprehensive environmental program aiming at sulfar dioxide emissions reduction by 75% in polar division;
2. **Efficiency improvements:** short-term metal production growth of 5-8%, stringent cost control – maintaining total cash cost inflation below inflation rate, and labour productivity growth of up to 15% from 2017 to 2020;
3. **Long-term production growth targets for the existing asset base:** Talnakh brownfield projects, South Cluster development (Zapolyarniy mine, Medveziy Ruchey open-pit and Norilsk Concentrator), and third stage of Talnakh concentrator upgrade;
4. **"Blue Sky" projects and cooperation down the value chain:** early stage evaluation of potentially the world's largest Greenfield PGMs[9] cluster through a joint venture with Russian Platinum Plc (one of the leading PGM producer in Russia); and strategic cooperation with BASF in fast growing battery materials sector.

Bystrinsky Project (50%+1 Norilsk Nickel, 36.6% CIS Natural Resources Fund and 13.3% China's Highland Fund) is ramping up, full operational capacity is

9 PGMs – platinum group metals.

expected to be reached in 2020. Potential IPO of Bystrinsky Project in 2020 is considered as a strategic option for further value creation of the asset (terms and conditions to be determined in the second half of 2019).

On 7 February 2018, Norilsk Nickel and Russian Platinum signed a framework agreement on strategic partnership. According to the agreement, the parties will establish a joint venture to develop disseminated ore deposits in the Norilsk Industrial District. The joint venture will be 50%-owned by Norilsk Nickel and 50%-owned by Russian Platinum. Norilsk Nickel will contribute to the joint venture its license for Maslovskoe deposit, while Russian Platinum will contribute its licenses for the South flank of Norilsk-1 and Chernogorskoe deposits.

On 22 October 2018, it was announced that BASF has selected Harjavalta, Finland, as the first location for battery materials production serving the European automotive market. The plant will be constructed adjacent to the nickel and cobalt refinery owned by Norilsk Nickel. In addition, BASF and Norilsk Nickel have signed a long-term, market-based supply agreement for nickel and cobalt feedstocks from Norilsk Nickel's metal refinery. The agreement will establish a locally sourced and secure supply of raw materials for a battery production in Europe.

Settlement with Interros in relation to Norilsk Nickel

On 10 December 2012, Interros (which holds approximately 30.4%[10] of Norilsk Nickel shares), RUSAL (which holds approximately 27.82%[11] of Norilsk Nickel shares), Crispian (which holds approximately 4.2%[12] of Norilsk Nickel shares) and the respective beneficial owners of Interros and Crispian, namely, Mr. Potanin and Mr. Abramovich, entered into an agreement (the 'Agreement') to improve the existing corporate governance and transparency of the Norilsk Nickel Group, to maximize profitability and shareholder value and to settle the disagreements of RUSAL and Interros in relation to the Norilsk Nickel Group.

In 2015, Norilsk Nickel's commitments pertaining to special dividends were fulfilled in advance (special dividends were paid out during 2014-2015, including dividend pursuant to the Norilsk Nickel's shareholder resolution resolved in the annual general meeting on 13 May 2015).

On 5 April 2016, the Company entered into the side letter with the parties to the Agreement pursuant to which the Agreement was further amended (the "Amendments"), among others, to the following effect on the dividend policy of Norilsk Nickel:

Dividend Policy of Norilsk Nickel

Starting 2017 and each subsequent year, the annual dividends payable by Norilsk Nickel shall be determined on the basis of the ratio of Norilsk Nickel's Net Debt to Norilsk Nickel's EBITDA as of 31 December of the preceding year as follows:

1. 60% of EBITDA if the ratio is 1.8 and less;
2. 30% of EBITDA if the ratio is 2.2 and more; and
3. if the ratio falls between 1.8 and 2.2, the percentage of EBITDA to be paid as dividends shall be calculated as follows: X% = 60% – (Net Debt/EBITDA – 1.8)/0.4 · 30%.

Starting 2018, the minimal amount of the annual dividends payable by Norilsk Nickel shall not be less than USD1 billion.

Potential disposal of 6,313,994 ordinary shares held by Crispian in Norilsk Nickel (3.99% of Norilsk Nickel shares)

On 10 December 2012, the Company entered into a settlement agreement ("Framework Agreement") with Interros International Investments Limited ("Interros") and LLC "Millhouse" and their repective beneficial owners to resolve their dispute relating to interests in Norilsk Nickel, details of which are set out in the circular of the Company dated 25 June 2014. As part of the Framework Agreement, with a view to create a balanced system of specific rights and obligations, each of the Company and Interros were required to transfer shares (totally approximately 5.87% stake in Norilsk Nickel) in Norilsk Nickel to Crispian.

On 6 February 2018, RUSAL received a letter from Crispian (the "Letter") informing that Crispian had received an offer from Bonico Holdings Co Ltd to buy 6,313,994 ordinary shares held by Crispian in Norilsk

10 According to the Norilsk Nickel Annual Report 2017.

11 According to the Norilsk Nickel Annual Report 2017.

12 According to the Norilsk Nickel Annual Report 2017.

Nickel (the "Offered Shares"). By the Letter, Crispian purported to give each of the Company and Whiteleave Holdings Limited (who replaced Interros as a party to the Framework Agreement) ("Whiteleave") a notice of a right of the first refusal to acquire the Offered Shares on the terms of a non-negotiable sale and purchase agreement derived from the terms and conditions of the offer ("ROFR"). The Company understood at the time that Whiteleave has accepted the ROFR.

RUSAL contended that the Letter is invalid and, hence, it contends that any sale of shares in Norilsk Nickel by Crispian pursuant to the Letter or pursuant to a purported acceptance of the Letter, or in consequence of an actual or (supposed) deemed rejection of Letter and/or the ROFR is also invalid under the Framework Agreement. On 12 February 2018, the Company commenced its legal challenge to the validity of the Letter in the High Court in London pursuant to the dispute resolution mechanisms set out in the Framework Agreement.

On 27 June 2018, the High Court in London issued its decision in relation to the Company's legal challenge. The decision was that the ROFR was invalid and ineffective such that Crispian was and is precluded under the Framework Agreement from disposing the offered shares pursuant to it. As a result, the share purchase agreement between Whiteleave and Crispian was unwounded. Such decision may be subject to further hearing, including applications for appeal.

Potential acquisition or disposal of shares in Norilsk Nickel

Pursuant to the Framework Agreement, each of the Company and Interros were not to sell or otherwise alienate its shares in Norilsk Nickel until the expiry of the lock-up of 5 years from the date of the Framework Agreement. Upon the expiry of the lock-up period, either party may initiate a "shoot out" between themselves by offering a price of not less than the 6-month weighted average price fo the shares of Norilsk Nickel immediately prior to the offer date plus 20% at any time and more than one time after the lock-up period (the "Shoot Out"). The offeree party shall either sell its stake in Norilsk Nickel at the offer price, buy the stake of the offering party or ask for a higher price. If it asks for a higher price, the offering party is obliged either to buy the stake of the offeree party for this higher price, or sell its stake at that price.

On 23 February 2018, RUSAL announced that it proposed to seek the approval of Shareholders, at an extraordinary general meeting of the Company by way of poll, of an acquisition mandate and a disposal mandate which would authorize the Board to effect (i.e. to initiate or respond to an offer under) a potential Shoot Out. Such mandates, if approved by Shareholders at an extraordinary general meeting, would give the Board the flexibility to expediently make an offer to buy the stake of Whiteleave (which replaced Interros as a party to the Framework Agreement) in Norilsk Nickel or, to accept an offer to sell its stake in Norilsk Nickel to Whiteleave, given the circumstances that a Shoot Out may be imminent. Any acquisition or disposal of shares in Norilsk Nickel pursuant to a Shoot Out will constitute a very substantial acquisition or disposal of the Company.

On 13 April 2018, following the inclusion of the Company into the SDN List issued by OFAC, RUSAL announced that it would not proceed to seek the Shareholders' approval of the mandates for the Board to effect a Shoot Out transaction.

Corporate Strategy

As at 31 December 2018, RUSAL's strategy is to ensure its long-term sustainable development in challenging market environment through the following strategic moves:

1. Increasing low-cost and high-efficiency production capacities and sales of VAP products. Further strengthening position on key markets including CIS, Europe, Asia and America markets.
2. Maintaining RUSAL's position as one of the most efficient and lowest cost producers.
3. Focus on innovations for core business and new products developments.
4. Sustainable and environmentally friendly aluminium.

Group-Wide Initiatives

Innovations and research projects and new super powerful reduction cells

The Company has been successfully operating the RA-550 super powerful reduction cells that were initially put into operation in the experimental industrial shop of the Sayanogorsk aluminium smelter. The new reduction cells have proved capable to deliver the best energy efficiency and environmental performance in the world: current efficiency: 96%, power consumption of below 12,800 kWh, and fluoride emissions of under 0.15 kg/t. The stable operation of the RA-550 reduction has tromped a number of innovative technical solutions to the high-amperage processes that shape the new standard in the industry: a fundamentally new configuration of the busbar with a two-line current supply, providing a symmetrical magnetic field and high MHD stability without a compensating loop; and a modular design of the busbar eliminating the constraints on the design of super powerful reduction cells operating at amperages in excess of 750 kA.

Environmental approach

The Green Soederberg process included in the list of the best available technologies in Russia is being successfully developed and improved upon in all key areas.

Two-stage gas scrubbing comprising dry and wet scrubbing stages is among the best gas scrubbing processes in the world and can remove not only fluorides but also sulphur (SO_2) from the exhaust fumes. RUSAL has patented a new pot gas scrubbing block that it designed itself. Now all the gas scrubbers installed at the aluminium smelters of RUSAL utilize the new scrubbing process that compared to other scrubbing processes, has a high efficiency per CAPEX (CAPEX on equipment is reduced by over 30%), as well as high fluoride and SO_2 removal effectiveness (99% and 96.5% respectively).

The improved design of the reduction cell degassing system has boosted degassing efficiency to over 97.4% while reducing the cost; and the centralized manufacture of the new units was organized at the iron casting facilities of RUSAL.

The automatic raw materials feeding systems that RUSAL has developed for its reduction cells as well as the production process control systems, the reduction cell tending equipment (new machines for loading alumina into reduction cells MZGV and systems for removing dust in MPU pot rooms) and innovative comprehensive gas scrubbing process have reduced the emissions of the main type of fluoride based contaminants (F, fluorides) by a factor of 3.5 relative to the standard Soederberg process. This has brought the environmental performance of the Green Soederberg process really close to baked anode reduction. In October 2018 environmental measurements were taken that confirmed that the new process meets the requirements of Russia's List of Best Available Technologies.

To ensure the Company always has access to raw materials and to strengthen the status of the Green Soederberg process as an environmentally friendly technology in terms of polyaromatic emissions, a new process was developed for making environmentally friendly pitch using low temperature coal dissolution and mixing with petroleum ingredients and low content of the products of the chemical coke production process (less than 30-40%). The new process is the only one of its kind in the world. In addition, new production processes are being designed and trialled at the industrial scale such as the hybrid and compound pitch processes that reduce the content of benzopyrene several-fold by replacing coal pitch with petroleum ingredients.

The Company has been making some significant efforts to minimize its carbon footprint. To that end, mathematical and physics models have been used to determine the optimal design of an industrial inert anode, which has confirmed the feasibility of inert anodes under industrial conditions in KrAZ reduction cells. Additional equipment was installed in the casthouses and an inert anode plant commenced operation; the new inert anode plant has enough capacity to supply inert anodes not only for the experimental production area but at an industrial scale.

Recycling

In order to boost the energy efficiency of aluminium production at relatively short pay back periods, tests are being carried out and new energy efficient reduction cell designs are being introduced at KrAZ, BrAZ, SAZ, NkAZ and IrkAZ. Electricity consumption per tonne of output was reduced by 200-400 kWh per tonne.

The use of bulk lining materials in pot rebuilds reduces the costs by RUB80,000-120,000 per cathode as a result of the lower prices of bulk lining materials and reduced labour intensity of installation. Furthermore, spent bulk lining materials can be recycled. Bulk materials proved to have a recycling rate of up to 50%. The introduction of bulk materials at 330 reduction cells at SAZ has already allowed the smelter to save more than RUB20 million.

Product engineering

A new aluminium zirconium alloy was developed for the drawing of wire and for use in cable shields. A new wire manufacturing process was developed and introduced at IrkAZ (the ExtruForm® line). Wire made from the new alloy was tested as a shield for a high voltage cable by VNIIKP; its effectiveness in this capacity was confirmed and the new material was approved for use as a replacement for copper. Amendments to state standards are currently under development to allow aluminium and aluminium based alloys to be used as cable shields.

As part of the efforts to further develop the ExtruForm® production line and expand the product range a production process was developed to make wire rod from an AMg series alloy that has a 3% magnesium content. The wire rod was tested as a raw material for making welding wire under industrial conditions and the consumer found the quality of the resulting product to be quite satisfactory. The line was retrofitted by installing a new casting block preheater to allow the production of high magnesium content alloys.

Research and development was carried out to refine the existing production processes in order to reduce the flow rate of the AlTiB alloying rod during the casting of billets. As a result of the retrofitting the average alloying rod flow rate was reduced by 15-17% for the 6XXX series alloys. The new and improved process was successfully tested at SAZ. A new process was also developed and introduced at BrAZ for casting 1070 alloy ingots without the feathery structure defect.

New powder alloys were developed for additive fabrication; and the new alloys offer improved performance at high temperatures: the alloys are based on the aluminium copper (PC-230) system and the Al-SiNi (PC-390) system. Basic 3D printing parameters were developed for the new alloys. Tests have demonstrated that the new alloys can be used at temperatures of 200-250C. The PC-320 alloy, developed earlier, was used to 3D-print a part that was successfully bench-tested as a replacement for a cast part. Subsequent optimization of the shape of the part reduced its weight by 33%, which was made possible by the new 3D printing process as it delivers improved strength performance when used with the new material.

A 3D printing laboratory was organized on the premises of the Institute for Light Materials and Technologies; it is equipped with an EOS 3D printer and auxiliary equipment for the preparation of powders and the finishing of 3D printed parts. Since the launch over 30 parts have been successfully manufactured from the new aluminium alloys for use in a broad range of industries.

New slabs were manufactured from a new aluminium alloys for railroad tanker cars at KrAZ. Ingots were processed into slabs. Modelling based on preliminary tests of the material demonstrated that the weight of the tanker car from the new alloy will be 37% less than that of a tanker car made from the AD0 alloy. Certification tests of the new material have been launched to obtain approval for its use in railroad equipment.

The content of the 6,063 alloy was optimized (within the specification ranges) for casting billets used in pressing in order to make them easier to work with. A test lot of billets was produced by VgAZ for further trials. Trials of the billets by customers operating pressing facilities found that the pressing rate for billets made from optimized alloys is 20-30% faster than the pressing rate for standard alloy billets.

We continue to develop more Al-Mg-0.1 Sc alloys with a view to cutting costs even further. A part manufactured from a forged block made from the P-1580 alloy successfully completed bench tests, and the manufactured sheets and forged products were studied when used in welding and cold stamping. The alloy exhibited significantly better properties than its counterparts: it was found to be 50% stronger compared to AMg alloys, which means it can be used as a replacement for Al-Mg and Al-Cu alloys. Tests on rolling mills demonstrated that sheets can be successfully made from thicker slabs (over 560 mm thick), which means the rolling yield ratio can be significantly increased.

In 2018, over 60 units of casting furnishing for slabs were designed and manufactured in-house and then used in the casthouses at KrAZ, SAZ and BrAZ on Wagstaff casting machines.

Innovations and Scientific Projects in Alumina Production

The red mud recycling process used by alumina refineries to extract scandium oxide as a by-product has been refined and improved upon: the yield of the process has been increased while the consumption of key reagents has been reduced. As a result the production cost was reduced to USD480 per kg of Sc_2O_3, which was confirmed on an experimental industrial unit (RUSAL Kamensk-Uralsky). The process continues to be optimized: additional improvements made in the laboratory can potentially reduce production costs further to USD350 per kg. The laboratory results are to be verified in the main production area in early 2019.

The quality of scandium oxide was improved to 99.9% and a 2% Al-Sc foundry alloy was produced that is fully compliant with GOST R 53777-2010.

A new stage has been completed in the project to develop an aluminium chloride production process for making alumina from non-bauxite raw materials: it involved the construction of a mini-plant; and the next stage is the creation of an experimental industrial unit with a capacity of 2,000 tonnes per year at the Achinsk Alumina Refinery.

In order to improve the efficiency of the project successful studies were carried out into methods to recycle the production waste (Si-stoff) into a broad range of commodities (silica gel, liquid glass, absorbents and a foaming fire retardant mix).

Laboratory technical solutions were developed to adapt the aluminium chloride process for the production of value-added products such as pseudoboehmite, which is used as a raw material for oil refinery catalysts. In Russia there is a demand for about 20,000 tonnes of this product every year, which means that continued work in this area holds a significant promise commercially.

A new production process has been developed for making highly dispersed precipitated aluminium hydroxide, a material that is used as a fire retardant. The low production costs results from the fact that the product is m ade from the slurries of the Achinsk Alumina Refinery, using the one-of-a-kind process for making alumina from nepheline. The new process for making highly dispersed precipitated aluminium hydroxide has completed all the requisite laboratory and field tests. Consumers were sent samples of the material and reported it was good enough for making compounds. It is currently estimated that there is a market for more than 15,000 tonnes per year for this product in Russia alone. Work has begun on the first stage of a 5,000 tonne-per-year production line at the Achinsk Alumina Refinery.

The company implemented a number of projects to boost the efficiency of its existing alumina refineries.

Retrofitting was completed of decanters 2, 3 and washer 5/1 in digestion areas 2 and 3 at RUSAL Krasnoturyinsk. Optimal red mud thickening modes were selected. The productivity of the retrofitted units was doubled.

The five time mud washing process was introduced in production area No. 8 at UAZ. During the implementation of the project the caustic and alumina content in the liquid portion of the waste mud was reduced by 25%.

A new process was developed at RUSAL Kamensk-Uralsky to use the spent tricalcium aluminate as a lime supplement during leaching, which should reduce the consumption of lime per tonne of output by about 10 kg per tonne. In 2019 the new process is to be field-tested and introduced into production.

RUSAL Kamensk-Uralsky completed the construction of the replacement precipitation module in production area No. 6, which is now operating at design capacity. The launch of the replacement battery increased the throughput of the precipitation area by 15% and improved the alumina size management process.

New technical solutions were developed on the basis of computational fluid dynamics (CFD) to allow the heat exchangers to be brought back into operation for non-contact heating of the thick slurry at the Ewarton facility. The project boosted output by 9,900 tonnes per year for alumina while reducing soda consumption by 3.7 kg per tonne of alumina. The new process is to be fully deployed in 2019. Mathematical modelling was carried out and the most electromagnetic stirrer was selected for the stirring of raw slurry at BAZ, which reduces its incrustation. As part of fundamental CFD modelling research methodologies were developed for using the CFD method to model the flocculation and decantation processes; the new methodologies are on a par with the best such methods currently available in the world.

Upgrade and Development

The Company continues to invest into main development areas:

1. Improving self-sufficiency;
2. Reducing production costs and boosting production efficiency;
3. Higher share of value-added products (aluminium alloys) in the total output.

Raw Material Self-Sufficiency

- In March 2018, IrkAZ's calcination kiln achieves design capacity of 9.5 tonnes per hour of calcined coke, marking the completion of the project aimed at retrofitting the kiln. The kiln's new output of 69.7 thousand tonnes per year of petroleum coke calcined in-house in 2018 allowed the company to reduce the amount of imported petroleum coke it needs to buy for the SAZ carbon plant. The quality of the calcined coke produced in-house meet all the requirements and match the quality of the imported raw material;
- VgAZ (up to 105 thousand tonnes per year of baked anodes) with own calcined coke capacity was launched in August 2018;
- The Taishet anode plant is implementing a new construction stage that includes an anode baking furnace with a capacity of 217.5 thousand tonnes of baked anodes per year. All the main production equipment needed for the project has already been purchased and currently construction and installation are underway.

Cutting costs and boosting production efficiency

— The full scale implementation continues of a comprehensive program to deploy the Green Soederberg production process across the aluminium smelters of the Company.

Over 80% of the reduction cells at the Krasnoyarsk aluminium smelter have been converted to the new standard (254 reduction cells were retrofitted in 2018). At the Bratsk aluminium smelter reduction cells are being retrofitted in 4 potrooms (66 reduction cells were retrofitted in 2018): over 10% of the smelter's reduction cells have been converted to use the new technology and modern gas scrubbers that have been installed on 3 potlines. Experimental Green Soederberg production areas are being operated at the Irkutsk, Novokuznetsk and Volgograd aluminium smelters. In five potrooms at KrAZ the gas ducts under the potrooms have been equipped with state-of-the-art automated pneumatic impulse cleaners.

The deployment of the Green Soederberg process reduces emissions of contaminants into the atmosphere to levels compliant with environmental regulations, while reducing the consumption of electricity, significantly cutting the amount of work in progress and increasing the service life of reduction cells.

— In order to reduce electricity consumption per tonne of output and boost the output of crude aluminium the reduction amperage was increased on the fifth potline at IrkAZ. The SCADA system was retrofitted, new re-designed dispensers were installed on the automated alumina point feeding system, and the bag filters of the gas scrubbers have been replaced. Tests confirmed that the reduction cells can operate at an amperage of 332 kA.

Expanding the share of value-added products in total output

As competition intensifies and customers are making more stringent metal quality requirements, the Company launched a number of projects to achievea competitive edge and maintain its market share:

In 2018, KrAZ completed the construction of a new casting system for making homogenized billets in diameters from 8 inches to 18 inches cast using the Airslip technology, which should provide a competitive edge to our Company and ensure that we can maintain our customers. In 2019, work will continue to achieve design capacity at the system (120 thousand tonnes of product per year).

In April 2018, SAZ commissioned a system for removing alkaline metals and carbides from aluminium to meet the demands of leading customers for metal purity and boost its casthouse's output of slabs by 20 thousand tonnes tonnes per year.

KrAZ completed the installation and debugging of a new PDBF filter heating system. The implementation of the project prevented the falling of the output of casting machines No. 4 and No. 5 during the replacement of filters while boosting the overall output of the casthouse by 3 thousand tonnes of slabs per year.

Environment:

In 2018, the Company received a DNV-GL certificate as confirmation that its environmental management system meets the requirements of ISO 14001-2015.

Regulation of Greenhouse Gas Emissions

Verification of the carbon footprint of the aluminium offered under the new ALLOW brand:

The Company has for the first time verified the aluminium it offers customers under the new ALLOW brand. The verification was conducted by the international audit firm KPMG. In 2017, ALLOW aluminium made up 77% of the Company's total output. All calculations were carried out in accordance with the Guidelines for Reporting the Aluminium Carbon Footprint developed by the International Aluminium Institute and published in February 2018.

Implementation of the ASI standard

In December 2017, a large-scale project on the implementation of the Aluminium Stewardship Initiative (ASI) standard was launched. The ASI standard began to be implemented at several pilot production sites: Boksit Timana, UAZ, IrkAZ and the Management Company. In 2018, the requirements of the standard were introduced; personnel was trained, the necessary internal documents were developed and business processes were modified to meet the requirements of the standard. Certification is planned for 2019.

Engineering and Construction Division

Below are projects fulfilled by production facilities and branches of the Engineering and Construction Division (ECD) in 2018 and actions scheduled for 2019:

The ECD and the Engineering and Construction Institute (Siberian Federal University-SFU) arranged modular professional re-trainings for construction project managers and experts to enhance their qualification. Four postgraduates with master's degrees completed their training in the Institute of Non-Ferrous Metals and Material Sciences (SFU); and a new group of students was selected to study 'Metallurgy (Anodes)'. Eleven students participated in the first higher education bachelor's degree program co-financed by ECD. In 2018, the ECD training center in Krasnoyarsk hosted 1,902 people who enhanced their occupational skills.

In 2018, plants and ECD branches implemented joint equipment reliability plans and significantly reduced downtime by 23% or 16,000 hours as compared to 2017, which, in turn, facilitated the minimization of production costs and the increase of output.

The following issues were addressed as part of the smelter electrical equipment reliability improvement plans:

1. In August 2017, ORD-66667/220/10 high-voltage transformer was installed and tested on the main stepdown substation 2 at the Bratsk smelter. For the first time that design was made employing high-voltage aluminium wiring to ensure a stable power supply to potrooms 1,2,3 and 4 of the Bratsk smelter. In 2018, two high-voltage transformers with the same design were installed at the Bratsk and Krasnoyarsk smelters. Every year, including 2019, it is planned to replace two transformers of such a design at aluminium smelters.
2. In June 2018, the Bratsk and Krasnoyarsk branches of RUS-Engineering Ltd purchased and commissioned new ChMZAP 70300 low loaders with a carrying capacity of 160 tonnes to transport transformers.
3. In January 2018, heads of electrotechnical labs underwent a joint training at the Bratsk center of competencies delivered by a chief of diagnostics and trials of BAUR as well as by test departments of the manufacturer of 9 mobile labs purchased in December 2017. The labs were purchased to control and diagnose cable lines of up to 10 kV with non-destructive methods using extremely low frequencies, defining dielectric losses in isolation and preventing outages. In 2018, there were 781 tests of HV cable lines, which revealed 6 emergency cables, where coupling sleeves and sections were replaced. An action plan was developed and approved to replace worn-out cable lines following the cabling tests and analysis. A MES cable diagnostics module was integrated into SAP R/3 TSRE, which allowed analyzing an operation of cable lines in 9 branches of the company with the use of mobile labs. Final tests of all HV cable lines are scheduled for 2019.
4. In 2018, a project titled 'Separation of the needs of the Sayanogorsk Aluminium Smelter', designed to increase power supply reliability, was completed, a positive expert opinion was received and a tender procedure was started to purchase the required equipment. In 2019, it is planned to purchase equipment and carry out construction and assembly works.
5. In 2018, the Bratsk center of competencies launched a project to increase maintenance efficiency and optimize costs targeting a shorter transformer maintenance time and the use of in-house resources.

A 500 tonnes multi-purpose mobile LIEBHERR crane was purchased as part of a vehicle fleet modernization plan. The crane helped shorten the process equipment maintenance period at the Achinsk refinery (powered conveyors, gas scrubbers and sintering furnaces).

In 2017, Achinsk commissioned an automatic moulding line, which facilitated the supply of good quality castings to the Company's smelters at the minimum cash cost. In 2018, the automatic moulding line cast more than 8,700 tonnes of cast-iron items from various alloys. The 2019 target is to start casting 100% of gas hood sections for pots.

As concerns pot rebuilds, a pot life cycle of 2,075 days was reached; the efforts will continue in 2019.

The Bratsk branch started pouring pre-heated cast-iron into cathode bottom blocks of all pots being rebuilt in order to reduce voltage drop on the steel bar-bottom block contact connection by 35 mV and, as a consequence, to minimize power consumption by 117.3 kWh/t of aluminium.

During 2018 under the modernization plan there were 254 S8BMe/S8Be pots installed at the Krasnoyarsk smelter; 101 energy-efficient ShPVVe pots and 67 environmentally-friendly S8Ba pots installed at the Bratsk smelter and 2 RA-167 pots installed in a trial area of the Novokuznetsk smelter.

In 2018, the Krasnoyarsk pot rebuilding department developed, manufactured and installed the following pieces of equipment:

1. a gantry cathode relining and metal structure assembly machine to improve labour conditions,

improve relining and metal structure manufacturing quality (as a result, costs on purchasing of metal structures from third party suppliers were reduced), shorten pot rebuild periods, optimize production areas and the number of auxiliary equipment;
2. a batching hopper for BROCHOT ramming machine to improve the quality of operations (to maintain a controllable set material temperature and to batch ramming paste automatically) while ramming cathode bottom seams and to avoid a hazardous impact on the personnel.

It is planned to install these pieces of equipment at all ECD branches, provided that industrial tests and operational trials are a success.

In 2018, 42 out of 1,191 pots disconnected for relining with their life time of up to 36 months, this being the lowest historical indicator.

In 2018, the Krasnoyarsk branch of RUS-Engineering Ltd continued to mass produce special self-propelled pot treatment vehicles as part of the project titled 'RUSAL Treatment Vehicles', which allowed putting aside as many purchases of such vehicles abroad as possible. In 2018, 43 treatment vehicles were manufactured and put into operation.

Since the beginning of the project, 173 vehicles have been put into operation and the design of 34 vehicles has been developed. The Group has made 52 patent applications to protect its intellectual property, including 5 in 2018. A total of 42 patents were obtained in Russia, including four in 2018. There were 17 self-propelled vehicles certified and registered for serial vehicle production in line with the TR TS 010/2011 Technical Regulation of the Customs Union 'Re Vehicle and Equipment Safety'.

One of the main aims of the 'RUSAL Treatment Vehicles' project in 2019 is to design and manufacture environmentally-friendly local diesel treatment vehicles to ensure reliable operation with a service life of at least 15,000 machine-hours.

In 2018, as part of the Metal Structure Manufacturing Project the Krasnoyarsk branch produced 17,165 tonnes of metal structures and aluminium goods, of which 9,342 tonnes were ferrous-metal structures and 7,822 tonnes were aluminium articles for the Taishet and Boguchany aluminium smelters; metal structures were supplied to the Bratsk and Shelekhov branches to meet their demand; and metal structures is in progress for the start-up complex of the Taishet aluminium smelter.

Personnel enhanced their transformer rewinding skills at the transformer maintenance department in Krasnoyarsk. Two TDTsNP-50,000/10 rectifier transformers were repaired.

In 2018, RUSAL Kamensk-Uralsky maintained a ball mill having replaced a drum made in China (Chaoyang Heavy Machinery Group) for the first time. The plant saved RUB1.86 million on the ball mill drum as compared to the cost of purchasing from local manufacturers. In 2018, automatic process control software of all three production stages was designed and installed as part of the construction of the 'Precipitation Substitution Module'. As a result of the cooperation between RUSAL Kamensk-Uralsky and the Kamensk-Uralsky branch, the 2018 output targets were exceeded with the output reaching 910,000 tonnes.

In 2018, the ECD planned to implement 35 environmental projects with a total budget of USD84 million. It was resolved to suspend 23 projects amounting to USD35 million because of the US sanctions against the Company. Despite this, in 2018, the Company commenced the construction of gas scrubbers for CJSC Kremniy in Shelekhov, commenced the unification of sections 1, 2 and 3 of mud disposal area 3 for RUSAL Kamensk-Uralsky, commenced maintenance on steam boiler 4 and commenced construction of a new evaporation train 16 for Friguia Alumina Refinery bauxite and alumina complex; and also started revamping a gas scrubber of sintering furnace 6 for RUSAL Achinsk.

A gas scrubber of sintering furnace 7 was maintained and commissioned at RUSAL Achinsk, together with equipment of first and second process lines at RUSAL Achinsk (electrical precipitators 1-3, calciners 2 and 3, the mud disposal area, evaporation train 14 and construction structures); Ploshchad Revolutsii (Square of Revolution) and Surikov Skver (Surikov Square) were restored in Krasnoyarsk.

In 2019, it is planned to start construction of an alumina terminal in Vanino port, construction of a mud disposal area 1 at the Nikolaev alumina refinery, a reconstruction of gas scrubbers connected to sintering furnaces 5 and 8 at RUSAL Achinsk, construction of treatment facilities at Timan Bauxite JSC, to complete maintenance of steam boiler 4 and construction of evaporation train 16, and to start maintenance of steam boiler 5 and turbine 4 at Friguia Alumina Refinery.

In 2018, production facilities and branches of ECD made significant efforts to construct facilities of new aluminium smelters, maintain process equipment and participate in all environmental projects of the Company, and all KPIs of the ECD were achieved.

In 2019, every production facility and branch has a defined scope of work and targets.

Environmental and Safety Policies

As an international market leader in one of the largest and fastest growing industries in the world, RUSAL's actions significantly affect the future of the industry and the global environment. RUSAL is the largest employer in the majority of the regions it operates in and holds itself accountable for the well-being of its staff and local communities. Furthermore, RUSAL is a publicly listed company with obligations to investors and shareholders who are confident about the future of the Company.

As a result, RUSAL's mission towards sustainability is a fundamental part of its business strategy. RUSAL is focused on innovative development, modernization of production capacities, improving its enviromental performance and reinforcing the Company's position as one of the best employers in Russia.

Operating on five continents and being involved in the metal production and processing, mining and power generation industries, RUSAL shares responsibility for addressing regional and global environmental issues and finding cutting edge approaches to solving such problems. The Company considers its environmental protection activities to be an inherent part of its business as well as its contribution to public sustainable development projects.

As with other natural resources and mineral processing companies, the Group's operations create hazardous and non-hazardous waste, effluent emissions into the atmosphere, as well as water, soil and safety concerns for its workforce. The Group regularly reviews and updates its health, safety and environmental management practices and procedures to ensure, where feasible, that they comply, or continue to comply, with best international standard.

Our safety management system is approved by DNV (DNV GL is an international accredited registrar and classification society) as compliant with BS OHSAS standard.

RUSAL's goal is to continuously improve its environmental performance, while taking into account practical possibilities and social and economic factors.

Key operating principles

Any management decisions at all levels in all areas of the Company's business would systematically abide by the following core principles:

- **Risk Management:** define and assess environmental risks, set targets and plan work taking into account environmental risk management issues;
- **Compliance:** comply with environmental legislative requirements of the countries where RUSAL has operations, as well as comply with environmental covenants assumed by the Company;
- **Measurability and evaluation:** establish, measure and evaluate environmental indicators and assess compliance with environmental legislation in the countries where RUSAL operates and with environmental covenants assumed by the Company;
- **Prevention:** apply the best available techniques and methods to prevent pollution, minimize risks of environmental accidents and other negative impacts on the environment;
- **Training:** train employees of the Company to meet the environmental requirements applicable to their business areas so as to provide employees with a better understanding of the environmental consequences should such requirements not be met;
- **Cooperation:** note the opinions and interests of related parties, establish environmental requirements when selecting suppliers and contractors and assist them in complying with those requirements;
- **Openness:** openly demonstrate the Company's plans and results of its environmental activities, including through public reports issued by the Company.

Environmental Strategy

Key goals of RUSAL's environmental strategy include:

- reducing emissions, including greenhouse gases;
- creating a closed-circuit water supply system for the main production processes of the Company's facilities;
- increasing the volume of treated and used waste products and their safe disposal;
- replacing and disposing of electrical equipment containing polychlorbiphenyls (PCBs);
- rehabilitating land which has been negatively impacted and assisting in the maintenance of biodiversity;
- creating corporate systems to manage environmental aspects and risks.

By following this environmental policy and undertaking to regularly review and update its provisions, the Company has tasked itself with continuously developing and improving its environmental management system and implementing its principles at all production facilities, including all those which are in operation and those which are still under construction. In 2017, RUSAL ran a project to implement ASI standards[13] at its pilot plants to apply international sustainable principles to the aluminium production chain. The certification of pilot plants is planned in March 2019.

As part of achieving its objectives of continuous development and improvement of its environmental management system, the Company pays special attention to certifying its factories for compliance with ISO 14001-2015, the international standard for environmental management systems. All RUSAL's aluminium smelters are certified as ISO 14001-2015 compliant.

The Group has also taken steps to lessen the environmental impact of its operations and comply with all applicable environmental laws and regulations.

Health & Safety: a core priority

RUSAL's activities to provide safe working conditions for employees and reduce occupational diseases and injuries are governed by the corporate Occupational Health and Safety Policy. The Company's efforts are integrated into the Occupational Health and Safety Management System, which is one of the crucial management systems in RUSAL's business.

The Company has the following health and safety objectives:

- To strive for zero injuries, zero emergencies and zero fires;
- To ensure the compliance of equipment and production processes with legal and regulatory requirements for occupational health, industrial and fire safety;
- To ensure personnel safety and health in the workplace and improve workplace environment on an ongoing basis in order to increase the level of safety; and
- To prevent occupational diseases.

The Occupational Health and Safety Management System is deployed at every production facility. It includes a risk management system, emergency response plans, budgeting of health and safety measures, personnel training based on national and corporate requirements, and a corporate e-learning system. Occupational health and fire safety measures are financed strictly on a timely basis to provide for identification of hazards and development of procedures to improve working conditions.

RUSAL pays special attention to establishing a constructive dialogue with state authorities and employees, business partners, the general public and expert organizations to jointly resolve health and safety issues. For this purpose, the Company's experts and managers participate in the legislative process through the Occupational Health, Safety and Environmental Committee of the Russian Union of Industrialists and Entrepreneurs, Russian Duma committees, federal ministries and services, the Russian Chamber of Industry and Commerce, the Russian Mining Trade Union, the Russian Association of Mining Industrialists, and other non-profit organizations and partnerships.

The universally accepted health and safety management systems is a system based on the OHSAS 18001:2007 international standard. Regular audits of this system at RUSAL are strengthened by numerous regular internal audits, which qualitatively and quantitatively assess key elements of the system, identify deficiencies and develop effective corrective measures to manage risks and prevent failures and injuries. According to 2018 data, the LTAFR (Lost Time Accident Frequency Rate) was 0.16 which is a slight increase compared to 2017 (0.15), but is considerably less than the global average for the aluminium industry in 2017 (0.38).

In total, 50 internal audits of health and safety management systems were carried out at the Company's sites. Det Norske Veritas held re-certification audits at the production facilities and the Company's head office, which confirmed the health and safety management systems' compliance with the requirements of OHSAS 18001:2007.

A sustainable player, engaged in all relevant industry sustainability initiatives

Primary aluminium production leads to a high volume of GHG (Greenhouse Gas) emissions. The main sources of GHG emissions are carbon anodes consumption due to carbon oxidation, perfluorocarbon emissions and indirect GHG emissions related to the generation of power

13 The ASI Performance and Chain of Custody Standards have been developed and designed to be globally applied, and throughout the aluminium value chain to enable the aluminium industry to demonstrate responsibility and provide independent and credible assurance of performance, reinforce and promote consumer and stakeholder confidence in aluminium products, reduce reputational risks concerning aluminium and aluminium industry players; and address the expressed needs by downstream industrial users and consumers for responsible sourcing of aluminium. Further details can be obtained at https://aluminium-stewardship.org/.

consumed. Indirect emissions can be much higher than direct emissions from aluminium smelting and can be up to 5-10 times more in case of power generation from coal. The current average worldwide level of direct and non-direct energy emissions of aluminium production is 12.3[14] tCO_2eq/tAl. 2017 RUSAL level was 2.8 tCO_2eq/tAl.

In 2007, the Company signed a memorandum of understanding with the United Nations Development Program. The aim of the memorandum is to implement measures to minimize the Group's impact on climate change, by reducing the Group's greenhouse gas emissions. The Group is actively participating in the International Aluminium Institute's activities related to targeting the reduction of greenhouse gas emissions and energy efficiency. The Group has achieved significant reductions in greenhouse gas emissions. For instance, the Group's aluminium smelters reduced specific greenhouse gas emissions in 2017 by 61% compared to 1990 emissions levels.

To perform more accurate calculations, the Company has developed a number of methodologies for determining greenhouse gas emissions which take into account the features of the Company's production facilities. The methodologies take into account the features of production facilities of RUSAL. An independent international verification body, BSI and KPMG have confirmed that our methodologies comply with the requirements of national and international standards and regulations. The Company first verified its ALLOW brand in 2018 with the help of the international auditor KPMG. In 2017, 77% of the Company's output was attributed to this brand. The computations followed the methodology contained in the International Aluminium Institute's carbon footprint reporting guidelines published in February 2018.

The Company has developed programs to achieve the specific direct GHG emissions reduction strategic goals at aluminium smelters and alumina refineries by 15% and 10%, respectively, by 2025 compared to 2014. (In 2017 aluminium smelters reduced specific direct GHG emissions by 3.7% and alumina refineries by 4% compared to 2014).

Since 2017, the Company has applied the internal price of carbon (USD20 per tonne of CO_2eq) when developing new projects.

In 2016, UC RUSAL initiated a project for the development of international guidelines at the International Aluminium Institute (IAI), aimed at the standardization of approaches for aluminium carbon footprint reporting. The Aluminium Carbon Footprint Technical Support Document was developed and approved by the IAI board of directors in October 2017, and officially published by IAI in February 2018. RUSAL will use this document as a guideline for reporting its own carbon footprint internally and externally. It will allow the Company to report comparable figures to customers and other interested parties.

RUSAL is actively participating in the updating of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories for Aluminium industry. The Final Draft Guidelines has been issued and the updated guidelines shall be approved in May 2019.

In 2016, the Company joined Aluminium Stewardship Initiative (ASI). ASI is a global, multi-stakeholder, non-profit standards setting and certification organization. It is the result of producers, users and stakeholders in the aluminium value chain coming together with a commitment to maximizing the contribution of aluminium to a sustainable society. ASI's objectives are:

- define globally applicable standards for sustainability performance and material chain-of-custody for the aluminium value chain;
- promote measurable and continual improvements in the key environmental, social and governance impacts of aluminium production, use and recycling;
- develop a credible assurance and certification system that both mitigates the risks of non-conformity with ASI standards and minimizes barriers to broad scale implementation.

RUSAL participated in the COP24 international Climate Change Conference (held at Katowice, Poland on 2-14 December 2018), where it contributed to the agenda of the Russian pavilion – a place for presentations, expert discussions of government officials, NGOs as well as Russian and foreign scientific and business communities. On 11 December, the Russian pavilion hosted a Low Carbon Material Day, when Mr. Evgenii Nikitin, CEO of RUSAL, and other representatives of the Company and the Climate Partnership of Russia delivered their speeches. Mr. Nikitin spoke of the Company's climate KPIs and innovations aimed at reducing negative environmental impacts. In addition, environmental education and environmental voluntary work undertaken by the Company were highlighted.

14 Source: http://www.world-aluminium.org/media/filer_public/2018/09/20/addendum_to_lca_report_2015_aug_2018.pdf.

Further, RUSAL took an active part in preparing the "Green Mosaic of Russia" exhibition at the conference and a round table discussion titled "Russian Investments into a Low GHG Emission Development".

RUSAL submits regular GHG emission reports from its productions to the Russian Meteorological Office to register emissions in the National Cadastre of Anthropogenic Emissions from Sources and Absorption by GHG sinks. In 2018, RUSAL participated in the review of Russian reports in relation to the The United Nations Framework Convention on Climate Change (UNFCCC) and made a detailed presentation to an international expert team on the policy and actions of the Company, a disclosure of carbon reporting in compliance with international standards, as well as on environmental education and trainings.

In 2018, a newly formed ICC Russia Commission on Climate Change Economy and Sustainability commenced operation. RUSAL chaired the commission, which formulated recommendations to business regarding 'green' financing, carbon regulation, energy efficiency, sustainability and a transition to a low-carbon economy. In light of this conference, in November 2018, RUSAL arranged a round table titled 'Green Technologies in Russia: Reality and Prospects', where RUSAL made a key presentation on its development and implementation of 'green' technologies.

RUSAL took an active part in a publication of a report by the Carbon-pricing Leadership Coalition (CPLC) on the use of carbon-pricing to address climate risks and new opportunities through the example of the construction industry value chain. The published information included RUSAL's experience in implementing an internal carbon price and commercialising ALLOW, a low-carbon aluminium brand[15].

Social Investments and Charity

RUSAL is taking seriously its responsibility to society and future generations, pursuing maximum effort to create a new quality of life and to promote social development in the regions where the Company operates. Working alongside the local communities and NGOs, we create an enhanced living environment. Social investments are integral part of the Company's Strategy.

The Company implements social investments in a number of key areas, which includes:

- Social development of the regions where the Company operates;
- Volunteering;
- Sports and Healthy Living;
- Culture & Arts;
- Education;
- Social entrepreneurship.

The priority focus for the Company's contribution in the social development of the regions is as follows:

- Participation in creating a comfortable urban environment by supporting the construction and reconstruction of social infrastructure facilities and modern public and recreational spaces;
- Development of corporate volunteering, extensive involvement in volunteer activities of employees of enterprises and residents of the regions of operation.

The Company implements its social investments in the form of the key programs and projects briefly described further.

The RUSAL Territory program is aimed at improving quality of life in the areas where the Company operates through the upgrade of the urban environment and social infrastructure, support for territorial development projects and formation of modern standards for the regional urban development

The Company maintains regular activities within the RUSAL Territory program, which are:

- Areal socioeconomic research and analysis with multistakeholder engagement;
- Development and management of the grants giving program "RUSAL Territory";
- Development and administration of educational and training programs for NGOs, educational, cultural and social institutions;
- Promotion of modern approaches to urban planning and development through conducting forums, learning and networking events, master classes and workshops.

The achieved results of the program since its launch in 2011 include 636 supported social and infrastructural projects in 22 cities and townships, 230 constructed and modernized facilities of social infrastructure, which provided access to a higher quality social infrastructure for more than half a million of local community members. The Company invested into the projects together with the local partners 748 million rubles. In 2017-2018, the Company developed policies of social investing for eight major communities.

15 https://www.carbonpricingleadership.org/news/2018/10/24/report-launch-carbon-pricing-in-the-construction-value-chain

In 2018, RUSAL implemented a large project of creating modern, comfortable and safe public spaces for residents and tourists in the historic center of Krasnoyarsk. The project started from a survey and analysis of existing public places, then the new concept of planning and functionality was developed for the city center area including Revolution square, Surikov garden and the city's Central Park, and the new architectural design for the area was prepared and implemented. In practical stage, the newer small architectural objects were set up, lighting and landscaping arranged. As a result, the renovated area became the favorite place for walks with the city residents and one of the city sights for the tourists. Over a hundred thousand people have visited renovated area during weekends and vacations. By implementing this project, the Company shared with the regional authorities a modern approach for renovation of public spaces in Krasnoyarsk.

The goal of the "Helping is easy program" is to foster social activity in the local communities, get the Company's personnel involved in corporate social and environmental activities, build partnership with NGOs, businesses and local government bodies.

The Company maintains the following activities within the program:

- Development and launch of complex volunteer program focused at different groups of stakeholders: employees, local communities, NGOs;
- Formation of volunteering eco-system within the local communities to provide sustainability of volunteer activities;
- Support of volunteer teams by grant giving contest "Helping is easy";
- Development and launch of educational courses for volunteers.

The "Helping is easy program" is operated since 2014 and more than 5,000 partner organizations support the Company's volunteering projects. The Company established the National Council for Corporate Volunteering to share best practices; it unites over 30 major Russian companies and has regional groups in 12 regions of Russia. Three thousand employees annually support the Company's volunteering projects. During the past eight years, 38 thousand volunteers participated in RUSAL volunteering programs such as "The Yenisei Day", "Green Wave" and the New Year charitable marathon. 250 thousand of local residents received assistance from volunteer teams.

The mentioned above "Yenisei Day" is a large-scale project of environmental volunteering implemented since 2011 in the Krasnoyarsk Territory and republics of Khakassia and Tyva with the goal of cleaning the coastal zone of the Yenisei River. During the period of the project implementation, the Company carried out 300 environmental activities and involved 75,000 volunteers who collected and removed 10 tonnes of garbage from the riverbanks and released 5,000 juvenile fishes into the river. The "Yenisei Day" has become a well-recognized regional tradition.

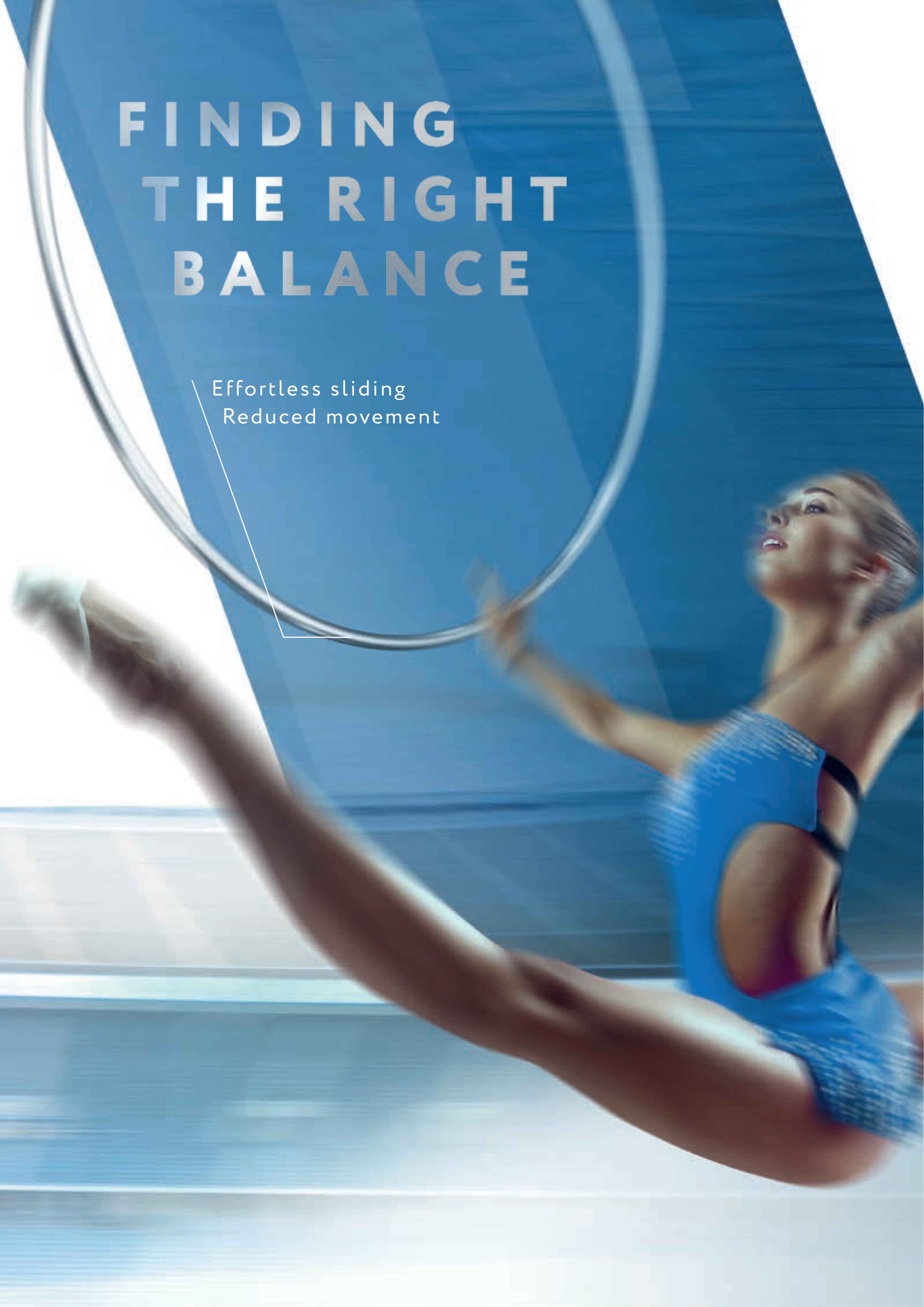
In the area of sports and healthy living the Company has developed the "Mounting the Skies Everyone!" project in partnership with En+ Group and the Russia's Ski Federation since 2016. The project serves the goal to promote a healthy lifestyle and engage employees and local residents in cross-country skiing in the regions and cities where the Company operates. Within the framework of the project RUSAL set up partnerships with regional sports administrations and cross-country skiing federations, provided help to the junior ski teams with 940 units of the skiing equipment, supported the preparation and launch of the educational courses completed by 402 skiing coaches who work with smaller children and junior teams. The Company carried out mass sports events and activities, such as 15 mass ski festivals attended by 52,000 local residents and the CUP Competitions for more than 1,900 junior athletes. In 2018, RUSAL developed and launched the online distance learning platform to spread the project's educational course; supported the development and launch into pilot production in Russia of snow-sealing machines for rolling tracks for cross-country skiing. The machines will be produced and delivered to the regions, where the Company operates.

RUSAL continued provision of good health services for the employees and local residents not only in Russia but also in distant countries of operation, particularly in the Republic of Guinea where the Company alongside with the local government continued struggle against severe infections. This emergent work started in order to prevent the outbreak and spread of the Ebola virus in Guinea and Africa. Since 2014, the Company in joint action with the Russian government has provided the modern anti-epidemic equipment and services, set up and provided operation of the Clinical Diagnostic Center for Epidemiology and Microbiology, as well as opened the modern laboratory complex for combating dangerous infectious diseases, delivered vaccine against Ebola developed in Russia. Due to taken measures, the Clinical Diagnostic Center successfully treated 62.5% of its patients with a confirmed diagnosis of Ebola fever, which became the highest percentage of recovering patients during the Ebola outbreak in Guinea; 2,000 local residents have passed anti-Ebola vaccination. The launch of the new laboratory complex has made possible a quickly detection of severely dangerous infections, upgraded the national sanitation security in Guinea and significantly diminished risks of spread of severe infections in the future.

The program that the Company initiated and implemented in the area of culture and arts became the RUSAL festival aimed at supporting the interest of the local residents to the culture and arts, science and technical creativity, development of creative skills, promotion of a healthy lifestyle by bringing to the local communities a wide range of socially significant cultural and educational events. The initiative was developed in 2016 in the form of an umbrella cultural program RUSAL festival that included different arts and activities: festivals of modern Russian movies in small cities and villages, performance tours of the leading theatre troupes and students from theatre universities with the best contemporary plays, large-scale science shows at popular interactive science venues, and unique night bike tours at iconic historical and cultural sites. In 2016-2018, the program brought remarkable impact on the cultural life of 18 Russian and Armenian cities where the Company operates. It gave to many smaller town residents a unique opportunity to see the favorite Russian actors, movies, theaters and plays. The Company with the assistance of 1,500 local volunteers conducted 150 events and activities of RUSAL festival attended by 300,000 local residents.

RUSAL continues searching for the most promising innovative ideas and projects and works on their effective implementation in the social sphere and socio-economic development of the regions where the Company operates.

In 2018, the Company allocated more than USD22.2 million for social investments and charitable projects.


FINDING THE RIGHT BALANCE
Effortless sliding
Reduced movement

04 MANAGEMENT DISCUSSION AND ANALYSIS

MANAGEMENT DISCUSSION AND ANALYSIS

Overview of Trends in the Aluminium Industry and Business Environment

Highlights for the full year 2018

- Global aluminium demand is likely to increase in 2019 now that the trade wars and supply side shocks of 2018 have subsided. Additionally, consumers have adjusted their expectations after the shocks of late 2018, expecting markets outside of China to be in heavy deficit in 2019. Therefore, global aluminium demand is expected to rise by 3.7% year-on-year in 2019 to 68 million tonnes vs 3.6% growth in 2018 year-on-year to 65.6 million tonnes.
- Global aluminium supply was unchanged by 0.5% year-on-year to 64.1 million tonnes in 2018 after 7% rise year-on-year in 2017. Global supply excluding China, grew by 1.8% to 27.7 million tonnes, while Chinese supply contracted by 0.6% to 36.4 million tonnes.
- In China production fell by more than 3 million tonnes between August and December 2018 as a result of low aluminium prices and tight environmental regulations.
- Still around 60% of Chinese aluminium smelting production and 50% of the ROW is struggling due to high power and alumina prices.
- Aluminium stocks at the LME warehouses dropped by 175 thousand tonnes to 926 thousand tonnes between January to mid-October 2018 – the lowest levels since December 2007. However, by the end of 2018 stocks rebounded to 1,273 thousand tonnes. January 2019 has seen a significant increase in LME cancelled warrants to 755 thousand tonnes, the lowest it has been in years.

Global aluminium

During 4Q 2018, the aluminium price along with the whole LME metals' market was affected by the investor sell-off that resulted from rising trade tensions between the US and China. Many market participants believe this could continue to negatively impact future economic growth and industrial activity.

Aluminium demand and premiums

Global aluminium demand is expected to recover in 2019 after the trade wars and supply shocks that occurred in the second half of 2018. Consumers will gradually adapt to the new reality as markets outside of China remain in heavy deficit, economic activity grows and subsequently diminishes supply risks. As such, global aluminium demand is expected to rise by 3.7% year-on-year in 2019 to 68 million tonnes vs 3.6% growth in 2018 year-on-year to 65.6 million tonnes.

Russian economic growth slowed at the end of 2018 but GDP still increased by an estimated 1.8%. Industrial production index growth amounted to 2.9% of GDP. Investment in fixed Russian assets rose after the recession by 3.0%. This was fueled by the increase in the construction industry since 3Q 2018. This trend is expected to continue in 2019 which will help maintain a high demand for aluminium from the building materials industry, as well as the energy transfer sector. 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 and is expected to rise to 1.2-1.25 million tonnes in 2019.

Global and regional headwinds weighed on Europe's economy testing its resilience in 2018. The US-China trade war and the risk of a no-deal Brexit continue to drag down business confidence in January. After a strong start to 2018, the economies of the EU28 appeared to have lost significant momentum in the second half of the year but the year ended at a reasonable growth of 1.5% in 4Q 2018.

Output in the construction industry increased all throughout 2018 with Germany's construction PMI hitting the seven-month high (53.3) in December. It was the upturn in homebuilding demand that drove the steepest rise in total industry activity.

The automotive sector endured disruption in 2018 as manufacturers struggled to address the car certification and registration bottlenecks that resulted from the implementation of the Worldwide Harmonised Light Vehicle Test Procedure ("WLTP") for emissions. The changeover to the WLTP test cycle constrained production and output slumped in the largest country-producers by 4.7% in the first nine months of 2018. In addition, the Section 232 investigation on auto sector tariffs is ongoing and presents risk to vehicle production in 2019. Aluminium growth remained ahead of car manufacturing growth as primary aluminium demand rose by 2.2% up to 9.6 million tonnes in Europe (including Turkey but excluding Russia).

North America witnessed strong growth in 2018, with economic and industrial activity accelerating sharply. GDP rose by an estimated 2.8%. Industrial production expanded at its fastest pace for several years in September and climbed at an estimated rate of 3.4% in 2018. Although vehicle production inched down by 0.5%, aluminium demand remained strong. Construction was relatively strong with the number of new builds growing by nearly 6% in January to October 2018. Overall primary aluminium demand in North America expanded by 1.6% to 6.9 million tonnes.

Favourable domestic conditions have been supporting Japan's economic expansion. GDP increased by 0.8% in 2018 year-on-year. Whilst industrial production grew by 0.9%, it should be noted that this is below last year's level due to weather-related problems in 1Q 2018 and 3Q 2018. Despite a strong outlook for commercial and infrastructure spending ahead of the Olympics, a slowdown in new housing developments tempered overall activity in the construction sector. At the same time, automotive production remained at the same level in the first eleven months of the year.

The ASEAN region saw a modest slowdown in growth in 2018, although primary aluminium demand resisted this trend. Continued investment in semis capacity has enabled the overperformance of the aluminium industry compared to industrial growth. As a result, aluminium primary demand in Asia (ex China and India) rose by 1.6% to 6.6 million tonnes in 2018.

The Indian economy expanded at a brisk rate of 7.4% in 2018, up from 6.2% in 2017 when demand was hindered by policy disruptions. Output growth from the construction sector increased by 8.1% on a yearly basis, whereas industrial sector output climbed at an estimated 5.3%. Those factors combined drove aluminium primary demand growth of 3.5% in 2018 to 2.2 million tonnes.

The Chinese economy grew at 6.6% year-on-year in 2018, however, the global instability and the trading conflict with the US deteriorated production activity with Cauxin PMI declining below the 50 level by end of 2018. Other sectors had a more mixed picture: automotive production declined by 4.2%; FAI investments grew by 5.9% and floor construction grew by 5.2% of in 2018 year-on-year. Aluminium demand was up by 4.6% year-on-year to 35.8 million tonnes but is estimated to accelerate to 5.1% in 2019 year-on-year to 37.6 million tonnes as a result of planned credit and capital stimulus by the Government.

The aluminium premiums were highly volatile in 2018 as a result of different market challenges such as the introduction of import duty in the U.S., OFAC Sanctions against RUSAL and several interruptions at smelters. Overall, the premiums grew by 9-10% on a comparable basis in 2018 except premiums in Japan. In the second half of 2018, the premiums trended down, mainly due to market backwardation that contributed to a liquidation of traders stocks. Asian premiums were affected by rising Chinese aluminium exports.

Aluminium supply and stocks

Global aluminium supply was relatively unchanged only experiencing 0.5% growth year-on-year to 64.1 million tonnes in 2018 after 7% raise in 2017 year-on-year. Globally, excluding China, supply grew by 1.8% to 27.7 million tonnes, while Chinese supply contracted 36.4 million tonnes. The availability of aluminium scrap may also increase in 2019 as scrap prices are expected to rise and demand to increase.

Aluminium production outside China was flat in 2018 at 27.6 million tonnes and 50% of aluminium productions outside of China operated at a loss. This is likely to limit potential restarts and will further increase the risk of supply disruptions. Aluminium stocks at the LME warehouses dropped by 175 thousand tonnes to 926 thousand tonnes during January to mid-October 2018, the lowest since December 2007. By the end of 2018 stocks rebounded to 1,273 thousand tonnes. January 2019 has seen a significant increase in LME cancelled warrants to 755 thousand tonnes, a multi-year low.

In China, production fell by more than 3 million tonnes from August to December 2018 as a result of low aluminium prices and tight environmental regulation. Nonetheless around 60% of Chinese aluminium smelting production is struggling due to high power and alumina prices. Chinese regional stocks declined by 0.5 million tonnes year-on-year to 1.33 million tonnes at the end of 2018 and returned to an average monthly level of 2018.

Chinese aluminium exports increased by 23.4% to 5.23 million tonnes. In 2019 Chinese exports will face challenges and are expected to decline. Due to lower arbitrage, a fall in inventories/production and the new stimulation program that are expected to be introduced by the Chinese Government to significantly improve domestic aluminium balance.

RUSAL's aluminium production results

The Group's primary aluminium production for the year ended 31 December 2018 demonstrates slight increase (+1.2% year-on-year) as compared to the previous year and totaled 3,753 thousand tonnes.

Production of VAP went down (-16.4% year-on-year) from 1,885 thousand tonnes in 2017 to 1,575 thousand tonnes in 2018, with the share of VAP decreasing from 50.8% to 42.0 % in 2018.

Asset (kt)	Interest	Year ended 31 December 2018	2017	Change year-on-year (%)
Russia (Siberia)				
Bratsk aluminium smelter	100%	1,009	1,008	0.1%
Krasnoyarsk aluminium smelter	100%	1,015	1,019	(0.4%)
Sayanogorsk aluminium smelter	100%	536	533	0.6%
Novokuznetsk aluminium smelter	100%	215	215	0.0%
Irkutsk aluminium smelter	100%	419	419	–
Khakas aluminium smelter	100%	291	292	(0.3%)
Russia (other than Siberia)				
Kandalaksha aluminium smelter	100%	72	72	–
Volgograd aluminium smelter	100%	64	13	392.3%
Nadvoitsy aluminium smelter	100%	6	12	(50%)
Other countries				
KUBAL (Sweden)	100%	125	123	1.6%
Total UCR		**3,753**	**3,707**	**1.2%**

Development of the in-house technology of primary aluminium production:

- In the pilot area of SAZ the project for improvement of high-amperage pots is ongoing: 16 pots of RA-400 and RA-400 T type and 8 pots of RA-550 type are in operation.
- In 2018 VgAZ started the production of prebaked anodes and own calcinated coke of KEP-2 grade. Production capacity: prebaked anodes – 104 thousand tonnes per year, KEP-2 – 95 thousand tonnes per year. Currently the complex is in industrial pilot operation.

Energy efficiency:

- Energy efficiency projects have been implemented in all aluminium smelters of the Aluminium Division. Implementation of energy saving actions in 2018 allowed to reduce specific total power consumption of the Siberian aluminium smelters vs. 2013 (year of launch of projects), by 451 kWh/t;
- Pilot areas of KrAZ, BrAZ, SAZ, KhAZ, IrkAZ showed positive results of trials of energy saving pot design for further proliferation in the Division. The implementation of the new energy saving design of S-255 pot at SAZ is ongoing in frames of the pot relining operations, KrAZ proliferates the energy saving OA-120 pot.

Increase in production of alloys:

- Start-up of the complex for production of billets at KrAZ with the capacity of 120 thousand tonnes per year to meet demands of our domestic clients.

Mechanization and automation:

- The Engineering and manufacturing of process equipment of the Company's own production were continued in frames of the Project RUSAL Pot tending machines (PROM) in order to improve labor conditions of operators and eliminate physically demanding operations. 173 units of equipment have been manufactured since 2013, 43 of them in 2018.
- In order to improve labor conditions in anode production area RUSAL Krasnoyarsk equipped 8 cranes with a remote control (working station of the operator is now located not in the area of operation, but in the administration room); RUSAL Bratsk continues the project for the substitution of pot operators' handwork by the machinery – in 2018 2 multifunctional cranes have been commissioned after the overhaul; the works for installation of remote radio-control at rare-used cranes are in progress.
- The Company implements the project "end-to-end automation" aimed at improvement of production management system. In 2018, in frames of the project RUSAL Sayanogorsk opened pilot areas for modernization of network infrastructure, development of system for technical record-keeping and telemetry of power facilities, implementation of a modern MES-system replacing local process automated working stations. RUSAL Krasnoyarsk, RUSAL Sayanogorsk and RUSAL Bratsk are implementing a casting data system. A common technological portal was created for the Aluminium Division powered by modern business analysis products. The update of automatic process control system of the main production areas is in progress: in 2018 work has been completed in 2 pot rooms, started in another 6 pot rooms. Automatic process control systems have been amended in 3 areas of the electrode production in RUSAL Sayanogorsk.

Health, safety, environment (HSE):

– One of priorities of sustainable development of the Company is the ensuring of environmental safety. The strategy of environmental safety of the production plant of the Aluminium Division is aimed at modernization of production by implementation of the best available process technology. In pursuance of these strategical goals RUSAL Krasnoyarsk, RUSAL Bratsk, Branch of RUSAL Bratsk in Shelekhov and RUSAL Novokuznetsk in 2018 continued the transition of reduction area to Green Soderberg technology. RUSAL Novokuznetsk expands the pilot area and installs the pots operated with prebaked anodes. Aluminium Division (RUSAL Krasnoyarsk, RUSAL Bratsk, Branch of RUSAL Bratsk in Shelekhov and RUSAL Novokuznetsk) modernizes the existing Fume Treatment Centers and installs new high efficient Dry gas treatment units of its own technology. To insure safe waste disposal RUSAL Sayanogorsk completed the construction and commissioning of the first start-up complex of the second stage of the landfill deposit of solid household waste and the second area of industrial waste, RUSAL Bratsk completed the reconstruction of Bauxite residue disposal area. More than USD33 million were invested into environmental projects in 2018.

All production plants of Aluminium Division confirmed in 2018 the compliance with the ISO4001, environmental management system certificate.

Certified production plants of Aluminium Division obtained in 2018 the confirmation of compliance with OHSAS 18001 requirements.

Alumina production results

RUSAL's total attributable alumina output was 7,774 thousand tonnes in 2018 and 7,773 thousand tonnes in 2017. In spite of the fact that the production volumes of Achinsk Alumina Refinery, Windalco and Aughinish Alumina Refinery declined, the launch of Friguia made it possible to maintain the production volume at the level of 2017.

Calculated based on the pro rata share of the Company's (and its subsidiaries') ownership in corresponding alumina refineries.

Asset (kt)	Interest	Year ended 31 December 2018	2017	Change year-on-year
Ireland				
Aughinish Alumina Refinery	100%	1,874	1,937	(3.3%)
Jamaica				
Windalco (Ewarton Works)	100%	502	582	(13.7%)
Ukraine				
Nikolaev Alumina Refinery	100%	1,715	1,676	2.3%
Italy				
Eurallumina	100%	–	–	–
Russia				
Bogoslovsk Alumina Refinery	100%	1,002	983	1.9%
Achinsk Alumina Refinery	100%	851	945	(9.9)%
Urals Alumina Refinery	100%	910	894	1.8%
Boxitogorsk Alumina Refinery	100%	–	–	–
Guinea				
Friguia Alumina Refinery	100%	182	–	100%
Australia (JV)				
Queensland Alumina Ltd.[16]	20%	738	756	(2.4%)
Total production		**7,774**	**7,773**	**0.0%**

16 Pro-rata share of production attributable to RUSAL.

Bauxite production results

RUSAL's total attributable bauxite output[17] was 13,847 thousand tonnes in 2018, as compared to 11,645 thousand tonnes in 2017. The decrease in bauxite production at Windalco occured because of the poor contractors' fleet condition. The stabilization of rail transportation at CBK (the acquisition of three additional locomotives and new wagons) after the accidents in October 2016 and April 2017 allowed to increase the production volumes and export of bauxite in 2018. In 2018 haulage equipment renovation project was finished at BCGI which made it possible to significantly increase production volumes in relation to 2017. The additional 1,560 thousand tonnes to 2017 were obtained as a result of the launch of Friguia after the stop and the new Dian-Dian mine.

17 Bauxite output data was:

- calculated based on pro-rata share of the Company's ownership in corresponding bauxite mines and mining complexes. The total production of the Company's fully consolidated subsidiary, Bauxite Company of Guyana Inc., is included in the production figures, notwithstanding that minority interests in each of these subsidiaries are held by third parties.
- reported as wet weight (including moisture).

The table below shows the contribution from each facility.

Bauxite mines (kt WET)	Interest	Year ended 31 December 2018	2017	Change year-on-year (%)
Jamaica				
Windalco (Ewarton)	100%	1,791	1,954	(8.3%)
Russia				
North Urals	100%	2,326	2,360	(1.4%)
Timan	100%	3,325	3,163	5.1%
Guinea				
Friguia	100%	720	–	100%
Kindia	100%	3,451	3,124	10.5%
Dian-Dian	100%	840	–	100%
Guyana				
Bauxite Company of Guyana, Inc.	90%	1,394	1,044	33.5%
Total production		**13,847**	**11,645**	**18.9%**

Nepheline production results

RUSAL's nepheline syenite production was 4,294 thousand tonnes in 2018, as compared to 4,332 thousand tonnes in 2017.

The decrease of the production volume of nepheline mine in 2018 by 38 thousand tonnes compared to 2017 or (0.9%) is largely explained by the mining works schedule.

Nepheline mines (Achinsk)	Interest	Year ended 31 December		Change year-on-year
(kt WET)		2018	2017	(%)
Kiya Shaltyr Nepheline Syenite	100%	4,294	4,332	(0.9%)
Total production		**4,294**	**4,332**	**(0.9%)**

The new Downstream division was established by the Company in February 2018 to develop and improve the efficiency of producing value-added products from aluminium and aluminium-based alloys. The new Division has brought together the packaging materials, powder metallurgy and wheel producing facilities, as well as the secondary alloys production.

Foil and packaging productions

The volume of foil produced by the Group's facilities in 2018 amounted to 88.95 thousand tonnes of foil materials. A substantial reduction of production 12.11 thousand tonnes (-12%) as compared to 2017 was caused by sanctions-related restrictions that were in place at the time. The biggest decrease of production volume affected the exports and amounted to 8.59 thousand tonnes (-16%).

Foil Mills	Interest	Year ended 31 December			Change 2018-on-2017
(kt)		2018	2017	dev	(%)
Domestic market (Russia and CIS)		**43.59**	**47.11**	**(3.52)**	**(7.5%)**
Sayanal	100%	24.43	24.17	0.26	1.1%
including converted foil		9.49	9.98	(0.48)	(4.9%)
Ural Foil	100%	15.14	19.12	(3.98)	(20.8%)
Sayana Foil	100%	4.02	3.83	0.20	5.0%
Export		**45.35**	**53.95**	**(8.59)**	**(15.9%)**
Sayanal	100%	10.32	14.02	(3.70)	(26.4%)
Ural Foil	100%	6.51	6.20	0.31	5.0%
Armenal	100%	28.52	33.72	(5.20)	(15.4%)
Total production		**88.95**	**101.06**	**(12.11)**	**(12.0%)**

Wheel business

OOO SKAD Casting and Mechanical Plant

Production output, thous. pcs.	Period 2018	2017	Change year-on-year, %
Aluminium wheels	970	617*	57.2%

The increase in the production volumes is explained by successfully implemented set of measures aimed at increasing the productivity, including the time losses of inefficient manufacturing processes, reducing the internal rejection rate and increasing the general efficiency of the production. The extra volume of the produced products was successfully sold to the consumers in line with increasing demand for the SKAD brand in the Russian aftermarket together with the growing new cars market (in 2018 +12.8% against 2017) and reducing import of wheels from China.

Other business

(t) unless otherwise indicated	Year ended 31 December 2018	2017	Change year-on-year (%)
Secondary alloys	14,313	28,343	(49.5%)
Powder	25,749	18,539	38.9%
Silicon	56,800	56,020	1.4%
Fluorides	0	0	–
Coal (50%) (thousand tonnes)	22,433	20,204	11.0%
Transport (50%) (thousand tonnes of transportation)	5,773	6,222	(7.2%)

* The production volume is set out for the period of RUSAL's ownership of the plant. On year-on-year basis the production volume amounted to 842 thousand wheels in 2017, meaning that the growth of production output in 2018 as compared to full 2017 would amount to 115.2% or 128.1 thousand wheels.

Silicon production

2018 output is at the level of 2017. Slight deviation in 2018 is mainly due to the difference in the schedule of maintenance works for the key equipment and cancellation of restart of ore-thermal furnace No.2 after overhaul (Kremny Shelekhov) due to decline in RUSAL silicon own needs.

Actions aimed at improvement of quality of produced silicon in cooperation with OOO RUSAL ETC were in progress in 2018. The refining process technology was adjusted for Kremny Ural, 100% refinement was implemented in 2 kilns.

Construction and commissioning of GTC (Kremny Ural) was completed. GTC is now in industrial pilot operation.

Project documentation for construction of GTC-1,2 for Kremny Shelekhov received a positive nonstate expert review. Civil and installation works are in progress.

Powders

In order to increase the capacity utilization rate and improve the efficiency of business, the SUAL PM Krasnoturyinsk Branch stopped its operation and the production was moved from there to free powder metallurgy capacities of Volgograd and Shelekhov OOO SUAL PM.

Secondary alloys

The reduction of the production output is related to stopping the commercial scrap-based alloy production because of its being unprofitable and also because of a substantial shrinking of the sales market (this product was export-oriented).

In 2018, the Company decided to mothball its RUSAL RESAL capacities and to move dross processing to the third parties. Out of 14,313 thousand tonnes of secondary metal, 5.5 thousand tonnes were produced at the third parties' facilities.

New Projects Directorate

Volkhov aluminium smelter: in 2018 the Company considered the possibility to start the production of automotive components in the plant facilities involving foreign partners specialized in this field. However, foreign companies are not open for cooperation under current conditions. Decision was taken and agreements were reached regarding the sale of asset complex of VAZ to AO METACHIM. The transaction is supposed to be completed in 2019.

Aluminium production results

The New Projects Directorate comprises the Nadvoitsy aluminium smelter, the aluminium section of the Ural smelter (all in Russia), ALSCON (Nigeria).

In 2018, there were no major changes in the status of UAZ and ALSCON aluminium productions shut down in 2013.

Nadvoitsy aluminium smelter: the smelter is completely mothballed.

In August 2018, the decision was taken to completely shut down the production (1/2 of the pot room 4 was operated before) followed by mothballing of the smelter. The production amounted to 6 thousand tonnes in 2018 showing a decrease of 50% compared to 2017.

Downstream projects

One of the key activities of the Directorate for new projects is the search for, development and implementation of projects aimed to establish new productions in order to increase consumption of aluminium and alloys in downstream and other sectors. The key facilities for implementation of new projects are mothballed plants:

- Project: Production of aluminium radiators for household use is in progress in the facilities of NAZ. The project implementation goes in a JV with ELSO Group of companies (50/50). The new production plant is the resident of a Priority Social and Economic Development Area. Civil works are completed. Certificates of compliance for manufactured goods GOST 31311-2005 were obtained. The production plant continuously improves the process technology and trains the personnel in frames of the industrial pilot operation. The plan is supposed to start-up the production in 1Q 2019.

- OOO Bogoslovskiy kabelniy zavod (BKZ) was founded in December 2016. It was a JV for production of cables and wires in Krasnoturyinsk. BKZ became the resident of a Priority Social and Economic Development Area in 2017.
- The production of flexible cable semis (wire, multiwire strand, cores of different cross-sections) was launched in August-December 2017. In 2018 the production involved 298 tonnes of aluminium. In 4Q 2018 the plant completed the restauration of the workshop No. 2, its main production area.
- In progress:
  - assembly of an armouring machine in the workshop No.2;
  - delivery of a bow type skip stranding machine;
  - preparation for dispatch: extrusion cable sheathing line and a snake-type strander;
  - manufacturing of second armouring machine and a testing station.

The launch of production of wire products is scheduled for the 1H of 2019.

Coal production results

The aggregate coal production attributable to the Company's 50% share in JV Bogatyr Coal LLP increased by 11% to 22,433 thousand tonnes in 2018, as compared to 20,204 thousand tonnes in 2017. The increase in volume in 2018 as compared to 2017 was due to increased sales of coal to Kazakh customers resulting from increased regional demand.

Transportation results

The products transported by JV LLP Bogatyr Trans, in which the Company has a 50% share, decreased by 7.2% to 5,773 thousand tonnes in 2018 from 6,222 thousand tonnes in 2017 due to an decrease in demand in the Russian Federation with the preservation of the structure.

Financial Overview

Revenue

	Year ended 31 December 2018			Year ended 31 December 2017		
	USD million	kt	Average sales price (USD/tonne)	USD million	kt	Average sales price (USD/tonne)
Sales of primary aluminium and alloys	8,293	3,671	2,259	8,324	3,955	2,105
Sales of alumina	975	1,930	505	769	2,018	381
Sales of foil and other aluminium products	346	–	–	323	–	–
Other revenue	666	–	–	553	–	–
Total revenue	**10,280**			**9,969**		

Total revenue increased by USD311 million or by 3.1% to USD10,280 million in 2018 compared to USD9,969 million in 2017.

	Quarter ended 31 December		
	2018 unaudited	2017 unaudited	Change, quarter on quarter, (4Q 2018 to 4Q 2017)
(USD million)			
Sales of primary aluminium and alloys			
USD million	1,855	2,263	(18.0%)
kt	877	1,000	(12.3%)
Average sales price (USD/t)	2,115	2,263	(6.5%)
Sales of alumina			
USD million	256	233	9.9%
kt	473	492	(3.9%)
Average sales price (USD/t)	541	474	14.1%
Sales of foil and other aluminium products (USD million)	72	91	(20.9%)
Other revenue (USD million)	182	158	15.2%
Total revenue (USD million)	**2,365**	**2,745**	**(13.8%)**

Revenue from sales of primary aluminium and alloys was almost flat in 2018 compared to 2017 primarily due to a 7.3% increase in the weighted-average realized aluminium price per tonne driven by an increase in the LME aluminium price (to an average of USD2,110 per tonne in 2018 from USD1,968 per tonne in 2017), which was offset by a 7.2% decrease in primary aluminium and alloys sales volume.

Revenue from sales of alumina increased by 26.8% to USD975 million for the year ended 31 December 2018 as compared to USD769 million for the previous year primarily due to an increase in the average sales price by 32.5%, which was partially offset by a decrease in the sales volumes by 4.4%.

Quarter ended 30 September	Change, quarter on quarter,	Year ended 31 December		Change, year-on-year
2018 unaudited	(4Q 2018 to 3Q 2018)	2018	2017	
2,379	(22.0%)	8,293	8,324	(0.4%)
1,046	(16.2%)	3,671	3,955	(7.2%)
2,274	(7.0%)	2,259	2,105	7.3%
272	(5.9%)	975	769	26.8%
504	(6.2%)	1,930	2,018	(4.4%)
540	0.2%	505	381	32.5%
104	(30.8%)	346	323	7.1%
163	11.7%	666	553	20.4%
2,918	**(19.0%)**	**10,280**	**9,969**	**3.1%**

Revenue from sales of foil and other aluminium products increased by USD23 million, or by 7.1%, to USD346 million in 2018, as compared to USD323 million in 2017 primarily due to the growth in sales of other aluminium products (aluminium wheels).

Revenue from other sales, including sales of other products, bauxite and energy services increased by 20.4% to USD666 million for the year ended 31 December 2018 as compared to USD553 million for the previous year, 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%).

Cost of sales

The following table shows the breakdown of RUSAL's cost of sales for the years ended 31 December 2018 and 2017, respectively:

	Year ended 31 December		Change, year-on-year	Share of costs
	2018	2017		
(USD million)				
Cost of alumina	877	728	20.5%	11.8%
Cost of bauxite	495	462	7.1%	6.7%
Cost of other raw materials and other costs	2,833	2,621	8.1%	38.1%
Purchases of primary aluminium from JV	307	279	10.1%	4.1%
Energy costs	2,147	2,149	(0.1%)	28.8%
Depreciation and amortisation	498	472	5.5%	6.7%
Personnel expenses	582	582	0.0%	7.8%
Repairs and maintenance	74	72	2.8%	1.0%
Net change in provisions for inventories	(20)	2	NA	(0.3%)
Change in finished goods	(347)	(184)	88.6%	(4.7%)
Total cost of sales	**7,446**	**7,183**	**3.7%**	**100.0%**

Total cost of sales increased by USD263 million, or 3.7%, to USD7,446 million in 2018, as compared to USD7,183 million in 2017. The increase was primarily driven by an increase in the cost of alumina, transportation tariffs and other raw material costs in 2018 that was partially compensated by the lower volumes of primary aluminium and alloys sold and depreciation of Russian Ruble against US dollar between the comparable periods.

The cost of alumina increased by 20.5% in 2018 compared to the previous year, primarily as a result of an increase in alumina purchase prices between the comparable periods.

The cost of bauxite increased by 7.1% to USD495 million in 2018 compared to USD462 million in 2017, primarily due to the increase in bauxite purchase prices between the periods.

The cost of raw materials (other than alumina and bauxite) and other costs increased by 8.1% in 2018 compared to the previous year, due to a rising raw materials purchase price (prices for raw petroleum coke increased by 35.6%, pitch by 17.6%, anode blocks by 16.7%, caustic soda by 11.1%).

Energy costs were almost flat between the comparable periods.

The finish goods mainly consist of primary aluminium and alloys (app. 95%). The dynamic of change between the reporting periods was driven by the fluctuations of primary aluminium and alloys physical inventory between the reporting dates: 40.7% increase in 2018 as compared to 26.6% increase in 2017.

Distribution, administrative and other expenses

Distribution expenses increased by 3.6% to USD462 million in 2018, compared to USD446 million in 2017, primarily due to the increase in transportation tariffs partially compensated by depreciation of the Russian Ruble against the US Dollar between the periods.

Administrative expenses in the amount USD629 million, which include personnel costs, were almost flat in 2018 compared to 2017.

Gross profit

As a result of the foregoing factors, RUSAL reported a gross profit of USD2,834 million for the year ended 31 December 2018 as compared to USD2,786 million for the previous period, representing gross margins of the periods of 27.6% and 27.9%, respectively.

	Year ended 31 December		
	2018	2017	Change year-on-year
(USD million)			
Reconciliation of Adjusted EBITDA			
Results from operating activities	1,481	1,523	(2.8%)
Add:			
Amortisation and depreciation	513	488	5.1%
Impairment of non-current assets	157	84	86.9%
Loss on disposal of property, plant and equipment	12	25	(52.0%)
Adjusted EBITDA	**2,163**	**2,120**	**2.0%**

Finance income and expenses

Finance income			
Interest income on third party loans and deposits	31	16	93.8%
Interest income on loans to related party – companies under common control	1	1	0.0%
Net foreign exchange gain	–	4	(100.0%)
Change in fair value of derivative financial instruments, including:	171	–	100.0%
Change in fair value of embedded derivatives	57	–	100.0%
Change in other derivatives instruments	114	–	100.0%
	203	**21**	**866.7%**

Adjusted EBITDA, defined as results from operating activities adjusted for amortisation and depreciation, impairment charges and loss on disposal of property, plant and equipment, increased to USD2,163 million for the year ended 31 December 2018, as compared to USD2,120 million for the previous year. The factors that contributed to the increase in Adjusted EBITDA margin were the same that influenced the operating results of the Company.

Results from operating activities decreased by 2.8% to USD1,481 million for the year ended 31 December 2018, as compared to USD1,523 million for the previous year, representing operating margins of 14.4% and 15.3%, respectively.

	Year ended 31 December		
	2018	2017	Change year-on-year
Finance expenses			
Interest expense on bank loans, company loans, bonds and other bank charges, including	(498)	(581)	(14.3%)
Interest expense	(459)	(477)	(3.8%)
Bank charges	(39)	(104)	(62.5%)
Interest expense on company loans from related parties — companies exerting significant influence	(2)	(2)	0.0%
Interest expense on provisions	(3)	(6)	(50.0%)
Net foreign exchange loss	(183)	–	100.0%
Change in fair value of derivative financial instruments, including	–	(287)	(100.0%)
Change in fair value of embedded derivatives	–	(104)	(100.0%)
Change in other derivatives instruments	–	(183)	(100.0%)
	(686)	**(876)**	**(21.7%)**

Share of profits of associates and joint ventures

Share of profits of Norilsk Nickel, with	885	528	67.6%
Effective shareholding of	27.82%	27.82%	
Share of profits of other associates	–	1	(100.0%)
Share of profits of associates	**885**	**529**	**67.3%**
Share of profits of joint ventures	**70**	**91**	**(23.1%)**

Finance income increased by USD182 million, or 866.7% to USD203 million in 2018 compared to USD21 million for the same period of 2017 primarily due to the net profit from change in fair value of derivative financial instruments for 2018 as compared to significant net loss on this item for 2017.

Finance expenses decreased by USD190 million or by 21.7% to USD686 million in 2018 as compared to USD876 million for the corresponding period of 2017, primarily due to the reason described above as well as 14.3% decrease of interest expense and other bank charges between the comparable periods following the Company's successful efforts on improvement of the debt profile and interest rate margins.

The Company's share in profits of associates for the years ended 31 December 2018 and 2017 amounted to USD885 million and USD529 million, respectively. Share in results of associates in both periods resulted primarily from the profit from the Company's investment in Norilsk Nickel.

The market value of the investment in Norilsk Nickel at 31 December 2018 was USD8,286 million as compared to USD8,294 million as at 31 December 2017.

Share of profits of joint ventures was USD70 million for the year ended 31 December 2018 as compared to USD91 million for the same period in 2017. This represents the Company's share of profits in joint ventures, namely BEMO, LLP Bogatyr Komir and Mega Business and Alliance (transportation business in Kazakhstan).

Profit before income tax

RUSAL earned a profit before income tax in an amount of USD1,953 million for the year ended 31 December 2018, as compared to a profit before income tax in an amount of USD1,288 million for the year ended 31 December 2017 due to reasons set out above.

Income tax

Income tax expense increased by USD189 million to USD255 million in 2018, as compared to USD66 million in 2017.

Current tax expenses increased by USD165 million, or 117.9%, to USD305 million for the year ended 31 December 2018, as compared to USD140 million for the previous year primarily due to increase in taxable profit.

The deferred tax benefit decreased to USD50 million in 2018 as compared to USD74 million in 2017 primarily due to reversal of certain temporary differences and change in fair value of derivative financial instrument.

Profit for the period

As a result of the above, the Company recorded a profit of USD1,698 million in 2018, as compared to USD1,222 million in 2017.

Adjusted and Recurring Net Profit

	Three months ended 31 December		Change quarter-on-quarter, % (4Q 2018 to 4Q 2017)
	2018 unaudited	2017 unaudited	
(USD million)			
Reconciliation of Adjusted (Loss)/Profit			
Net profit for the period	149	440	(66.1%)
Adjusted for:			
Share of profits and other gains and losses attributable to Norilsk Nickel, net of tax effect	(118)	(101)	16.8%
Change in the fair value of derivative financial liabilities, net of tax (20%)	(39)	66	NA
Impairment/(reversal) of non-current assets	(9)	(55)	(83.6%)
Adjusted (Loss)/Profit	**(17)**	**350**	**NA**
Add back:			
Share of profits of Norilsk Nickel, net of tax	118	101	16.8%
Recurring Net Profit	**101**	**451**	**(77.6%)**

	Three months ended 30 September	Change quarter on quarter, % (4Q 2018 to 3Q 2018)	Year ended 31 December		Change, year-on-year
	2018 unaudited		2018 unaudited	2017 unaudited	
	597	(75.0%)	1,698	1,222	39.0%
	(285)	(58.6%)	(839)	(496)	69.2%
	(17)	129.4%	(160)	267	NA
	43	NA	157	84	86.9%
	338	**NA**	**856**	**1,077**	**(20.5%)**
	285	(58.6%)	839	496	69.2%
	623	**(83.8%)**	**1,695**	**1,573**	**7.8%**

Adjusted Net Profit for any period is defined as the net profit adjusted for the net effect of the Company's investment in Norilsk Nickel, the net effect of derivative financial instruments and the net effect of non-current assets impairment. Recurring Net Profit for any period is defined as Adjusted Net Profit plus the Company's net effective share in Norilsk Nickel results.

Assets and liabilities

RUSAL's total assets were almost flat with slight increase of USD3 million to USD15,777 million as at 31 December 2018 as compared to USD15,774 million as at 31 December 2017. The increase in current assets driven primarily by the increase in inventories and trade accounts receivable was almost compensated by the decrease in investments in associates.

Total liabilities decreased by USD762 million, or 6.7%, to USD10,568 million as at 31 December 2018 as compared to USD11,330 million as at 31 December 2017 mainly due to the decrease in the Company's outstanding financial debts.

Cash flows

The Company generated net cash from operating activities of USD680 million for the year ended 31 December 2018 as compared to USD1,702 million for the previous year driven by the net increase in working capital and provisions to USD1,270 million for 2018 as compared to USD326 million for the previous year.

The Company used USD106 million net cash for the investing activities for the year ended 31 December 2018 as compared to net cash from investing activities USD2 million generated for the previous year primarily due to an increase in other investments and acquisition of subsidiaries.

Operating cash flows and cash received from settlement of derivative financial instruments of USD125 million allowed the Company to assign USD146 million of its own cash flows for the debt repayment that together with the interest payments of USD490 million represent the main components of the cash used in the financing activities with the total net amount of USD517 million for 2018.

Segment reporting

The Group has four reportable segments, as described in the Annual Report of the Company, which are the Group's strategic business units: Aluminium, Alumina, Energy, Mining and Metals. These business units are managed separately and results of their operations are reviewed by the CEO on a regular basis.

The core segments are Aluminium and Alumina.

	Year ended 31 December			
	2018 Aluminium	2018 Alumina	2017 Aluminium	2017 Alumina
(USD million)				
Segment revenue				
kt	3,596	7,525	3,741	7,668
USD million	8,068	2,753	7,847	2,338
Segment result	1,813	239	1,852	130
Segment EBITDA[18]	2,150	353	2,204	232
Segment EBITDA margin	26.6%	12.8%	28.1%	9.9%
Total capital expenditure	271	332	350	260

The segment result margin (calculated as a percentage of segment profit to total segment revenue per respective segment) for aluminium segment decreased to 22.5% for the year ended 31 December 2018 from 23.6% for the year ended 31 December 2017, and increased to 8.7% compared to 5.6%, respectively, for the alumina segment. Key drivers for the decrease in margin in the aluminium segment are disclosed in "Revenue", "Cost of sales" and "Adjusted EBITDA and results from operating activities" sections above. Detailed segment reporting can be found in the consolidated financial statements for the year ended 31 December 2018.

18 Segment EBITDA for any period is defined as segment result adjusted foramortisation and depreciation for the segment.

Capital expenditure

RUSAL recorded a total capital expenditure of USD834 million for the year ended 31 December 2018. RUSAL's capital expenditure in 2018 was aimed at maintaining existing production facilities.

	YEAR ENDED 31 DECEMBER	
	2018	2017
(USD million)		
Development CAPEX	453	356
Maintenance		
Pot rebuilds costs	101	109
Re-equipment	280	377
Total capital expenditure	**834**	**842**

The BEMO project companies utilize the project financing proceeds to make necessary contributions to the ongoing construction projects and do not require contributions from the joint ventures partners at this time.

Purchase, sale or redemption of RUSAL's listed securities

There has been no purchase, sale or redemption of RUSAL's listed securities during 2018 by RUSAL or any of its subsidiaries.

Code of Corporate Governance Practices

RUSAL adopted a corporate code of ethics on 7 February 2005. Based on the recommendations of the European Bank for Reconstruction and Development and the International Finance Corporation, RUSAL further amended the corporate code of ethics in July 2007. The corporate code of ethics sets out RUSAL's values and principles for many of its areas of operations.

The Directors adopted a corporate governance code which is based on the Code on Corporate Governance Practices as set out in Appendix 14 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("Hong Kong Listing Rules") then in force on 11 November 2010. The Directors consider that save for code provisions A.1.7 (physical Board meetings at which Directors have material interests), A.4.1 (specific term of non-executive directors) and A.4.2 (specific term of directors) for reasons set out below and also on pages 94-95 of RUSAL's interim report for the six months ended 30 June 2018, RUSAL has complied with the code provisions as set out in the Corporate Governance Code and Corporate Governance Report in Appendix 14 to the Hong Kong Listing Rules during the period from 1 January 2018 to 31 December 2018.

The Board generally endeavoured throughout the twelve-month period ended 31 December 2018 to ensure that it did not deal with business by the way of written resolution where a substantial Shareholder of the Company or an independent non-executive Director had disclosed an interest in a matter to be considered by the Board which the Board determined to be material. As a result, there were no occurrence (out of the twenty-two written resolutions the Board passed during the period) when urgent business was dealt with by the Board by way of written resolution where a material interest of a Director was stated to have been disclosed.

Of the twelve Board meetings held in the twelve month period ended 31 December 2018 where one or more Directors had disclosed a material interest, all the independent non-executive Directors were present at all six of the Board meetings held.

Of the twelve Board meetings held, there were four occasions where an independent non-executive Director had a material interest in the transaction. On such occurrences, the independent non-executive Director abstained from voting and the resolutions approving entry into such transactions were passed by the requisite majority excluding the materially interested independent non-executive Director.

Audit Committee

The Board established an audit committee (the "**Audit Committee**") to assist it in providing an independent view of the effectiveness of the Company's financial reporting process, risk management and internal control systems, and internal audit function to oversee the audit process and to perform other duties and responsibilities as are assigned to the Audit Committee by the Board. The Audit Committee is assisted by the Company's internal audit function which undertakes both regular and ad hoc reviews of risk management, internal controls and procedures, the results of which are reported to the Audit Committee. The Audit Committee consists of independent non-executive Directors. The members are as follows: Mr. Bernard Zonneveld (chairman of the committee, independent non-executive Director, with relevant professional qualifications and knowledge related to accounting and financial management; resigned as chairman of the committee with effect from 6 March 2019); Dr. Elsie Leung Oi-sie (independent non-executive Director), Mr. Dmitry Vasiliev (independent non-executive Director), Mr. Maxim Poletaev (chairman of the committee, independent non-executive Director; appointed to the committee with effect from 6 March 2019) and Mr. Kevin Parker (independent non-executive Director; appointed to the committee with effect from 6 March 2019).

Material events since the end of the year

28 JANUARY 2019

OFAC removed RUSAL from the SDN List.

28 JANUARY 2019

RUSAL announced resignation of the Chairman of the Board of Directors Jean-Pierre Thomas and independent non-executive Director Philippe Bernard Henri Mailfait.

08 FEBRUARY 2019

RUSAL announced its operating results for the 4Q 2018 and full year 2018.

15 FEBRUARY 2019

RUSAL announced changes in Board of Directors.

20 MARCH 2019

The Group executed the put option under panda bonds issuance (the first tranche) and redeemed bonds with notional value CNY680 million.

25 MARCH 2019

Fitch Ratings assigned to the Company a Long-Term Issuer Default Rating (IDR) of 'BB-'. The Outlook is Stable.

29 MARCH 2019

RUSAL Bratsk announced a new coupon rate in respect to the series 08 bonds at the level of 0.01% per annum. On 10 April 2019 the Company exercised a put option on the outstanding RUB-denominated bonds series 08.

04 APRIL 2019

Moody's Investors Service Ltd assigned to the Company a corporate family rating of Ba3 and probability of default rating of Ba3-PD. The outlook is stable.

RUSAL Bratsk announced a new coupon rate in respect to the series BO-01 bonds at the level of 0.01% per annum. On 18 April 2019 the Company exercised a put option on the outstanding RUB-denominated bonds series BO-01.

Loans and borrowings

The nominal value of the Group's loans and borrowings was USD6,332 million as at 31 December 2018, not including bonds, which amounted to an additional USD1,963 million.

Set out below is an overview of certain key terms of the select facilities in the Group's loan portfolio as at 31 December 2018:

Facility/Lender	Principal amount outstanding as at 31 December 2018	Tenor/Repayment Schedule	Pricing
Syndicated facilities			
PXF facility	USD1.7 billion	Up to USD1.7 billion syndicated aluminium pre-export finance term facility – until 31 May 2022 equal quarterly repayments starting from July 2019	3 month LIBOR plus 2.5% p.a.
Bilateral loans			
Nordea Bank Abp	USD200 million	January 2021, bullet repayment at final maturity date	1 month LIBOR plus 2.4% p.a.
Sberbank loan	USD3.4 billion RUB57.8 billion	December 2024, quarterly repayments starting from March 2021	3 month LIBOR plus 3.75% p.a 9.15%
Bonds			
Eurobond	USD600 million	February 2022, repayment at final redemption date	5.125% p.a.
Eurobond	USD500 million	May 2023, repayment at final redemption date	5.3% p.a.
Eurobond	USD500 million	February 2023, repayment at final redemption date	4.85% p.a.
Panda bond	CNY1.0 billion	March 2020, repayment at final redemption date, subject to a bondholders' put option exercisable in March 2019*	5.5% p.a.
Panda bond	CNY500 million	September 2020, repayment at final redemption date, subject to a bondholders' put option exercisable in September 2019	5.5% p.a.

* In March 2019 the Group executed the put option under panda bonds issuance (the first tranche) and redeemed bonds with notional value CNY680 million.

The average maturity of the Group's debt as at 31 December 2018 was 3.5 years.

Security

As of the date of this Annual Report, the Group's debt (save for several unsecured loans and bonds) is secured, among others, by assignment of receivables under specified contracts, pledges of shares in certain non-operating companies, designated accounts, shares in Norilsk Nickel (representing a 25% plus 1 share of Norilsk Nickel's total nominal issued share capital).

Key Events

In January 2018 the Company entered into a bilateral facility agreement with Nordea Bank Abp (previously named Nordea Bank AB (publ)): USD200 million, 3 years, unsecured, with an interest rate -1 month LIBOR plus 2.4% p.a. , bullet repayment. The proceeds were applied for the partial prepayment of existing debt.

On 13 December 2018, the Group executed amendment to the existing credit facility with Sberbank for conversion of ½ of the principal outstanding amount of the loan into rubles with interest rate 9.15%. As at the date of this Annual Report the amount of USD2,107 million was converted into rubles.

Debt Capital Markets

In the end of January – beginning of February 2018, the Company successfully executed placement of the third tranche of Eurobond: USD500 million, 5 years, unsecured with a coupon rate 4.85% p.a. The proceeds were used for partial refinancing of the existing debt.

Dividends

No dividends were recommended or approved by the Board during 2018.

Financial Ratios

Gearing

The Group's gearing ratio, which is the ratio of total debts (including both long-term and short-term borrowings and bonds outstanding) to the total assets, as at 31 December 2018 and 31 December 2017 was 52.5% and 53.8%, respectively.

Return on Equity

The Group's return on equity, which is the amount of net profit as a percentage of total equity, was 32.6% and 27.5% as at 31 December 2018 and 31 December 2017, respectively.

Interest Coverage Ratio

The Group's interest coverage ratio, which is the ratio of earnings before interest and taxes to net interest (excluding bank costs and interest expense on provision), for the years ended 31 December 2018 and 31 December 2017 was 5.6 and 3.8, respectively.

Environmental Performance and Safety

Safety

For three years the coefficient of injuries in RUSAL has tendency for declining: 0.17 in 2015, 0.18 in 2016, 0.15 in 2017. In 2018 it was 0.16 which is a slight increase compared to 2017 0.15, but is considerably less than the global average for the aluminium industry in 2017 (0.38).

Environmental performance

Environmental levies for air emissions and the discharge of liquids and other substances amounted to USD7.2 million in 2016, USD6.8 million in 2017 and USD7.0 million in 2018. There have been no material environmental pollution incidents at any of the Group's sites or facilities during the year ended 31 December 2018.

Employees

The following table sets forth the aggregate average number of staff (full time equivalents) employed by each division of the Group during 2017 and 2018, respectively.

Division	YEAR ENDED 31 DECEMBER 2017	YEAR ENDED 31 DECEMBER 2018
Aluminium	18,434	18,849
Alumina	21,026	21,280
Engineering and Construction	14,134	14,411
Energy	28	28
Packaging	2,156	2,136
Managing Company	820	813
Technology and Process Directorate	1,179	1,335
Others	4,199	5,204
Total	**61,976**	**64,057**

Remuneration and benefit policies

The remuneration paid by the Group to an employee is based on his/her qualification, experience and performance, as well as the complexity of his or her job. Wages for employees are generally reviewed annually and are revised in accordance with a performance assessment and local labor market conditions. Under the current collective agreement, the remuneration of employees of the Company's smelters is subject to an annual increase offsetting inflation on a basis of the official data on the minimal living wage of working population and the consumer price index published by the Federal State Statistics Service of the Russian Federation.

RUSAL's Personnel Policy and the Corporate Code of Conduct govern the relationship between the Group and its staff. The Group's Corporate Code of Conduct strictly prohibits discrimination based on gender, race and/or religion and forbids any form of child, forced or indentured labor.

Labor relations

About 60% of the Group's employees are unionized and 95% of employees are covered by collective agreements.

More than ten smelters of the Company took part in the Industrial Competition "The Most Socially Effective Smelter of the Russian Mining and Metallurgical Complex" and seven of them won. RUSAL Krasnoyarsk became the winner in the nomination of "The Most Socially and Economically Effective Collective Agreement", RUSAL Sayanogorsk, RUSAL Ural (Volgograd) and Krasnoyarsk Branch of the Russian Engineering Company – in the nomination of "Personnel Development", RUSAL Ural (Kandalaksha) and Shelekhov Branch of the Russian Engineering Company – in the nomination of "Health Protection and Safe Working Conditions" and RUSAL Bratsk – in the nomination of "Nature Protection Activity and Resource-Saving".

In December 2018, the Company, as a part of the Association of the Russian Mining and Metallurgical Complex Industrialists, signed the agreement with the Miners' and Metallurgical Workers' Union of Russia on prolongation of the Industrial Tariff Agreement for the Russian Mining and Metallurgical Complex for the next year on the current terms.

Changes to the organizational structure of the Company

Aiming to put into operation the Tayshet Aluminium Smelter the relevant organizational structure was established.

Aiming to improve operation and sales efficiency the new Division Downstream has consolidated all the packaging (RUSAL Sayanal, RUSAL Armenal, Sayanskaya Foil, Ural Foil and other), powder (PM Shelekhov, PM Krasnoturynsk, PM Volgograd and other) and downstream (SKAD) smelters.

In order to enhance innovation activity of the Company and improve creativity of its staff as well as to improve efficiency of operational costs and investments through implementation of the Theory of Innovative Problem Solving (TRIZ) the relevant Directorate was established within the Managing Company.

Creating a new generation of highly-skilled personnel (forming and developing the external talent pool)

Target student enrolment programs and international educational programs were implemented: the programs were extended; procedures were developed for planning and employment of the external talent pool program graduates; plans for 2018 were adjusted; target recruitment programs were revised; profession-focused events for school pupils were enhanced in presence regions.

In 2018, a scholarship program for graduates of higher and secondary vocational educational institutions was continued. By the end of last year, 20 new contracts were signed for relevant disciplines.

Number of students learning under the Target Recruitment Program:

Educational institutions	Number of persons				
	2014	2015	2016	2017	2018
Siberian Federal University (students from Krasnoyarsk, Sayanogorsk and Bratsk)	31	51	44	51	14
Irkutsk State Technical University (students from Bratsk and Irkutsk)	9	18	16	12	8
Ural Federal University (students from Krasnoturyinsk and Kamensk-Uralsky)	4	14	6	6	12
Siberian State Industrial University (students from Novokuznetsk)	4	4	15	5	0
Ural State Mining University (students from Severouralsk and Kamensk-Uralsky)	4	4	16	20	20
Kamensk-Uralsky Polytechnical College (students from Kamensk-Uralsky)	–	25	18	20	19
Krasnoyarsk Industrial Metallurgical College (students from Krasnoyarsk)	11	5	11	15	11
Volgograd State Technical University (students from Volgograd)			9	11	1
Volgograd Management and New Technologies College				25	0
Achinsk College of Transport and Agriculture Industry					12
Total	**63**	**121**	**135**	**165**	**97**

An internship program dubbed "New Generation" was launched in 2017 as a part of the external talent pool development. The program mainly aims to rejuvenate the Company's workforce by attracting young specialists with a high potential. Participants were selected from among the best graduates of the target educational institutions, with high average marks (at least 4.5 for white-collar personnel), English language skills, readiness to relocation etc. For each intern, a mentor is appointed who then develops an individual development plan and helps the intern adapt to a new environment, set and achieve professional goals. Internship lasts for 6 months, during which participants tackle interesting and complicated projects and then defend them in front of their department and the head of HR. Provided the defence was successful, a decision may be made to offer full-time employment. In 2018, the program attracted 145 participants, and over 80% of them have since become RUSAL's employees. For the next year, the plan is to admit over 150 new interns.

In 2018, the Company continued the implementation of the "RUSAL Laboratory" project. During the year, Laboratories were opened at the Siberian Federal University and at the Siberian State Industrial University. Laboratories at the Volgograd State Technical University and the National research Irkutsk state technical University are also preparing for the unveiling. Furthermore, career centers, where pupils are intensively preparing for the Unified State Examination in the specialized RUSAL disciplines, were opened in these Laboratories.

In order to increase the prestige of the metallurgical and mining professions, RUSAL opened offices in the Siberian Federal University and at the Siberian State Industrial University for the application period. RUSAL representatives advised pupils and their parents on demanded in the aluminium industry specialities and training areas.

In 2018, pupils were taken on tours to Company's productions and provided with career guidance. During the year our productions were visited by over 1,000 pupils. Company's productions actively participate in the education provided by related organizations by granting of available space to students for their production floor workshops and practical trainings. In 2018, over 900 students from supporting colleges and universities received their practical trainings.

In 2018, about 8 teams (17 peoples) were trained in Krasnoyarsk, Kamensk-Uralsky and Krasnoturyinsk. According to the internal selection results, two teams took part in the Junior Skills and Robofest competition. In addition, "Technology for producing metallurgical industrial products Competition", where the team of one of our sponsored schools won, was held on World Skills standards with the support of RUSAL.

Forming and developing the internal talent pool

In 2017, 1,628 people from the succession pool trained (subjects are listed below), among them, there are new development projects – the 'Proficiency School' (156 people trained) and the 'Apprenticeship School' (330 people trained). In 2018, the projects are to be rolled out to other productions of RUSAL.

In 2018, BS-250 succession pool candidates were trained in managerial competences. There were 15 trainings held for 277 participants. Subjects of the trainings were: public presentations, target setting – tools and practice as well as inspiring leadership.

During 2018 there were 1,264 practical workshops arranged for succession pool candidates. There were 138 (11%) of the practical inter-divisional workshops among them.

In 2018, 615 reservists were trained in the following areas (including, without limitation): manager's internal and external communications; strategic team building; corporate entrepreneurship business simulation; public performance under pressure, business result focus; leader and team; persuasive communication and basic managerial skills training.

Training personnel within functional academies

The Company continuously develops its personnel training systems through systematising and developing professional training of workers, managers, specialists and clerks, raising the relevancy of functional academies, and creating target modular programs for business objectives. The approach to the preparation of training in areas within functional academies was revised, experts for areas were defined, and topics of training were developed. Due to the new approach to developing topics for functional academies, employees raise their skills in accordance with the Company's targets and strategy.

In 2018, the following training programs were developed (including, without limitation):

Area	Content	Number of trainees
Technology	Aluminium production technology Operation and maintenance of slab casting systems ROBOGUIDE software Training of cold metal rolling operators SysCAD software STATISTICA software ANSIS mathematical simulation software Aluminium foil rolling processes	174
Quality management	Quality tools: SPC, APQP, FMEA, MSA, 8D International quality standards: ISO 9001:2015, IATF 16949 Production process audit Internal quality standards	1,283
Laboratory and metrology	Control of analysis result quality in analytical control laboratories Measurement methods: development, validation (including certification) and implementation in an analytical laboratory Development, testing and application of standard material samples based on requirements of GOST 8.315-97 Metallographic control technologies Laboratory accreditation: requirements and preparation issues Analytical laboratory management system	76
Energy and repair	Electricity and capacity markets Energy saving and energy management Operation and safe maintenance of electrical installations at industrial production facilities Energy trading	33
Health, safety and environment	Environment management system standard: ISO 14001:2015 Atmospheric air protection Ecologist atmosphere pollution calculation program and MPE Ecologist program Subsoil use practical training	76
Information technology	Cisco ORACLE C# programming SAP Transportation Management Mitel MX-ONE TSE 5.0 system VMware vSphere: Install, Configure, Manage v.6 VPLEX Management IK-OPSYS	62
Theory of inventive problem solving (TIPS)	Improvement production by TIPS tools	219

Training process personnel at production facilities

Special programs and personnel development projects were implemented at production facilities in the following areas (including, without limitation):

- Operation of the A1212 Master inspection tool;
- Pressure Casting Industry 4.0;
- The technology of DC casting of aluminium alloys;
- Training in IA500, a new analytical tool;
- Assessment of non-metallic inclusions to improve quality of raw materials;
- Software for modelling of different types of welding in a magnetic field;
- Software for data panels to provide information on process operations quickly in KrAZ potrooms;
- Slab production. Implement a new process instruction;
- Training under a casting defect catalogue;
- Metal science. Aluminium alloys;
- Maintenance and operation of PROPERZI;
- Casting technology.

Educating the Company's employees in higher educational institutions according to bachelor, master and postgraduate programs

The Company implements modular programs of obligatory training for workers and office employees to obtain bachelor's degree in branches of the Ural Federal University, Siberian Federal University and Siberian State Industrial University in the following areas: electric installation and systems; metallurgical machines and equipment; non-ferrous metal science; non-ferrous, rare and precious metal sciences; casting technologies; and low-melting/high-melting metal science. In 2017, training programs were also launched at the Ural State Mining University. As of 2017, over 110 employees of RUSAL are continuing their bachelor's programs.

Besides, training programs were implemented for managers to obtain master's degrees from the Siberian Federal University in non-ferrous metal science. The presidential skills-raising program was implemented for engineering personnel in the following areas: energy efficient and environmentally friendly technologies in aluminium production; problems and prospects; advanced resource-saving technologies of aluminium reduction; skills-raising for managers and specialists in relevant functional areas. In 2017, master's programs were also launched at the Irkutsk National Research Technical University and at the Ural Federal University. As of 2017, over 80 employees of RUSAL are continuing their master's programs.

The basic chair of the Irkutsk National Research Technical University (IrNITU) was opened by SibVAMI together with RUSAL Bratsk in Shelekhov. Work was commenced to open the basic chair of IrNITU, by SibVAMI together with CJSC Kremny in Shelekhov. Besides, work was commenced to open the basic chair of the Siberian Federal University in Achinsk at Achinsk Alumina Refinery.

Distant learning system (DLS):

Item	2015	2016	2017	2018
Number of production facilities and business units using DLS	54	62	67	69
Number of trainees through DLS	16,693	57,257	33,649	90,806
Number of computer trainings (courses)	over 300	over 400	over 500	528
Number of educational institutions participating in the DLS program "RUSAL – to Russian Schools"	142	178	182	183

Other VR learning systems

The following simulators and training facilities were developed and launched in 2018:

- Interactive simulator standard ingot Al-raw production process at RUSAL Sayanogorsk

RUSAL ensures that it fully complies with the existing legislation and strives to meet the highest international standards of environmental and social responsibility, not only in its operating activities but also in reporting and providing sufficient information and feedback to all of its stakeholders.

Business risks

In order to reduce the negative effects of potential dangers and to ensure stable and sustainable business development, the Company pays particular attention to building an effective risk management system.

Risk management is a responsibility of the risk management group created by the Board as a part of the Directorate for Control. The main internal documents governing activity in this area are:

- The risk management policy, which determines the general concept and employee obligations in the risk management process; and
- The regulations on risk management, which organize the risk management process and include a description of the key tools and methods for identifying, assessing and mitigating risks.

The key elements of the Company's risk management system are: defining and assessing risks, developing and implementing risk mitigation measures, risk management reporting, and assessing the performance of the risk management system.

Key steps taken in risk management

- Organizing independent risk audits at the Company's enterprises conducted by specialists of the Willis Group and the Ingosstrakh Engineering Center to reduce risks and optimize the Company's insurance program;
- Preparation of an annual corporate risk map by the Directorate for Control and its quarterly updating;
- Performance of risk management system reviews and audits by the Directorate for Control;
- Preparation of the RUSAL risk insurance programs.

Monitoring, reporting and performance assessment of the risk management system

The Directorate for Control regularly reports on its activities to the Board and Audit Committee. As part of these reports, the Directorate for Control provides information on the risk management system, the results of preparing Risk Maps, new risks, and the mitigation of various types of risks.

The Audit Committee oversees how competently and adversely management monitors compliance with the Company's risk management policies and procedures. Based on the reporting submitted, the Audit Committee and the Board review the Company's risk profile and the results of its risk management programs on a quarterly and annual basis respectively.

In 2018, the Company identified the following risks which affect its business:

1. The Group operates in a cyclical industry that has recently experienced price and demand volatility, which has had and may continue to have a material adverse effect on the Group's performance and financial results.
2. The Group's competitive position in the global aluminium industry is highly dependent on the continued access to inexpensive and uninterrupted electricity supply, in particular, long-term contracts for such electricity. Increased electricity prices, as well as interruptions in the supply of electricity, could have a material adverse effect on the Group's business, financial condition and the results of operations.
3. The Group depends on the provision of uninterrupted transportation services and access to infrastructure for the transportation of its materials and end products across significant distances which is outside of the Company's control, and the prices for such services (particularly rail tariffs) could increase.
4. The terms of the credit facility agreements impose certain limits on the Group's capital expenditure and the payment of dividends. Failure by the Group to comply with the terms and conditions of these agreements may materially and adversely affect the Group and its Shareholders.
5. The Group is exposed to foreign currency fluctuations which may affect its financial results.
6. En+ is able to influence the outcome of important decisions relating to the Group's business, which includes transactions with certain related parties.
7. The Group depends on the services of the key senior management personnel.

8. Adverse media speculation, claims and other public statements could materially and adversely affect the value of the Shares.
9. The Group's business may be affected by labor disruptions, shortages of skilled labor and labor costs inflation.
10. The Group relies on third-party suppliers for certain materials.
11. Equipment failures or other difficulties may result in production curtailments or shutdowns.
12. The Group is subject to certain requirements under Russian anti-monopoly laws.
13. The Group operates in an industry that gives rise to health, safety and environmental risks.
14. Ore Reserves and Mineral Resources data are estimates only and are inherently uncertain, and such Ore Reserves and Mineral Resources may be depleted more rapidly than anticipated.
15. The Group's licenses and concession rights to explore and mine Ore Reserves may be suspended, amended or terminated prior to the end of their terms or may not be renewed.
16. The Group is exposed to risks relating to the multi-jurisdictional regulatory, social, legal, tax and political environment in which the Group operates.
17. The Group is exposed to the risk of re-inclusion in the SDN List or imposition of other sanctions with potential damage of similar materiality.

Contingencies

The Board has reviewed and considered the contingent liabilities of the Company and disclosed information concerning such contingent liabilities in note 24 to the consolidated financial statements. Accordingly, for detailed information about contingent liabilities, please refer to note 24 to the consolidated financial statements. Details of the amounts of provisions are also disclosed in note 20 to the consolidated financial statements.

Tax contingencies

The new controlled foreign company ("CFC") rules have been introduced in Russia starting from 1 January 2015. The rules apply to undistributed profits of non-Russian CFC controlled by Russian tax-resident Shareholders. The Company is a tax-resident in Cyprus and managed and controlled from Cyprus and the new CFC rules shall not directly apply to the Group in relation to any of its non-Russian affiliates. The CFC rules may apply to Russian tax-resident controlling Shareholders of the Company, where such Shareholder controls more than 25% (or 10% where all Russian tax-resident Shareholders together control more than 50%). The rules also introduce certain reporting requirements for such Russian tax-resident controlling Shareholders of the Company in relation to non-Russian affiliates of the Group where such Shareholders directly or indirectly control more than 10% of those affiliates.

Legal contingencies

The Group's business activities expose it to a variety of lawsuits and claims which are monitored, assessed and contested on an ongoing basis. Where management believes that a lawsuit or claim would result in the outflow of the economic benefits for the Group, a best estimate of such outflow is included in provisions in the consolidated financial statements (refer to note 20 of the consolidated financial statements). As at 31 December 2018, the amount of claims, where management were able to assess the outflows, were approximately USD31 million, as compared to USD36 million as at 31 December 2017.

In January 2013, the Company received a writ of summons and statement of claim filed in the High Court of Justice of the Federal Capital Territory of Nigeria (Abuja) by plaintiff BFIG Group Divino Corporation ("BFIG") against certain subsidiaries of the Company. It is a claim for damages arising out of the defendants' alleged tortious interference in the bid process for the sale of the Nigerian government's majority stake in the Aluminium Smelter Company of Nigeria Plc ("ALSCON") and alleged loss of the BFIG's earnings resulting from its failed bid for the said stake in ALSCON. BFIG sought compensatory damages in the amount of USD2.8 billion plus interest.

In January 2014, the court granted the Company's motion to join the Federal Republic of Nigeria and Attorney General of Nigeria to the case as co-defendants. The last hearing took place on 8 November 2017. The claim was struck out. BFIG may appeal.

Based on a preliminary assessment of the claim, the Company does not expect the case to have any material adverse effect on the Group's financial position or its operations as a whole.

In January 2018, one of the Company's subsidiaries, ALSCON and the Bureau of Public Enterprises of Nigeria entered into an addendum to the original sale and purchase contract regarding ALSCON on the key terms and conditions as disclosed in the announcement of the Company dated 19 January 2018.


TEAMING UP
FOR A SHARED
FUTURE
Light weight and durable
Non-corrosive

05 PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

Executive Directors

Evgenii Nikitin, aged 53 (Chief Executive Officer, Executive Director)

Mr. Nikitin was appointed as an executive Director on 28 June 2018. Mr. Nikitin was appointed as the Chief Executive Officer of the Company in November 2018. Mr. Nikitin was appointed as the acting CEO of the Company in May 2018 and RUSAL's Head of Aluminium Division in January 2014. Prior to that, he held the positions of director of Aluminium Division East since October 2013. Prior to that appointment Mr. Nikitin was the managing director of KrAZ, one of the world's largest aluminium production facilities. From 2008 to 2010, he was managing director of SAZ after beginning his career with the Group as a pot operator in 1993.

Mr. Nikitin was born on 11 March 1966. He graduated from the Moscow State Technical University of Civil Aviation in 1989 and from Lomonosov Moscow State University with a master's degree in business management (MBA) — production systems in 2009.

Save as disclosed in this Annual Report, Mr. Nikitin was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders.

Evgeny Kuryanov, aged 38 (Executive Director)

Mr. Kuryanov was appointed as an executive Director with effect from 14 February 2019. Mr. Kuryanov was born on 10 June 1980. He graduated from Irkutsk State Technical University with Metallurgy of Non-Ferrous Metals (cum laude). From February 2000 to May 2004, Mr. Kuryanov was the salt operator and calcination operator of RUSAL Bratsk. From August 2004 to November 2005, he was the salt operator of the reduction area of RUSAL Krasnoyarsk. From November 2005 to August 2010, he was the potline supervisor/senior potline supervisor of RUSAL Krasnoyarsk. From June 2010 to December 2015, he was the head of reduction area of RUSAL Krasnoyarsk. From December 2015 to August 2016, he was the general director of Shelekhov branch of RUSAL Bratsk, since September 2016 he has served as the managing director of RUSAL Krasnoyarsk.

Save as disclosed in this Annual Report, Mr. Kuryanov was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Evgenii Vavilov, aged 34 (Executive Director)

Mr. Vavilov was appointed as an executive Director on 28 June 2018. Mr. Vavilov graduated from the Siberian Federal University, program of study "Machines and technologies of foundry production". Since November 2013, Mr. Vavilov has been the senior master of the foundry directorate of JSC "RUSAL Krasnoyarsk". From September 2010 to November 2013, Mr. Vavilov was the master of production technology of the foundry directorate of JSC "RUSAL Krasnoyarsk". Mr. Vavilov was the master of DplP shift of the foundry directorate of JSC "RUSAL Krasnoyarsk" from November 2009 to August 2010, the acting master of the shift of the foundry directorate of JSC "RUSAL Krasnoyarsk" from April 2009 to October 2009, and the foundry man of non-ferrous metals of the foundry directorate of JSC "RUSAL Krasnoyarsk" from August 2007 to March 2009. Under the leadership of Mr. Vavilov, projects such as "Reducing the formation of process waste from aircraft No. 16 in LO No. 1 at JSC "RUSAL Krasnoyarsk" and "Increasing the release of alloys during the overhaul of the M10 mixer from 3 to 4 melts" were launched and implemented.

Save as disclosed in this Annual Report, Mr. Vavilov was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Vladislav Soloviev (Executive Director)
(Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 24 May 2018, Mr. Soloviev resigned as a Director with effect from 28 June 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Siegfried Wolf (Executive Director)
(Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 24 May 2018, Mr. Wolf resigned as a Director with effect from 28 June 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Sergei Popov (Executive Director)
(Ceased to be a Director with effect from 14 February 2019)

As referred to in the announcement of the Company dated 15 February 2019, Mr. Popov resigned as a Director with effect from 14 February 2019. Reference may be made to his profile information in the Company's announcement dated 28 June 2018.

Non-executive Directors

Marco Musetti, aged 49 (Non-executive Director)

Mr. Musetti was appointed as a member of the Board with effect from 15 December 2016.

Mr. Musetti has also been serving as a member of the board of directors of Sulzer AG since 2011 and on the board of directors of Schmolz + Bickenbach AG since 2013.

From 2007 until April 2018, Mr. Musetti was managing director investments at Renova Management AG, based in Zurich, Switzerland. Mr. Musetti was a member of the board of directors of CIFC Corp. from January 2014 to November 2016. Mr. Musetti was chief operating officer and deputy chief executive officer of Aluminium Silicon marketing (Sual Group) from 2000 to 2007, head of metals and structured finance desk for Banque Cantonale Vaudoise from 1998 to 2000, and deputy head of metals desk for Banque Bruxelles Lambert from 1992 to 1998.

Mr. Musetti holds a Master of Science in Accounting and Finance from the London School of Economics and Political Science, United Kingdom, and a Major degree in Economics from University of Lausanne, Switzerland.

Save as disclosed in this Annual Report, Mr. Musetti was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Vyacheslav Solomin, aged 44 (Non-executive Director)

Mr. Solomin was appointed as a non-executive Director on 28 June 2018. Mr. Solomin holds the position of the chief operating officer of En+ since October 2017. Between May 2018 and October 2018, Mr. Solomin also served as chief executive officer of En+ . Between June 2014 and November 2018, Mr. Solomin has also held the position of chief executive officer of EuroSibEnergo (Russia). At EuroSibEnergo, Mr. Solomin was responsible for achieving both current and long term targets for efficiency of the power business, and the development and execution of the company's strategy as producer of clean energy. From 2007 to 2014, he held various director positions within the En+ group, and also served as a first deputy chief executive officer and chief financial officer at EuroSibEnergo where he was responsible for all aspects of the financial performance of the company, corporate finance and for overseeing the human resources and legal departments. Prior to joining En+ group, from 2005 to 2007, Mr. Solomin held various positions, including chief financial officer, at Inter RAO. Between 1996 and 2005, Mr. Solomin held various managing positions at PricewateehouseCoopers Audit business in Vladivostok, Moscow and Los Angeles, the United States.

Mr. Solomin graduated Summa Cum Laude from the Far Eastern State University Vladivostok with a Diploma in International Economic Relations and Summa Cum Laude from the University of Maryland University College with a Diploma in Science.

Save as disclosed in this Annual Report, Mr. Solomin was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Timur Valiev, aged 38 (Non-executive Director)

Mr. Valiev was appointed as a non-executive Director on 28 June 2018. Mr. Valiev joined En+ group as general counsel in July 2013. Mr. Valiev is in charge of managing court activities, claims and contracting, legal support of merger and acquisition projects and creation of joint ventures. Mr. Valiev was a director of En+ from June to December 2018. Since 2013 Mr. Valiev has been a member of the board of directors of JSC Irkutskenergo. From 2009 to 2013 Mr. Valiev served as director for international projects and mergers and acquisitions at Basic Element Limited. Prior to joining Basic Element Limited, Mr. Valiev worked at international law firm Dewey & LeBoeuf, the legal department of TNK-BP, and at a number of Russian consulting firms.

Mr. Valiev graduated with Honors from the Moscow State University with a degree in law. He also undertook postgraduate studies there.

Save as disclosed in this Annual Report, Mr. Valiev was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Oleg Deripaska (Non-executive Director) (Ceased to be a Director with effect from 25 May 2018)

As referred to in the announcement of the Company dated 25 May 2018, Mr. Deripaska resigned as a Director with effect from 25 May 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Maxim Sokov (Non-executive Director)
(Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 28 June 2018, Mr. Sokov resigned as a Director with effect from 28 June 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Daniel Lesin Wolfe (Non-executive Director)
(Ceased to be a Director with effect from 10 April 2018)

As referred to in the announcement of the Company dated 11 April 2018, Mr. Wolfe resigned as a Director with effect from 10 April 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Dmitry Afanasiev (Non-executive Director)
(Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 28 June 2018, Mr. Afanasiev resigned as a Director with effect from 28 June 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Ekaterina Nikitina (Non-executive Director) (Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 28 June 2018, Ms. Nikitina resigned as a Director with effect from 28 June 2018. Reference may be made to her profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Gulzhan Moldazhanova (Non-executive Director) (Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 28 June 2018, Ms. Moldazhanova resigned as a Director with effect from 28 June 2018. Reference may be made to her profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Ivan Glasenberg (Non-executive Director)
(Ceased to be a Director with effect from 10 April 2018)

As referred to in the announcement of the Company dated 11 April 2018, Mr. Glasenberg resigned as a Director with effect from 10 April 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Maksim Goldman (Non-executive Director)
(Ceased to be a Director with effect from 10 April 2018)

As referred to in the announcement of the Company dated 11 April 2018, Mr. Goldman resigned as a Director with effect from 10 April 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Olga Mashkovskaya (Non-executive Director)
(Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 28 June 2018, Ms. Mashkovskaya resigned as a Director with effect from 28 June 2018. Reference may be made to her profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Independent non-executive Directors

Elsie Leung Oi-sie, aged 79 (Independent non-executive Director)

Dr. Leung was appointed as a member of the Board on 30 November 2009. From 1997 to 2005 Dr. Leung was the Secretary for Justice of the Hong Kong Special Administrative Region, as well as a member of the Executive Council of Hong Kong. Dr. Leung was admitted as a solicitor of the Supreme Court of Hong Kong in 1968. She was a partner of P. H Sin & Co., a Hong Kong law firm, which amalgamated with the law firm Iu, Lai & Li Solicitors & Notaries in 1993. Dr. Leung was a senior partner with Iu, Lai & Li Solicitors & Notaries from 1993 to 1997. In 2006, she resumed practice at Iu, Lai & Li Solicitors & Notaries. Dr. Leung has served on several government boards and committees, including the Independent Police Complaints Council, Equal Opportunities Commission, Social Welfare Advisory Committee and Inland Revenue Board of Review. Dr. Leung was appointed as a Delegate of the People's Congress of Guangdong Province in 1989. In 1993, she was appointed as a Delegate of the 8th National People's Congress as well as a Hong Kong Affairs Adviser. Since 2006 she has been the deputy director of the Hong Kong Basic Law Committee of the Standing Committee of the National People's Congress of the People's Republic of China. Dr. Leung was born in 1939. Dr. Leung is a qualified Solicitor in England and Wales and obtained a Master of Law degree from the University of Hong Kong in 1988. Dr. Leung was appointed as an independent non-executive director of China Resources Power Holdings Company Limited, a company listed on the Hong Kong Stock Exchange, with effect from 22 April 2010. Dr. Leung was an independent non-executive director of Beijing Tong Ren Tang Chinese Medicine Company Limited, a company listed on the Hong Kong Stock Exchange, from 7 May 2013 to 12 September 2017. Dr. Leung became an independent non-executive director of China Life Insurance Company Limited, a company listed on the Hong Kong Stock Exchange, Shanghai Stock Exchange and New York Stock Exchange, with effect from 20 July 2016, and was appointed as an independent non-executive director of PetroChina Co. Ltd., a company listed on the Hong Kong Stock Exchange, Shanghai Stock Exchange and New York Stock Exchange with effect from July 2017.

Dr. Leung was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Dmitry Vasiliev, aged 56 (Independent non-executive Director)

Mr. Vasiliev was appointed as a member of the Board with effect from 26 June 2015. He is currently the managing director of the Institute of Corporate Law and Corporate Governance (Moscow, Russia) and serves on the supervisory board of the Non-Commercial Partnership "National Pension Association". He previously served as a member of the board of directors of more than 20 Russian and foreign companies and funds, including JSC "Avtokran" (2010–2013), JSC "Mosenergo" (2003–2006), JSC "Gazprom" (1994–1995) and Investment Fund "SICAF-SIF BPT ARISTA S.A." (Luxembourg) (2009).

Mr. Vasiliev has been the managing director of the Institute of Corporate Law and Corporate Governance since April 2009. Mr. Vasiliev has served on the supervisory board of the Non-Commercial Partnership "National Pension Association" since December 2013. He served on the board of directors of the U.S.-Russia Foundation for Economic Advancement and the Rule of Law (USRF) from 13 January 2012 until 4 December 2015. He served as independent non-executive director of the supervisory board of JSC "RKS - Management" from 28 June 2013 until 31 December 2015 and again from 22 November 2017 until 28 April 2018, and served as independent non-executive director of the supervisory board of the LLC "RKS – Holding" from 28 June 2013 until 28 April 2018.

From January 2007 to April 2009, Mr. Vasiliev was the managing director of JP Morgan PLC (London, UK) (investment banking for Russia/CIS countries). From 2002 to 2007, he was the first deputy of general director (CEO) on Strategy and Corporate Governance of JSC "Mosenergo" (Moscow, Russia). From 2001 to 2003, he was a senior researcher in the area of state governance and anticorruption measures (in particular, research on risks of corruption and conflict of interest during bankruptcy proceedings in Russia) of Carnegy Center (Moscow). From 1999 to 2003, he was the chairman of the board of directors of the Association for Protection for the Investors Rights (API) (Moscow, Russia). From 2000 to 2002, he was the executive director of the Institute of Corporate Law and Corporate Governance (Moscow, Russia). From 1994 to 1996, he was first the deputy chairman and executive director of the Federal Commission for the Securities Market of the Russian Federation (FCSM) and then the chairman from 1996 to 2000. From 1991 to 1994, he was the deputy chairman of the Russian Federation State Property Committee (Ministry of Privatization). In 1991, he was the deputy chairman of St-Petersburg's Property Fund (St-Petersburg, Russia). From 1990 to 1991, he was the director of the Privatization Department of the Committee of the Economic Reform of St. Petersburg, Mayor Office. From 1985 to 1990 he was a junior researcher of the Academy of Science of USSR (Leningrad, USSR).

Mr. Vasiliev graduated from the Leningrad Institute for Finance and Economics (Leningrad, USSR) in 1984. He also completed the International Institute for Securities Market Development: the program of comprehensive professional panels and workshops regarding the development and regulation of securities market (Washington, DC, USA) in 1994. In 2007, he obtained the status of "FSA approved person for Investment Advisory" by passing the exam of the Securities & Investment Institute (London, UK). Mr. Vasiliev has two state awards of the Russian Federation: the Medal "For the Service to the Motherland", level II (1995) and the Medal "To 850 years of Moscow" (1997).

Mr. Vasiliev was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Bernard Zonneveld, aged 62 (Independent non-executive Director; Chairman with effect from 6 March 2019)

Mr. Zonneveld was appointed as a member of the Board with effect from 24 June 2016, and was appointed as Chairman of the Board with effect from 6 March 2019.

Since February 2017, Mr. Zonneveld has been non-executive partner of Capitalmind, a corporate finance advisory firm of the Netherlands.

From August 2014 until 1 January 2015, Mr. Zonneveld served as the head of ING Eurasia at ING Bank's Commercial banking division in Amsterdam. In May 2007, Mr. Zonneveld was appointed as managing director/global head of structured metals & energy finance at ING Bank's Commercial banking division in Amsterdam. Mr. Zonneveld joined ING Group in 1993 and since then he has held various senior positions, including managing director/global co-Head of commodities group, managing director/global head of structured commodity finance and product development and director/head of structured commodity & export finance. He has served as chairman of the Netherlands-Russian Council for Trade Promotion, a member of the Dutch Trade Board, a member of the Russian committee and a member of the board of the Netherlands-Ukraine Council for Trade Promotion. He holds a master's degree in business law from Erasmus University in Rotterdam.

Mr. Zonneveld was an independent non-executive director of Vimetco N.V., a company whose global depositary receipts are listed on the London Stock Exchange, from July 2007 to June 2013.

Mr. Zonneveld was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company.

Maxim Poletaev, aged 48 (Independent non-executive Director)

Mr. Poletaev was appointed as a member of the Board with effect from 14 February 2019.

From 1995 to 2000, Mr. Poletaev was the head of resources allocation and securities management division and the head of the analysis and marketing division in the Severny Bank of Sberbank of Russia. From 2000 to 2002, he was the deputy chairman of the executive board of the Yaroslavl Bank of OJSC Sberbank of Russia. From 2002 to 2009, he was the chairman of the board of Baikal Bank of OJSC Sberbank of Russia. In 2009, Mr. Poletaev was the vice-president and director of the Corporate Development Department of Moscow Bank of OJSC Sberbank of Russia. From 2009 to 2013, he was the vice-president and chairman of Moscow Bank of OJSC Sberbank of Russia. From 2013 to 2018, he was a member and the first deputy chairman of the executive board of PJSC Sberbank. Since 2018, he has served as adviser to the chairman of the executive board of PJSC Sberbank. Mr. Poletaev graduated from Yaroslavl State University with diploma with Honors in accounting, control and analysis.

Mr. Poletaev was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company.

Randolph N. Reynolds, aged 77 (Independent non-executive Director)

Mr. Reynolds was appointed as a member of the Board with effect from 14 February 2019.

Mr. Reynolds is a co-founder and principal of Reynolds Development.

Mr. Reynolds served as a vice chairman and executive officer and was a member of the board of directors of Reynolds Metals Company. He was also a member of the office of the chief executive and served on Reynolds Metals Company's strategic guidance committee and on the boards of directors of a number of subsidiary companies.

Mr. Reynolds currently serves as a trustee of the Richard S. Reynolds Foundation and as its vice president/treasurer.

In 1969, Mr. Reynolds joined Reynolds Metals Company as a salesman in the metal field sales department in Louisville, Kentucky. In 1972, he began his career as national accounts manager for the chemical sales division. He was assigned the additional responsibility of worldwide sales in 1974 and was named general manager of the division in 1977. He was elected president of Reynolds International, Inc. in 1980. Mr. Reynolds previously served on the boards of First Union National Bank, Ma'aden Aluminium Company and Novolipetsk Steel (NLMK). He was the chairman of the board of the Defense Enterprise Fund and the co-chairman of the board of Junior Achievement of Russia. He was also a member of the advisory board of the Company. Mr. Reynolds graduated from Bellarmine University.

Mr. Reynolds was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company.

Kevin Parker, aged 59 (Independent non-executive Director)

Mr. Parker was appointed as a member of the Board with effect from 14 February 2019.

Mr. Parker is the managing partner of Sustainable Insight Capital Management, the New York based global asset-management firm that launched in 2013. Mr. Parker has over 35 years of investment experience. Prior to that, Mr. Parker was a member of the management board of Deutsche Bank for 10 years and the former global head of Deutsche Asset Management from 2004 to 2012.

He is also the owner of Chateau Maris, named one of the five most environmentally friendly wineries in the world by Wine Spectator Magazine.

Mr. Parker received a BS Finance from New York University in 1981. After attending New York University, he joined EF Hutton and later Morgan Stanley where he was appointed head of the firm's equity derivatives business in Japan and Asia in 1988, based in Tokyo. He became a managing director in 1991 and held a variety of positions including head of Asian derivatives, global head of equity derivatives trading and chief information officer. He joined Deutsche Bank in June of 1997, serving in a variety of roles before moving to Deutsche Asset Management as its head in 2004.

Mr. Parker was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company.

Christopher Burnham, aged 62 (Independent non-executive Director)

Mr. Burnham was appointed as a member of the Board with effect from 14 February 2019.

Mr. Burnham has served as a member of the board of directors of En+ since 28 January 2019 as an independent director. Mr. Burnham is the chairman and chief executive officer of Cambridge Global Capital, LLC, headquartered in Washington, D.C. He cofounded Cambridge after a distinguished career in government, diplomacy, banking, and private equity.

Mr. Burnham is a globally recognized expert in the implementation of accountability and transparency, and the implementation of best practice in government, corporations, and inter-governmental organizations, having served as Under Secretary General for Management of the United Nations, Under Secretary of State for Management (acting), and Assistant Secretary of State for Resource Management and chief financial officer of the U.S. Department of State.

At the U.S. Department of State, he built and led the implementation of performance measures down to the mission level while modernizing the global reporting system across 270 offices in 170 countries. As chief operating officer of the United Nations and a member of the cabinet of Kofi Annan, he instituted sweeping governance reforms including the establishment of the first United Nations Ethics Office, the first United Nations Independent Audit Advisory Committee, the adoption of new International Public Sector Accounting Standards, the first comprehensive consolidated Annual Report in the history of the United Nations, and a new whistleblower protection policy that received independent recognition as the "gold standard." He also implemented best-in-class financial disclosure reporting by senior United Nations officials and staff based on the U.S. government model, a first ever sexual harassment policy, and initiated a taskforce to investigate corruption within United Nations procurement that led to prosecutions and convictions by the U.S. District Attorney's office of the Southern District of New York.

Mr. Burnham has been confirmed twice by the United States Senate. In addition, Mr. Burnham is the former vice chairman and managing director of Deutsche Asset Management where he co-founded and led Deutsche Bank's direct private equity group, RREEF Capital Partners, the bank's reentry into private equity after an eight-year absence. He also chaired Deutsche Bank's asset management governance committee in Germany. A combat veteran of the United States Marine Corps (Reserve) who retired at the rank of Lieutenant Colonel, Mr. Burnham volunteered for active duty in 1990 and served as an infantry platoon commander in the Gulf War. He and his men were part of the lead Allied forces to reach and liberate Kuwait City. Since 2013, Mr. Burnham has served as chairman and chief executive officer of Cambridge Global Capital, a venture capital investment firm focused on opportunities in life sciences, cyber and data security, and artificial intelligence/data analytics. Mr. Burnham studied national security policy at Georgetown's National Security Studies Program, and is a graduate of Washington and Lee University, and Harvard University, where he earned an M.P.A. in 1990.

Mr. Burnham was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company.

Nick Jordan, aged 59 (Independent non-executive Director)

Mr. Jordan was appointed as a member of the Board with effect from 14 February 2019.

Mr. Jordan has served as a member of the board of directors of En+ since 28 January 2019 as an independent director. Mr. Jordan has more than 30 years' experience in senior positions in leading global financial institutions. He was executive chairman of Big Un Limited from 28 May 2018 until October 2018 and served as its non-executive chairman from 22 March 2018 until 28 May, 2018. He stepped up to executive chairman to help restructuring the business given a series of reporting and accounting issues which eventually led to the company being placed in administration.

Previously, he served as chairman of supervisory board at 4finance Group S.A. (part of the Finstar Group) having earlier been the chief executive officer at Finstar Financial Group (another subsidiary) from 2015 to 2017.

Earlier, he was the co-chief executive officer of Goldman Russia at Goldman Sachs until 2015. Prior to this, he served as the chief executive officer of Russia & the Commonwealth of Independent States at UBS Group AG from June 2010.

Before this, he worked briefly for Lehman Brothers and Nomura focused on emerging markets.

He worked for more than 10 years with Deutsche Bank eventually becoming Vice Chairman and Head of Emerging Markets. Prior to that, Mr. Jordan was CEO of Morgan Grenfell Securities Russia, responsible for all Securities Trading, Capital Markets and Investment Banking.

He joined Manufacturers Hanover in 1985 and developed an international career in the firm that was first acquired by Chemical Bank.

He then moved to London where he became the Vice President in the London office and Head of the Emerging Markets Fixed Income Trading. Shortly after the firm was acquired by Chase, he left to join Deutsche Bank.

Mr. Jordan started his banking career in the Management Training Program at Bank of New York. Mr. Jordan graduated from Boston University with a BA in political science.

Mr. Jordan was and is independent from, and not related to, any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company.

Philippe Bernard Henri Mailfait (Independent non-executive Director) (Ceased to be a Director with effect from 26 January 2019)

As referred to in the announcement of the Company dated 28 January 2019, Mr. Mailfait resigned as a Director with effect from 26 January 2019. Reference may be made to his profile information in the Company's announcement dated 28 June 2018.

Jean-Pierre Thomas (Independent non-executive Director) (Ceased to be a Director with effect from 26 January 2019)

As referred to in the announcement of the Company dated 28 January 2019, Mr. Thomas resigned as a Director with effect from 26 January 2019. Reference may be made to his profile information in the Company's announcement dated 28 June 2018.

Mark Garber (Independent non-executive Director) (Ceased to be a Director with effect from 28 June 2018)

As referred to in the announcement of the Company dated 26 June 2018, Mr. Garber resigned as a Director with effect from 28 June 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Matthias Warnig (Independent non-executive Director) (Ceased to be a Director with effect from 31 December 2018)

As referred to in the announcement of the Company dated 27 December 2018, Mr. Warnig resigned as a Director with effect from 31 December 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

Philip Lader (Independent non-executive Director) (Ceased to be a Director with effect from 10 April 2018)

As referred to in the announcement of the Company dated 11 April 2018, Mr. Lader resigned as a Director with effect from 10 April 2018. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2017.

The table below provides membership information of the current committees on which each Board member serves.

Board Committee Directors	Audit Committee	Corporate Governance & Nomination Committee	Remuneration Committee
Dr. Elsie Leung Oi-sie	X		C
Mr. Dmitry Vasiliev	X	C	X
Mr. Bernard Zonneveld		X	
Mr. Marco Musetti			
Mr. Evgenii Nikitin			
Mr. Evgenii Vavilov			
Mr. Vyacheslav Solomin			
Mr. Timur Valiev			
Mr. Evgeny Kuryanov			
Mr. Maxim Poletaev	C		
Mr. Randolph N. Reynolds		X	X
Mr. Kevin Parker	X		
Mr. Christopher Burnham		X	
Mr. Nick Jordan			X

Notes:-

C – Chairman X – member

* – These committees also consist of other non-Board members.

	Health, Safety and Environmental Committee*	Standing Committee	Marketing Committee*	Norilsk Nickel Investment Supervisory Committee	Compliance Committee
	X				
		C		X	X
		X	X	X	
	X				
		X		X	
				C	
	C				X
					C
	X				X

Senior Management (the composition as at 31 December 2018)

Vladislav Soloviev, aged 45 (President)

Mr. Soloviev was appointed as the President of the Company and ceased to be the Chief Executive Officer of the Company with effect from 15 March 2018. In April 2010, he was appointed as the First Deputy Chief Executive Officer and executive Director of the Company. In November 2014, Mr. Soloviev was appointed as the Chief Executive Officer of the Company and ceased to be the First Deputy Chief Executive Officer of the Company. Mr. Soloviev ceased to be a member of the Board of the Company with effect from 28 June 2018.

From 2008 until April 2010, Mr. Soloviev was chief executive officer of En+ Management LLC. From 2007 to 2008, Mr. Soloviev was the head of the Company's Finance Directorate following the Company's formation. Before that, he was the director of the Company's accounting department. Prior to joining the Company, Mr. Soloviev was deputy director of the department of tax policy and worked as adviser to the Minister for taxes of the Russian Federation, where he was responsible for implementing amendments to tax laws. From 1994 to 1998, he held various top positions in UNICON/MC Consulting and was in charge of auditing oil and gas companies. From 1 January 2008 until January 2015, Mr. Soloviev was a director of En+. Mr. Soloviev serves on the board of directors of Norilsk Nickel. Mr. Soloviev was appointed as the chief executive officer and the chairman of the executive committee of RUSAL Global in 2014-2018. Mr. Vladislav Soloviev served as a member of the board of directors of En+ from 1 January 2018 until 30 April 2018.

Mr. Soloviev was born in 1973. In 1995, he graduated from the Higher School of the State Academy of Management with Honors, and in 1996, he graduated from the Stankin Moscow Technical University. In 2004, Mr. Soloviev graduated from the Finance Academy under the Government of the Russian Federation and was awarded an MBA degree by Antwerp University in Belgium.

Save as disclosed in this Annual Report, Mr. Soloviev was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Alexandra Bouriko, aged 41 (Chief Financial Officer)

Alexandra Bouriko has been RUSAL's Chief Financial Officer since October 2013. She is responsible for the financial planning, auditing and preparation of financial reports and the execution of the Company's investment programs. Alexandra Bouriko served as the Chief Executive Officer of the Company from 15 March 2018 until 23 May 2018.

From June to October 2013, Alexandra Bouriko served on the board of RUSAL.

From November 2012 to October 2013, Alexandra Bouriko was the deputy chief executive officer of En+. She was responsible for En+ Group operational management, enhancement of business effectiveness and improvement of the Group's financial performance.

Prior to joining En+ Group, Alexandra Bouriko spent 16 years with KPMG in Russia and Canada; and held the position of Partner at KPMG since 2005.

At KPMG, Alexandra Bouriko worked with major Russian and international companies with focus on metals, mining, oil and gas industries. Alexandra played key roles in audits of IFRS, US GAAP and Russian GAAP financial statements of major Russian groups. Alexandra was in charge of IPO planning and preparation of major Russian metals and mining companies on London Stock Exchange and Hong Kong Stock Exchange.

Alexandra graduated from the economic faculty of the Lomonosov Moscow State University. She is a member of the Canadian Institute of Chartered Accountants and the American Institute of Certified Public Accountants.

Save as disclosed in this Annual Report, Ms. Bouriko was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Alexey Arnautov, aged 44 (Director for new projects)

Alexey Arnautov was appointed as the Head of New Projects Directorate in February 2014.

Prior to that appointment, Mr. Arnautov held of the position of director of the Aluminium Division West since July 2010. From March 2009 until July 2010 Mr. Arnautov assumed the role of acting director of the Aluminium Division of the Moscow branch of RUSAL Global. Prior to that appointment, Mr. Arnautov was financial director of the Aluminium Division from April 2006. From

November 2004 until April 2006, he was the director of the financial department of the ECD. From 1998 to 2000, he held several positions in the financial services in Sibneft Oil Company. He began his professional career in Noyabrskneftegaz in the Far North of Russia in 1996.

Born in 1974, Mr. Arnautov graduated from the Donbass State Academy of Construction and Architecture with a degree in engineering and construction in 1996. He received a degree with Honors from the International Academy of Entrepreneurship in 1998 and an MBA in Economics from the Institute of Business and Economics at California State University in 2004.

Mr. Arnautov was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Roman Andryushin, aged 44 (Director, Sales and Marketing)

Roman Andryushin was appointed as director for sales and marketing in May 2018.

From February 2014 until April 2018 Roman Andryushin was the Head of Russia and CIS Sales Directorate.

Roman Andryushin was responsible for marketing and sales of a wide range of the Company's products in Russia and CIS, as well as for incentivising domestic industries to grow their aluminium consumption and search of new sales markets, including development of new products by the Company.

From 2007 until 2014, Roman worked in capacity as the chief operating officer of RUSAL Marketing GmbH, RUSAL's Swiss office responsible for international sales of the Company's metal. In this position he was involved in the creation of an efficient sales organization, relations with key customers, optimization of supply chain, increase of value-added products sales and immediately responsible for operational management of RUSAL's export sales.

From 2003 to 2007, Roman Andryushin worked as the chief financial officer of ZAO "Komi Aluminium" (which at the time was a joint venture of RUSAL and UAL for bauxite mining and alumina production), chief financial officer of the Rolling Division of RUSAL and chief financial officer of Alcoa Russia.

From 1996 to 2002, Mr. Andryushin held a few key positions with the Belaya Kalitva metallurgical complex.

Roman Andryushin graduated with Honors from the Novocherkassk State technical University, Economics and Management Department. Later he obtained an EMBA degree from Lorange Institute of Business, Switzerland and an MBA from University of Wales, Great Britain. He also holds a Ph.D. in economics.

Mr. Andryushin was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Dmitry Bondarenko, aged 40 (Director, Production Development)

Dmitry Bondarenko has been RUSAL's director for production development since 2010. He oversees the development and introduction of RUSAL's production system. He is also responsible for organization of production and logistics as well as for the quality management system.

Between 2009 and 2010, Dmitry Bondarenko was head of the production department of RUSAL's Aluminium Division. From 2001 to 2009, Mr Bondarenko was the lead expert at GAZ Group Managing Company LLC, where he was in charge of introducing the Toyota Production System.

Dmitry Bondarenko graduated with Honors from the Nizhny Novgorod State Technical University, majoring in Design of Technical and Technological Complexes.

Mr. Bondarenko was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Victor Mann, aged 60 (Technical Director)

Victor Mann has been technical director of the Company since 2005, in charge of research and development, engineering, design, process management, technical development and modernization of production facilities, and start-up and commissioning of green-field and upgraded capacities.

From 2002 to 2005, Victor Mann was head of RUSAL's Engineering and Technology Center.

From 1998 to 2002, he was deputy technical director of the Krasnoyarsk smelter.

From 1991 to 1998, Victor Mann was promoted from design engineer to head of automation at the Krasnoyarsk smelter.

Victor Mann was awarded the Order of Merit for the Fatherland and is on the list of Honorable Metallurgists of Russia.

Mr. Mann was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Igor Lerner, aged 40 (Director, Control, Internal Audit and Business Coordination)

Igor Lerner was appointed as RUSAL's director for control, internal audit and business coordination in December 2017. He is responsible for the internal control system and raising the efficiency of business processes within the Company. He ensures the independent analysis of critical issues of the Company's operations for reporting to CEO and top management. He is also responsible for compliance with the requirements of the regulators.

Igor Lerner joined En+ Group in 2008 as director of audit at one of the En+ subsidiaries - Central European Aluminum Company. Since 2011, Igor Lerner has been in charge of the entire Group's internal audit, control and revision, and risk management functions; he was appointed the Group's ethics officer in 2013.

From 2007 until 2008, he served in the external and internal audit divisions of PricewaterhouseCoopers and Mechel, Moscow, Russia.

Between 2001 and 2006, he worked in the finance and taxes department of the oilfield service division of YUKOS.

Mr. Lerner graduated from the State University of Management receiving a Master's degree Diploma with Honors, Faculty of Management in Energy Industry and then in 2003 he earned PhD in Economics, Faculty of Institutional Economics.

Mr. Lerner was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Yakov Itskov, aged 52 (Head of Alumina Division)

Yakov Itskov was appointed as RUSAL's head of Alumina Division in September 2014.

From January 2013 until September 2014, Mr. Itskov was the Company's director of procurement and logistics.

Prior to that, Yakov Itskov worked as a head of RUSAL's International Alumina Division from February 2010. The International Alumina Division included the western bauxite mining and alumina production facilities: the Guineabased Friguia Alumina Refinery and Compagnie des Bauxites de Kindia, the Bauxite Company of Guyana, Aughinish Alumina in Ireland, Eurallumina in Italy, Alpart and Windalco in Jamaica and Queensland Alumina in Australia. The key objective of the International Alumina Division was the mining of bauxite and production of high quality alumina for the Company's smelters and sales in the global market. This required considerable flexibility and an ability to meet each customer's specific demands.

Yakov Itskov became the first vice president of Russ-Neft in 2009 and held that position until 2010. From 2008 to 2009, he was general director of BazelDorStroy LLC and between 2007 and 2008 he was the general director of the project and construction company Transstroy LLC. He was also the managing director of Basic Element LLC from 2006 until 2007 and, prior to this, he was the general director of Soyuzmetallresurs CJSC from 2001 to 2006.

From 2000 to 2001, Mr. Itskov was the deputy commercial director of JSC Russian Aluminium.

Yakov Itskov holds a degree in Mining Machines and Complexes from Moscow State Mining University. He also holds a PhD in Economics.

Mr. Itskov was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Anton Yegorov, aged 45 (General Counsel)

Anton Yegorov joined RUSAL as general counsel in July 2018.

Generally, his responsibilities in the office include coordination of legal functions of the Group and also overall management of the Company's legal team.

Before Mr. Yegorov joined the Group, he was the vice-president, legal affairs in the multinational metallurgy company EVRAZ. Prior to that, he held the position of deputy chief executive officer, legal, corporate, international affairs of the Russian Post.

Before joining Russian Post, Mr. Yegorov spent 5 years with RUSAL in his role as the head of Russian and CIS legal affairs.

Anton Yegorov graduated from the Moscow State University as physicist and as a lawyer, holds a graduate studies diploma from the Institute of State and Law of the Russian Academy of Sciences and an Executive MBA diploma from IE Business School.

Mr. Yegorov was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Oleg Mukhamedshin, aged 45 (Director for Strategy, Business Development and Financial Markets)

Oleg Mukhamedshin was appointed as the director for strategy, business development and financial markets in 2012. Prior to his current position, Mr Mukhamedshin worked as the head of equity and corporate development, director for financial markets, and director for capital markets from 2007 to 2011.

Oleg Mukhamedshin is responsible for developing and implementing the Company's strategy covering mergers and acquisitions and growth projects, debt and equity capital markets, as well as maintaining investor relations.

From 2009 to 2011, he led the restructuring of RUSAL's USD16.6 billion debt and its USD2.2 billion IPO on the Hong Kong Stock Exchange and Euronext Paris in 2010. Under his leadership, RUSAL was the first company to launch a Russian Depository Receipts program.

From 2006 to 2008, Oleg Mukhamedshin was involved in the preparation and implementation of the Company's major mergers and acquisitions transactions, including the acquisition of a 25% stake in Norilsk Nickel, its merger with SUAL and Glencore's bauxite and alumina assets.

From August 2004 through to March 2007, Mr. Mukhamedshin was RUSAL's deputy chief financial officer, overseeing corporate finance.

From 2000 to August 2004, Oleg Mukhamedshin was director of the department for corporate finance.

Prior to joining RUSAL, Oleg Mukhamedshin worked in various executive roles in the corporate finance departments of leading Russian natural resources companies including TNK (now TNK-BP). Between 1999 and 2000, he was an advisor to the principal shareholder of the Industrial Investors Group. From 1994 to 1995, he worked with the investment bank PaineWebber to help establish the Russia Partners Fund, one of the first international direct investment funds in Russia.

Oleg Mukhamedshin was born in 1973.

Oleg Mukhamedshin graduated from the Moscow State University, Economics Department, with Honors.

Mr. Mukhamedshin was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Alexey Barantsev, aged 59 (Head of Engineering and Construction Business)

Alexey Barantsev has been in charge of RUSAL's Engineering and Construction Business since the end of May 2012. He is responsible for repair and maintenance activities across the Company's plants, management of construction, modernization and new technology implementation projects.

From 2008 to 2011, Alexey Barantsev held positions of general manager of Glavstroy-Management CJSC and TRANSSTROY Engineering & Construction Company Ltd.

In 2008, he was first deputy chief executive officer in production of Russian Machines OJSC.

In July 2007, Alexey was head of operational development and first deputy chairman of the management board GAZ Management Company LLC.

In January 2007, he was appointed head of auto-components division and production and restructuring director of GAZ Group, first deputy chairman of the management board GAZ Group Management Company LLC.

In mid-2006, he was transferred to the position of first deputy chairman of the management board - head of the Nizhny Novgorod unit of RusPromAvto Management Company LLC, which was subsequently renamed to GAZ Management company LLC.

In 2005, Mr. Barantsev graduated from the Russian Presidential Academy of National Economy and Public Administration and was awarded an MBA degree.

Since October 2005, he worked as deputy chief executive officer/executive director of RusPromAvto Management Company LLC.

In July 2002, he was appointed deputy chief executive officer GAZ OJSC, and a month later became chief executive officer of the plant.

In February 2002, he was appointed deputy chief executive officer for new construction projects of Russian Aluminium Management OJSC.

In July 2000, he was appointed managing director of the Bratsk aluminium smelter.

In August 1998, he was appointed executive director of the Krasnoyarsk aluminium smelter. One month later he became general manager of the smelter.

In February 1992, Alexey started his career at the Bratsk aluminium smelter as deputy head of procurement unit. Later he became deputy head of procurement for operations, Bratsk aluminium smelter. In 1994, he was transferred to the position of Head of Reduction Shop No. 2. In February, 1996 he was appointed technical director of the smelter.

In 1985, Alexey Barantsev graduated from the Irkutsk Technical University.

Mr. Barantsev was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Andrey Donets, aged 56 (Head of Downstream Division)

Andrey Donets was appointed as director of RUSAL's Downstream Division Director in January 2018. He is responsible for running the group of business units focused on value-added aluminium products manufacturing. The Downstream Division includes the foil, packaging, aluminium powders and wheels production facilities of the Company. Andrey Donets has extensive experience in metal production. Over the past 10 years, he headed various business units at Alcoa.

In 2008, he was appointed as the president of Alcoa Russia and chairman of the boards of Alcoa SMZ and Alcoa BK, where he was in charge of all Alcoa operations in Russia. In 2011, Andrey Donets was appointed as the president of the Alcoa Global Packaging Group, and in 2015 was nominated vice president of the Alcoa Global Medical Services.

Prior to joining Alcoa, Mr. Donets was chief executive officer of Rexam Russia (a leading global producer of aluminum beverage cans) and headed ROSTAR (Russia's largest producer of aluminum cans). In 1998, he was appointed sales & marketing director, and in 2000, as commercial director of the ROSTAR company (RUSAL subsidary). In 2004, he was appointed as deputy chief executive officer of RUSAL for the packaging business, Rostar chief executive officer and chairman of the board of directors of RUSAL Dmitrov.

Andrey Donets was born in Moscow in 1962. In 1985, he graduated from the First Moscow Medical Institute. In 1999, he earned his MBA at the Academy of the National Economy of the Government of Russia.

Mr. Donets was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Natalia Beketova, aged 45 (Director, Human Resources)

Natalia Beketova was appointed as the director of human resources in September 2015.

Her responsibilities include personnel management, developing the Company's talent pool in line with RUSAL's aims and objectives, and the creation of a candidate talent pool. She is also responsible for facilitating social and motivational programs for RUSAL employees.

Mrs. Beketova joined RUSAL from Procter&Gamble, where she held many senior positions during her 20 year tenure. From 2010 she was human resources director for Eastern Europe (Russia, Kazakhstan, Ukraine, and Belarus). From 2007 she was in charge of Procter&Gamble's training and development division for the CEEMEA region and was based in the company's European headquarters in Geneva.

Natalia Beketova graduated from Tula State Lev Tolstoy Pedagogical University with Honors.

Mrs. Beketova was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Vera Kurochkina, aged 47 (Director of Public Relations)

Ms. Kurochkina has been the director of the Public Relations Directorate of the Moscow Branch of RUSAL Global since late March 2007. She is responsible for the development and the implementation of the external and internal communications strategy of the Company and for establishing co-operational ties with industrial and non-commercial associations.

Ms. Kurochkina is also responsible for key media relations projects, event management, advertisements, charity and social programs. Since 10 January 2012, she has also been the deputy chief executive officer, public relations of Basic Element. Ms. Kurochkina had also been a member of the board of directors of Joint Stock Company Agency "Rospechat" from 22 June 2012 until 17 June 2013.

From 2006 to 2007, Ms. Kurochkina was the public relations director of "RUSAL Managing Company" LLC. Prior to 2006, she headed "RUSAL Managing Company" LLC's mass media relations department. From 2001 to 2003, she was the public relations and marketing director at LUXOFT, a large Russian software developer. From 2000 to 2001, Ms. Kurochkina managed a group of projects at Mikhailov & Partners, a strategic communications agency, and from 1998 to 2000, she was a marketing and communications manager at PricewaterhouseCoopers.

Ms. Kurochkina holds a Master's degree from the Peoples' Friendship University of Russia in Moscow, from which she graduated with Honors in 1993. She also holds a Master's degree from the Finance Academy of the Russian Government.

Save as disclosed in this Annual Report, Ms. Kurochkina was independent from and not related to any other Directors, members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Aleksey Gordymov, aged 46 (Director, Business Support)

Aleksey Gordymov was appointed as RUSAL's Head of Business Support in November 2017. In this position, Aleksey supervises supplies of RUSAL's operations and support of the sales team through streamlining logistics and transportation as well as deliveries of key raw materials and consumables.

Aleksey Gordymov worked as Deputy Head of Alumina Division from 2014 to 2017. From 2008 to 2014, he was the Head of Bauxite & Alumina Supply Department. Prior to that, Aleksey was the Head of Procurement in the International Alumina Division in Moscow's headquarters.

Between 2005 and 2008, Mr. Gordymov ran Alumina Company of Guinea in West Africa, Bauxite Company of Guyana and RUSAL Jamaica.

Aleksey Gordymov studied and majored in transportation, metals & mining and economics.

Mr. Gordymov was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial year.

Sergey Zakhartsev, aged 42 (Resource Protection Director)

Sergey Zakhartsev was appointed as RUSAL's Resource Protection Director in June 2017.

His responsibilities include management of activities to ensure the security of the Company, protect its resources, and organize response in cases of encroachment on the interests and resources of the Company; coordination of the development, implementation and control of measures aimed at the effective provision of the regime and protection at the Company's facilities, the introduction of systems of integrated technical protection of threats against facilities and protection regimes; and organization of systematic work to ensure the economic and information security of the Company, and its protect commercial secrets.

Sergey Zakhartsev was Resource Protection Deputy Director of Russian Machines Group from 2010 to 2017.

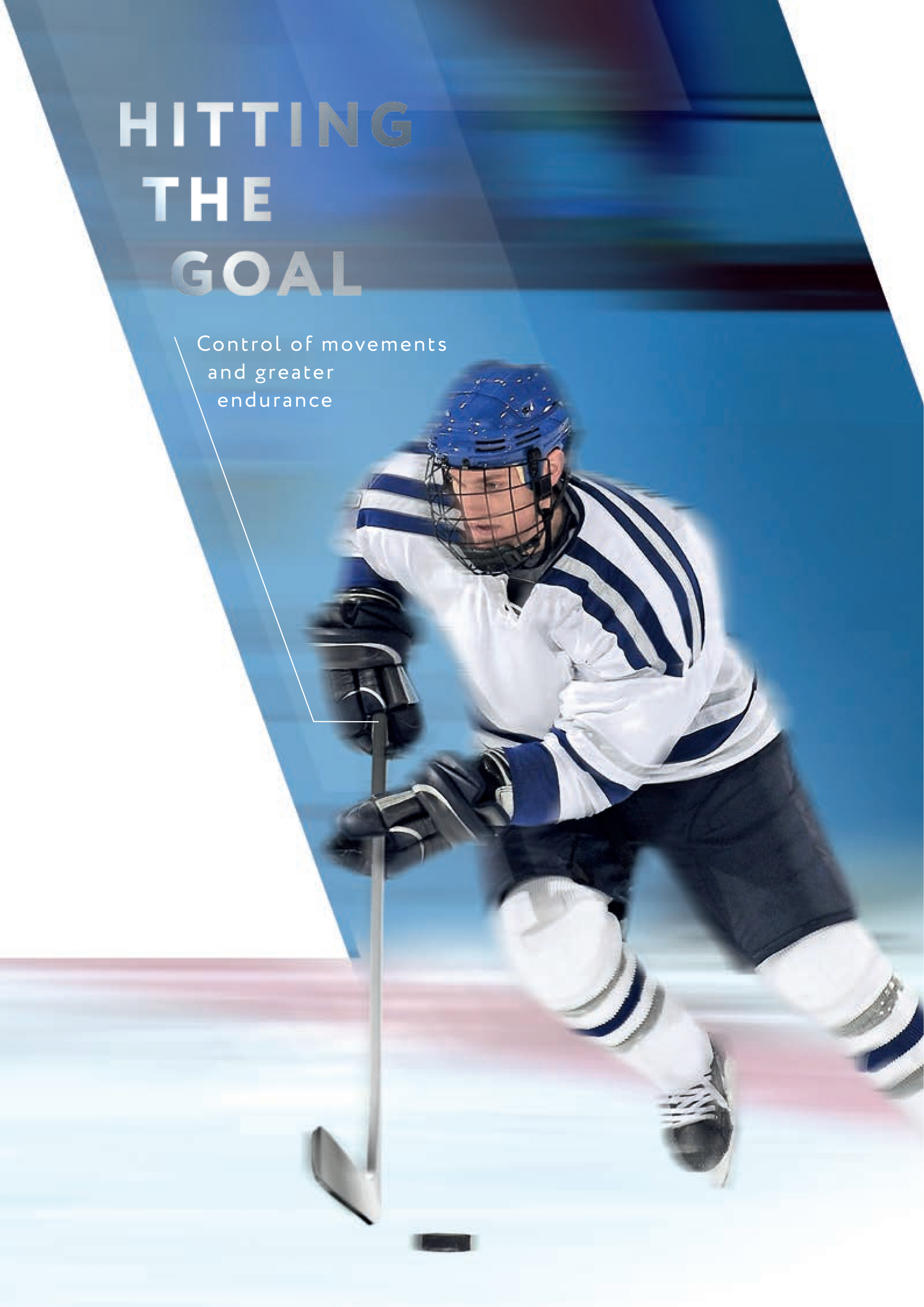
He was Deputy Head of the Inspectorate in The Federal Security Service of the Russian Federation from 1997 to 2010.

In 2002, he defended his thesis for the degree of Candidate of Legal Sciences on the topic "Listening to telephone conversations in operational search activities and criminal proceedings".

Mr. Zakhartsev was independent from and not related to the Directors, any other members of senior management, substantial Shareholders or controlling Shareholders of the Company as at the end of the financial-year.

HITTING THE GOAL

Control of movements and greater endurance



06 DIRECTORS' REPORT

DIRECTORS' REPORT

THE DIRECTORS ARE PLEASED TO PRESENT THE 2018 ANNUAL REPORT AND THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS OF THE RUSAL GROUP FOR THE YEAR ENDED 31 DECEMBER 2018.

1 Principal activities

The principal activities of the Group are the production and sale of the aluminium (including alloys and value-added products, such as aluminium sheet, ingot, wire rod, foundry aluminium alloy, aluminium billet and others). Within its upstream business, the Group has secured substantial supplies of bauxite and has the capacity to produce alumina in excess of its current requirements. The Company also holds strategic investments, including its investment in Norilsk Nickel and coal business. There has been no significant change in those activities throughout the financial year.

2 Financial summary

The results of the Group for the year ended 31 December 2018 are set out in the consolidated financial statements on pages 198 to 339.

3 Business Review

Please refer to the section headed "Business Overview" and "Management Discussion and Analysis" on pages 17 to 79 for further information on the review of the Group's business.

4 Dividends

No dividends were recommended or approved by the Board in 2018.

5 Reserves

The Directors propose to transfer the amount of USD1,134 million to reserves within the meaning of Schedule 4 to the Companies Ordinance (Chapter 622 of the Laws of Hong Kong). The amount of the reserves available for distribution to Shareholders as at 31 December 2018 was USD14,152 million.

6 Fixed assets

Information relating to significant changes in the fixed assets of the Company or of any of its subsidiaries that have occurred during the financial year is set out in note 13 to the consolidated financial statements.

7 Share capital

Share repurchases

Neither the Company nor any of its subsidiaries repurchased, sold or redeemed any of their securities during the financial year ended 31 December 2018.

Share issues

No Shares were issued/allotted by the Company during the financial year ended 31 December 2018.

8 General mandate granted to the Directors in respect of the issuance of Shares

There was no general mandate granted to the Directors to issue Shares in effect during the financial year.

9 Shareholders' agreements

(a) Shareholders' Agreement with the Company

The principal terms of this agreement are described in Appendix A.

At the time of entering of the Shareholders' Agreement with the Company, the parties to the agreement included the Major Shareholders, namely En+, SUAL Partners, Glencore and Onexim.

Following the Shareholding Changes during the year, the Shareholders' Agreement with the Company continues to be binding among En+, SUAL Partners and Glencore. The impact of the Shareholding Changes during the year to the Shareholders' Agreement with the Company is described in Appendix A.

(b) Shareholders' Agreement among Major Shareholders only

The Shareholders' Agreement among Major Shareholders only, which has not been amended since the Listing Date, sets out certain agreed matters between the Major Shareholders in relation to Board appointments, Board committees, voting, transfers of Shares and certain other matters. The principal terms of the Shareholders' Agreement among Major Shareholders only are described in Appendix B.

Following the Shareholding Changes during the year, the Shareholders' Agreement among Major Shareholders only continues to be binding among En+, Sual Partners and Glencore. The impact of the Shareholding Changes during the year to the Shareholders' Agreement among Major Shareholders only is described in Appendix B.

10 Management contracts

Other than the appointment letters of the Directors and the full-time employment contacts, the Company has not entered into any contract with any individual, firm or body corporate to manage or administer the whole or any substantial part of any business of the Company during the year.

11 Connected transactions

The transactions and arrangements summarized below were entered into by members of the Group with its connected persons (including their respective associates) prior to and during the financial year ended 31 December 2018, and are required to be disclosed by the Company in compliance with Rules 14A.49, 14A.71 and 14A.72 of the Listing Rules and, where applicable, were disclosed by the Company in accordance with the requirements of Chapter 14A of the Listing Rules.

Continuing connected transactions disclosed in the Director's report section of the Annual Report differ from the related party transaction disclosures included in note 5, note 6 and note 25 of the consolidation financial statements. Differences arise as the definition of continuing connected transactions does not include operations with Glencore or operations with associates of the Group, while these transactions are treated as related party transactions in the consolidated financial statements of the Group. Additionally, transactions that are considered immaterial and meet the definition of de minimis are not included in the disclosure of continuing connected transactions

The independent non-executive Directors consider that each of the transactions below have been entered into and are conducted:

(a) in the ordinary and usual course of business of the Group;

(b) on normal commercial terms or better; and

(c) in accordance with the relevant agreement governing them on terms that are fair and reasonable in the interests of the Company and its Shareholders as a whole.

The Company's auditors were engaged to report on the Group's continuing connected transactions for the year ended 31 December 2018 in accordance with the Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants. The Board confirmed that auditors have issued an unqualified letter in accordance with Rule 14A.56, containing their confirmation that nothing has come to their attention that caused them to believe that the continuing connected transactions as disclosed by the Group below (i) have not been approved by the Board; (ii) were not, in all material respects, in accordance with the pricing policies of the Group if the transactions involve the provision of goods or services by the Group; (iii) were not entered into, in all material respects, in accordance with the relevant agreement governing the transactions; and (iv) have exceeded the cap.

A Electricity and Capacity Supply Contracts

En+ is the Controlling Shareholder of the Company. Accordingly, the electricity and capacity supply and transmission contracts between members of the Group and companies controlled by En+ referred to below constituted continuing connected transactions for the Company under the Listing Rules.

Long-term electricity and capacity supply contracts

The Group through its three wholly-owned subsidiaries, KrAZ, BrAZ, and RUSAL Ural JSC (formerly JSC "SUAL") entered into three long-term electricity and capacity supply contracts on 4 December 2009, 1 December 2009 and 15 November 2009 respectively. Under each of these contracts, 50% of the price must be paid before the 15th day of the month of supply and the remaining 50% of the price must be paid before the 25th day of the month of supply. The amount to be paid is satisfied in cash via wire transfer and is based on the estimated consumption of the Group as mutually agreed between the parties. The final settlement is made by the parties in the month following the month of supply. RUSAL Ural JSC and BrAZ each concluded the contracts with JSC Irkutskenergo for the period from 2010 to 2018. On 31 December 2014, RUSAL Ural JSC, BrAZ and JSC Irkutskenergo entered into an addendum pursuant to which all rights and obligations under the contract dated 15 November 2009 were transferred from RUSAL Ural JSC to BrAZ. KrAZ concluded the contract with Krasnoyarskaya HPP for the period from 2010 to 2020. The cost of electricity supplied by JSC Irkutskenergo and Krasnoyarskaya HPP is based on a fixed formula which is tied to the market prices of electricity and the prices of aluminium quoted on the LME. For details of the formula, please refer to the Company's circular dated 13 December 2013. As mentioned in the announcement dated 19 November 2014, Krasnoyarskaya HPP suspended the supply of electricity in the amount required by KrAZ under the contract since October 2014. As mentioned in the Company's circular dated 11 October 2016, certain members of the Group entered into three new long-term electricity supply agreements to replace the abovementioned long-term electricity and capacity supply contracts. The cost of electricity to be supplied is based on a formula which is tied to the market prices of electricity at discount. For details of the formula, please refer to the Company's circular dated 11 October 2016. One of the three new long-term electricity supply agreements entered into between RUSAL Energo Limited Liability Company and EuroSibEnergo Joint Stock Company on 28 October 2016, took effect from 1 November 2016. As mentioned in the announcement dated 29 November 2017, as part of a reorganization of the En+ group companies and for the purpose of replacing JSC Irkutskenergo in the original contracts with another subsidiary of En+ as part of that reorganization, on 28 November 2017, the original contracts with JSC Irkutskenergo have been terminated and new replacement contracts have been entered into between the respective members of the Group which were parties to the original contracts and LLC "EuroSibEnergo-Hydrogeneration" ("EuroSibEnergo-Hydrogeneration", a wholly-owned subsidiary of En+), as the seller. The term of the new contracts covers the remaining term of the original contracts. All other material terms and conditions under the new contacts remain the same as the material terms and conditions under the original contracts after the replacement, including those as set out in the circular dated 11 October 2016 such as the pricing formula, annual contractual amount of electricity to be supplied and payment timeframe, guarantee provided by the seller's parent company and the annual caps.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2018 under the contract between BrAZ and JSC Irkutskenergo/EuroSibEnergo-Hydrogeneration (replaced JSC Irkutskenergo) was USD215.2 million.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2018 under the contract between BrAZ (which replaced RUSAL Ural JSC (formerly JSC "SUAL") as a party pursuant to an addendum dated 31 December 2014) and JSC Irkutskenergo/EuroSibEnergo-Hydrogeneration (which replaced JSC Irkutskenergo as a party) was USD75.9 million.

The actual monetary value of electricity purchased for the year ended 31 December 2018 under the contract between RUSAL Energo Limited Liability Company and EuroSibEnergo Joint Stock Company was USD154.3 million.

Short-term electricity and capacity supply contracts

On 27 March 2014, the framework agreements (as mentioned on pages 13 and 23 of the circular of the Company dated 13 December 2013), governing (i) the transactions under the short-term electricity and capacity supply contracts with En+'s associates and the miscellaneous electricity and capacity transmission contracts with En+'s associates (as further discussed below); and (ii) the transactions under certain aluminium sales contracts with En+'s or Mr. Deripaska's associates (as further discussed below) respectively, were signed.

Members of the Group, including BrAZ, SAZ, NkAZ, RUSAL Ural JSC (formerly JSC "SUAL") and RUSAL Energo Limited Liability Company entered into, from time to time in the financial year ended 31 December 2018 as part of their ordinary course of business, short-term electricity and capacity supply contracts with duration not exceeding one year with the companies controlled by En+, including JSC Irkutskenergo, LLC "Avtozavodskaya CHP", JSC "EuroSibEnergo" and EuroSibEnergo-Hydrogeneration. The electricity and capacity supplied under these short-term electricity and capacity supply contracts are derived from the plants operated by JSC Irkutskenergo, JSC "EuroSibEnergo", EuroSibEnergo-Hydrogeneration and LLC "Avtozavodskaya CHP". Details of the arrangement was disclosed in the Company's circular dated 11 October 2016.

The electricity (excluding electricity supplied to residential users) under the short-term electricity and capacity supply contracts is generally supplied at open (non-regulated) prices. There are, however, exceptions (which include provision of power contracts and contracts for renewable energy) which require the electricity to be sold at prices or tariffs prescribed by the Russian authorities and calculated on the basis of the mechanism approved by the Government of the Russian Federation. Payments under each of the short-term electricity and capacity supply contracts are made by installments in accordance with the regulations of the Market Council. The consideration was satisfied by the Group in cash via wire transfer.

In addition, members of the Group, including SU-Silicon LLC, JSC, RUSAL SAYANAL, JSC "Ural Foil", JSC "RUSAL Krasnoyarsk" and JSC "South Ural Cryolite Plant" entered into, from time to time as part of their ordinary course of business, short-term electricity and capacity supply contracts not exceeding three years with LLC MAREM+ (formerly CJSC MAREM+ until 3 August 2015), a company controlled by En+, for the supply of electricity and capacity purchased at the wholesale energy and capacity market.

The purchase of electricity and capacity at the wholesale market is effected at a price which is determined daily (for electricity) and monthly (for capacity), based on the trading results at the wholesale market, and subject to unpredictable external fluctuations (including, without limitation, weather factors, river stream flow rates, hydropower plant output storage, transborder cross-flow planning, provision for reserves by power generation facilities, scheduled equipment repairs, fuel price fluctuations, details of fuel regime for "endpoint" power generation facilities, economic efficiency of bids submitted by producers, technological processes of power generation facilities' equipment, and effect of state regulation on the market model). The price under these contracts/addendums is derived from the wholesale market price regulated under the regulations of the Government of the Russian Federation. Payments are effected by tentatively scheduled instalments during each month, with the final payment effected in the middle of the month following the month of billing. The consideration was satisfied by the Group in cash via wire transfer.

During 2018, members of the Group have from time to time entered into short-term electricity and capacity supply contracts with LLC "Irkutskaya Energosbytovaya Company" ("Irkutskenergosbyt LLC"), a company controlled by En+ as to more than 30%, for the supply of electricity and capacity purchased at the wholesale electricity market and supplied to the consumers in the retail market on normal commercial terms (including the pricing terms) regulated under the regulations of the Government of the Russian Federation. Payments under each of these contracts are made by installments during each month of supply. The consideration was satisfied in cash via wire transfer.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2018 under the contracts/addendums with JSC Irkutskenergo, LLC "Avtozavodskaya CHP", LLC MAREM+ (including LLC "MAREM+K", which is a subsidiary of LLC MAREM+), JSC "EuroSibEnergo", EuroSibEnergo-Hydrogeneration and Irkutskenergosbyt LLC was USD244.1 million.

Miscellaneous electricity and capacity transmission contracts

The Group has also entered into miscellaneous electricity and capacity transmission contracts and/or addendums to those contracts with Joint Stock Company "Irkutsk Electronetwork Company" (JSC "IENC") being a company controlled by En+ as to more than 30% of its issued share capital, from time to time during the year ended 31 December 2018.

The consideration under such miscellaneous electricity and capacity transmission contracts/addendums shall follow the tariffs stipulated by the Tariff Service of the Irkutsk region (an executive authority of the Irkutsk region in the sphere of government regulation of tariffs including electricity and capacity transmission tariffs), and on terms which are uniform for all consumers (tariffs are differentiated depending on voltage levels). The consideration under these contracts/addendums is satisfied in cash via wire transfer.

The actual monetary value of electricity and capacity transmission purchased and sold for the year ended 31 December 2018 under these contracts with companies controlled by En+ was USD144.3 million.

Long-term capacity RSE contracts

The Group also entered into the capacity supply from renewable sources of energy (RSE) contracts with a term of 15 years with companies controlled by En+, including Krasnoyarskaya HPP (which was replaced by LLC "Abakanskaya SPS" in 2017) as sellers, from time to time during the year ended 31 December 2018.

Long-term capacity RSE contracts are entered into in accordance with the governmental regulations requiring all participants in the electric energy wholesale market to purchase capacity by entering into standard form of contracts, the terms (including the mechanics of price determination and duration of contract of 180 months) of which are determined by the Market Council and published on the website of the Market Council. All the terms and conditions of the long-term capacity RSE contracts are regulated by the legislation and neither a supplier nor a buyer under such contract can amend them. The exact capacity volume to be supplied under the contract and its value is determined by the TSA. The payment is made via bank transfer using the special bank accounts of the parties under the TSA's instructions. Therefore, the Group does not have information regarding payment on the instant. Notifications from the TSA on the volumes supplied and payments made are submitted to the parties at a later stage. The price of capacity to be sold under the long-term capacity RSE contracts is determined by the TSA in accordance with procedures established by the rules of determination of the price of capacity of the generating facilities using renewable energy sources, approved by the Resolution of the Government of the Russian Federation and the Wholesale Market Rules the details of which were set out in the Company's circular dated 11 October 2016.

On 30 March 2016, the TSA, on behalf of "RUSAL Energo" LLC, entered into a long-term capacity RSE contract with Krasnoyarskaya HPP.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2018 under the long-term capacity RSE contracts with Krasnoyarskaya HPP (which was replaced by LLC "Abakanskaya SPS" in 2017) was USD0.9 million.

The aggregate consideration for the long-term and short-term electricity and capacity supply contracts, long-term capacity RSE contracts together with the miscellaneous electricity and capacity transmission contracts between the Group and the associates of En+ for the year ended 31 December 2018 was USD834.7 million, which is within the annual cap of USD887.3 million (net of VAT) approved by the independent Shareholders of the Company for such type of continuing connected transactions for the year ended 31 December 2018.

B Aluminium Sale Contracts

Members of the Group have from time to time entered into aluminium sales contracts with associates of Mr. Oleg Deripaska, who ceased to be a Director with effect from 25 May 2018 ("Mr. Deripaska"), or with associates of En+.

Aluminium Sales Contracts with Mr. Deripaska's associates

Mr. Deripaska indirectly controls more than 30% of members of the group of Public Joint Stock Company "GAZ" (the "GAZ Group") including LLC GAZ, "GAZ Group Autocomponents" LLC, JSC "UMZ", J-S.C. AVTODIZEL (YaMZ), JSC "URAL Motor Vehicles Plant". Each of these companies is therefore an associate of Mr. Deripaska. As such, the transactions between members of the Group and members of the GAZ Group constitute continuing connected transactions of the Company under the Listing Rules.

On 1 January 2018, the Group, acting through JSC "UC RUSAL TH", entered into framework agreements with members of the GAZ Group, under which the Group agreed to supply aluminium and alloys at market prices defined on monthly basis until 31 December 2018, where the price for alloys is defined in accordance with the formula the details of which were stated in the Company's circular dated 11 October 2016. The total consideration for the aluminium supplied under these framework agreements to the members of GAZ Group during the year ended 31 December 2018 amounted to USD15.6 million. The consideration was satisfied in cash via wire transfer.

Aluminium Sales Contracts with En+'s Associates

"KraMZ" Ltd. is held by En+ as to more than 30% of the issued share capital. "KraMZ" Ltd. is therefore an associate of En+. Accordingly, the contracts discussed below constituted continuing connected transactions for the Company under the Listing Rules.

On 14 December 2006, the Group through JSC "UC RUSAL TH", entered into a long-term contract to supply aluminium to "KraMZ" Ltd. (substituted as the buyer to the aforementioned long-term supply contract pursuant to a substitution agreement dated 17 March 2011) for a period until December 2021. Pursuant to the contract, the Group would supply aluminium to "KraMZ" Ltd. at arm's length prices tied to the price of aluminium on the LME. The consideration under the contract must be prepaid. For further details of this long-term contract, please refer to the circular dated 13 December 2013 issued by the Company.

The consideration for the aluminium supplied under this contract (as supplemented) to "KraMZ" Ltd. during the year ended 31 December 2018 amounted to USD128 million. The consideration was satisfied in cash via wire transfer.

On 28 June 2018, RUSAL RESAL entered into a contract for supply of the secondary aluminium to "KraMZ" Ltd. for the period until 31 December 2018, at arm's length prices determined on a monthly basis. The payment under the contract is made by 100% advance payment.

The consideration for the secondary aluminium supplied under this contract to "KraMZ" Ltd. during the year ended 31 December 2018 amounted to USD0.5 million. The consideration was satisfied in cash via wire transfer.

The aggregate consideration for the aluminium supplied to each of the companies referred to above, for the year ended 31 December 2018 was approximately USD144.1 million, which was within the annual cap of USD371 million (net of VAT) as approved by the independent Shareholders of the Company for such type of continuing connected transactions for the year ended 31 December 2018.

C Purchase of raw materials for production from BCP

Mr. Deripaska (ceased to be a Director with effect from 25 May 2018) was indirectly interested in LLC PGLZ (formerly Limited Liability Company BaselCement-Pikalevo) ("BCP") as to more than 30% of the issued capital.

Accordingly, the transactions previously entered into between a member of the Group as buyer and BCP as seller constituted a continuing connected transaction of the Company under the Listing Rules. The price for the purchase of raw materials under the contract was determined on an arm's length basis. The consideration for the contract was satisfied in cash via wire transfer.

Details of the transaction are set out in the table below:

Buyer	Date of contract	Term of contract	Type of raw materials/Subject	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
RUSAL Trading House JSC	01.01.2018	Up to 31.12.2020	Alumina and hydrate	Be made on the 5th, 15th, 25th day of the current month, and the final settlement to be made on the 5th day of the next month	33.5
RUSAL Trading House JSC	01.01.2018	Up to 36 months	Corporate guarantees	Equal repayments of RUB83.33 million starting from the 25th month	–
Total:					**33.5**

The aggregate consideration for the raw materials supplied under the purchase of alumina and hydrate contract by BCP during the year ended 31 December 2018 amounted to USD33.5 million which was within the maximum aggregate consideration of USD59.52 million for 2018 as disclosed in the announcement dated 28 December 2017. Based on the terms of the corporate guarantees, the maximum aggregated guaranteed amount (calculated based on the maximum lending amounts under the loans) will be RUB2.75 billion as disclosed in the announcement dated 28 December 2017.

D Sale of raw materials to the associates of Mr. Deripaska and En+

Mr. Deripaska indirectly controls or previously controlled more than 30% of each of Achinsk Cement LLC, Stroyservice LLC ("Stroyservice"), LLC "GAZ Group Autocomponents" and "Glavstroy Ust Labinsk" LLC (which ceased to be a connected person on 1 December 2018), and therefore, each of them is/was an associate of Mr. Deripaska and thus is/was a connected person of the Company according to the Listing Rules.

Each of "KraMZ-Auto" Limited Liability Company ("KraMZ-Auto"), "KraMZ" Ltd. and LLC "Sorskiy Ferromolibdenoviy Zavod" is held by En+ as to more than 30% of the issued share capital. Each of KraMZ-Auto, "KraMZ" Ltd. and LLC "Sorskiy Ferromolibdenoviy Zavod" is therefore an associate of En+. Accordingly, the contracts discussed below constituted continuing connected transactions for the Company under the Listing Rules. Pursuant to Rule 14A.81 of the Listing Rules, the transactions disclosed below were aggregated as they are entered into by the Group with the associates of the same connected persons who are associated with one another and the subject matter of each of the agreements relate to the sale of raw materials by members of the Group. The prices for the sale of raw materials under each of the contracts were determined on an arm's length basis. The consideration for each of these contracts was satisfied in cash via wire transfer or by set-off of obligations. The aggregate consideration for the raw materials supplied under these contracts to the associates of Mr. Deripaska or En+ during the year ended 31 December 2018 amounted to USD12.3 million, which was within the maximum aggregate consideration of USD17.733 million for 2018 as disclosed in the announcement dated 27 February 2018.

* - The sum of the figures in the tables are different due to rounding

Note:

1. The contract may be extended by further agreement between the parties.

E Transportation Contracts

As discussed above, KraMZ-Auto is an associate of En+. During the Review Period, En+ holds more than 30% of the issued share capital of each of JSC Otdeleniye Vremennoy Expluatatsii ("OVE") and JSC Irkutskenergotrans, thus each of OVE and JSC Irkutskenergotrans is also an associate of En+. Each of KraMZ-Auto, OVE, and JSC Irkutskenergotrans is therefore an associate of En+ and a connected person of the Company under the Listing Rules. Accordingly, the contracts between members of the Group on the one part and KraMZ-Auto, OVE or JSC Irkutskenergotrans on the other, as described below, constituted continuing connected transactions for the Company under the Listing Rules. Pursuant to these contracts, KraMZ-Auto, OVE and JSC Irkutskenergotrans were to provide various transportation services to members of the Group. All these transportation contracts were concluded on arms' length commercial terms. The consideration for each of these contracts was satisfied in cash via wire transfer or by set-off of obligations.

The details of these contracts are set out below:

Buyer (associate of Mr. Deripaska/En+)	Seller (member of the Group)	Date of contract	Type of raw materials
“KraMZ-Auto”	JSC “RUSAL Krasnoyarsk”	01.01.2018	Gasoline, diesel fuel, oil and other petroleum products
“KraMZ-Auto”	PJSC “RUSAL Bratsk” (Shelekhov)	01.01.2018	Gasoline, diesel fuel, oil and other petroleum products
“KraMZ-Auto”	PJSC “RUSAL Bratsk”	01.01.2018	Gasoline, diesel fuel, oil and other petroleum products
“KraMZ-Auto”	JSC “RUSAL Sayanogorsk”	01.01.2018	Gasoline, diesel fuel, oil, grease and other petroleum products
“Achinsk Cement” LLC	JSC “RUSAL Achinsk”	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Coal
“Achinsk Cement” LLC	JSC “RUSAL Achinsk”	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Nepheline sludge
“Achinsk Cement” LLC	JSC “RUSAL Achinsk”	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Limestone

	Term of contract	Payment term	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Up to 31.12.2018	Payment upon delivery within 10 business days, or the conduct of the netting, in the presence of counter-obligations	–
	Up to 31.12.2018	Payment upon delivery within 10 business days, or the conduct of the netting, in the presence of counter-obligations	–
	Up to 31.12.2018	Payment upon delivery within 10 business days, or the conduct of the netting, in the presence of counter-obligations	–
	Up to 31.12.2018	Payment upon delivery within 10 business days, or the conduct of the netting, in the presence of counter-obligations	0.3
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month in the amount of 25% of approved volume of sales. Payment for the following weeks should be made no later than the last business day of the previous week	5.9
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month. Payment for the following weeks should be made no later than the last business day of the previous week	0.6
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month. Payment for the following weeks should be made no later than the last business day of the previous week	2.5

Buyer (associate of Mr. Deripaska/En+)	Seller (member of the Group)	Date of contract	Type of raw materials
"Achinsk Cement" LLC	JSC "RUSAL Achinsk"	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Pulverized coal
"Achinsk Cement" LLC	JSC "RUSAL Achinsk"	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Clay from overburden
"Achinsk Cement" LLC	JSC "RUSAL Achinsk"	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Fuel oil
"Achinsk Cement" LLC	JSC "RUSAL Achinsk"	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Diesel fuel
"Stroyservice"	"RUSAL Sayanogorsk" JSC	01.01.2018	Gasoline, diesel fuel, oils, lubricants and construction materials
"Glavstroi Ust-Labinsk" LLC	JSC "UC RUSAL TH"	26.01.2018	Aluminium powder

	Term of contract	Payment term	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month. Payment for the following weeks should be made no later than the last business day of the previous week	–
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month. Payment for the following weeks should be made no later than the last business day of the previous week	0.1
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month in the amount of 25% of approved volume of sales. Payment for the following weeks should be made no later than the last business day of the previous week	0.2
	Up to 31.12.2018 (Note 1)	Payment for first week should be made no later than the 30th of the previous month in the amount of 25% of approved volume of sales. Payment for the following weeks should be made no later than the last business day of the previous week.	–
	Up to 31.12.2018	Payment upon delivery, no later than 10 working days from the date of issue of the invoice for the shipped goods	1.3
	Up to 31.12.2018	100% advance payment	0.5

Buyer (associate of Mr. Deripaska/En+)	Seller (member of the Group)	Date of contract	Type of raw materials
LLC "GAZ Group Autocomponents"	JSC "UC RUSAL TH"	14.02.2018	Silicon
LLC "Sorskiy Ferromolibdenoviy Zavod"	JSC "UC RUSAL TH"	26.02.2018	Aluminium powder
"KraMZ" Ltd.	JSC "UC RUSAL TH"	26.02.2018	Silicon
Total			

° - The sum of the figures in the tables are different due to rounding.

	Term of contract	Payment term	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Up to 31.12.2018, may be extended automatically for next calendar year if neither party declare its intention to terminate it not less than 20 calendar days before expiry	100% advance payment	0.1
	Up to 31.12.2018	100% payment within 30 days from the date of shipment	0.4
	Up to 31.12.2018, may be extended automatically for next calendar year if neither party declare its intention to terminate it not less than 20 calendar days before expiry	100% advance payment	0.3
			12.3*

Details of these contracts are set out in the table below:

Service provider (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract
"KraMZ-Auto" LLC	Limited Liability Company "Russian Engineering Company"	13.11.2017	Up to 31.12.2018
"KraMZ-Auto"	JSC "RUSAL Krasnoyarsk"	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	JSC "RUSAL Krasnoyarsk"	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	"Sayanogorsk Railcar Repair Works Limited Liability Company" (SVRZ)	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	"Sayanogorsk Railcar Repair Works Limited Liability Company" (SVRZ)	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	PJSC "RUSAL Bratsk"	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	JSC "RUSAL Sayanogorsk"	01.01.2018	Up to 31.12.2020
"KraMZ-Auto"	JSC "RUSAL Sayanogorsk"	01.01.2018	Up to 31.12.2020

	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Within 60 calendar days after signing the acceptance certificate for a calendar month	0.1
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	2.5
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	0.7
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	3.5
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	0.1
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	–
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	–
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	2.4
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	0.3
	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	2.3

Service provider (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract
OVE	JSC "RUSAL Sayanogorsk"	01.01.2018	Up to 31.12.2018
"KraMZ-Auto"	JSC "Kremniy"	27.12.2017 (the terms of the contract commenced on 01.01.2018)	Up to 31.12.2018
JSC "Irkutskenergotrans"	JSC "Kremniy"	27.12.2017 (the terms of the contract commenced on 01.01.2018)	Up to 31.12.2017
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company" (Sayanogorsk)	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Up to 31.12.2020
"KraMZ-Auto"	"IT-Service" LLC	25.12.2017 (the terms of the contract commenced on 01.01.2018)	Up to 31.12.2020
"KraMZ-Auto"	JSC "RUSAL SAYANAL" JSC	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Up to 31.12.2020
"KraMZ-Auto"	JSC "RUSAL SAYANAL" JSC	28.12.2017 (the terms of the contract commenced on 01.01.2018)	Up to 31.12.2020

	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Payment for services is carried out every ten days within 10 working days from the date of receipt of the invoice	3.8
	Payment within 10 days after receiving invoice for services provided	–
	Payment within 60 days after receiving invoice for services provided	–
	Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by the customer, on the basis of performed works acceptance certificates signed by the parties	0.1
	Payment within 60 days from the date of signing and provision of original invoice	–
	Payment within 10 days after receipt of the VAT invoice	0.2
	Payment within 15 days after receipt of the VAT invoice	–

Service provider (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract
OVE	JSC "RUSAL SAYANAL"	Additional agreement dated 28.12.2017 to the original contract dated 20 January 2016 (the terms of the additional agreement commenced on 01.01.2018)	Up to 31.12.2018, may be extended by signing an additional agreement
"KraMZ-Auto"	LLC "SUAL-PM"	Additional agreement dated 27.12.2017 to the original contract dated 27 February 2017 (the terms of the additional agreement commenced on 01.01.2018)	Up to 31.12.2018
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company" (Shelekhov)	28.12.2017 (the terms of the additional agreement commenced on 01.01.2018)	Up to 31.12.2020
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company" (Bratsk)"	28.12.2017 (the terms of the additional agreement commenced on 01.01.2018)	Up to 31.12.2018
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company" (Sayanogorsk)	18.01.2018	Up to 31.12.2018

	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Payment within 10 days after receipt of the VAT invoice	–
	Payment within 10 days after receipt of invoice	–
	Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works acceptance certificates signed by the parties	0.1
	Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works acceptance certificates signed by the parties	0.2
	Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by the customer, on the basis of performed works acceptance certificates signed by the parties	0.3

Service provider (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company" (Krasnoyarsk)	18.01.2018	Up to 31.12.2020
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company"	01.02.2018 (addendum to the contract dated 28.12.2017)	Up to 31.12.2020
"KraMZ-Auto"	Limited Liability Company "Russian Engineering Company"	26.02.2018 (addendum to the contract dated 18.01.2018)	Up to 31.12.2018
"KraMZ-Auto"	RUSAL Bratsk PJSC	15.11.2018 (addendum to the contract dated 01.01.2018)	Up to 31.12.2018
Total:			

The aggregate consideration for the transportation services provided by the associates of En+ during the year ended 31 December 2018 amounted to USD17.1 million, which was within the maximum aggregate consideration of USD20.918 million for 2018 as disclosed in the announcement dated 16 November 2018.

Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by the customer, on the basis of performed works acceptance certificates signed by the parties	0.4
Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works and acceptance certificates signed by the parties	–
Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works acceptance certificates signed by the parties	–
Payment to be made within 10 banking days from the date of receipt of the original invoice, on the basis of the signed certificate of rendered services	–
	17.1

F Heat Supply Contracts with associates of En+

Each of the issued share capital of Baykalenergo Joint-Stock Company, Khakass Utility Systems Limited Liability Company and JSC Irkutskenergo is held by En+ (being a substantial shareholder of the Company) as to more than 30%, and is therefore an associate of En+. Each of Baykalenergo Joint-Stock Company, Khakass Utility Systems Limited Liability Company and JSC Irkutskenergo is thus a connected person of the Com-

Supplier (associate of En+)	Customer (member of the Group)	Date of contract
JSC "Irkutskenergo"	"RUSAL Bratsk" Open Joint Stock Company	Addendum expected to be dated 01.01.2017 to the contract dated 01.01.2013
JSC "Irkutskenergo"	JSC "SibVAMI"	28.12.2016
Joint-Stock Company "Baykalenergo"	Limited Liability Company "RUSAL Taishet Aluminium Smelter"	01.03.2017
JSC "Irkutskenergo"	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018
JSC "Irkutskenergo"	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018
JSC "Baykalenergo"	JSC "RUSAL Sayanogorsk"	01.01.2018
JSC "Baykalenergo"	JSC "RUSAL Sayanogorsk"	01.01.2018

pany under the Listing Rules. Accordingly, the contracts below constitute continuing connected transactions of the Company. Pursuant to these contracts, the associates of En+ were to supply heat (including heat energy and heat power in the form of steam and hot water) to members of the Group. All of these heat supply contracts were entered on arms-length commercial terms. The consideration for each of these contracts was satisfied in cash via wire transfer or by set-off of obligations.

Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
Up to 31.12.2018	Advance payment of 35% of the total price on the 18th day of each month, and 50% on the 30th day of each month with the remaining 15% being paid by the 10th day of the next month	–
Up to 31.12.2019	Advance payment of 35% of the total price on the 18th day of the current month and 50% by the last day of the current month, with the remaining 15% being paid by the 10th day of the next month	–
Up to 31.12.2019	Advance payment of 35% of the total price on the 18th day of each month, and 50% on the last day of each month, with the actual amount consumed to be paid by the 10th day of the month following the billing month with allowance for earlier payments	–
Up to 31.12.2020	First payment of 35% of the total price no later than the 18th day of the current month; second payment of 50% no later than the last day of the current month; and the third payment of 15% no later than the 10th day of the month following the settlement month	1.4
Up to 31.12.2020	First payment of 35% of the total price no later than the 18th day of the current month; second payment of 50% no later than the last day of the current month; and the third payment of 15% no later than the 10th day of the month following the settlement month	0.7
Up to 31.12.2018	Payment to be made monthly, no later than the 20th day of the month following the reporting period	–
Up to 31.12.2018	Payment to be made monthly, no later than the 20th day of the month following the reporting period	–

Supplier (associate of En+)	Customer (member of the Group)	Date of contract
"Khakass Utility Systems" LLC	JSC "RUSAL Sayanogorsk"	01.01.2018
"Khakass Utility Systems" LLC	JSC "RUSAL SAYANAL"	28.12.2017 (the terms of the contract will commence on 01.01.2018)
JSC "Baykalenergo"	Limited Liability Company "RUSAL Taishet Aluminium Smelter"	01.02.2018
Total:		

The aggregate consideration for the heat supply provided by the associates of En+ during the year ended 31 December 2018 amounted to USD7 million, which was within the maximum aggregate consideration of USD8.969 million for 2018 as disclosed in the announcement dated 2 February 2018.

G Repair Services Contract s with the associates of En+

Each of the issued share capital of Bratskenergoremont Joint Stock Company ("Bratskenergoremont"), Irkutskenergoremont JSC, KraMZ-Auto, Khakass Utility Systems LLC, "KraMZ" Ltd., JSC "IENC", "HPS-engineering" Ltd. and JSC Baykalenergo is directly or indirectly held by En+ as to more than 30%, and therefore each of them is an associate of En+ and thus is a connected person of the Company under the Listing Rules.

Accordingly, the transactions entered into between members of the Group as customers and Bratskenergoremont, Irkutskenergoremont, KraMZ-Auto, Khakass Utility Systems LLC, "KraMZ" Ltd., JSC "IENC", "HPS-engineering" Ltd. or JSC "Baykalenergo" as contractors constitute continuing connected transactions of the Company under the Listing Rules. The consideration for the repair services under each of these contracts are determined on an arm's length basis. The consideration for each of these contracts was satisfied in cash via wire transfer or set-off of obligations.

° The sum of the figures in the tables are different due to rounding.

	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Up to 31.12.2018	First payment to be paid no later than the 20th of the month of the current billing period (month) on the basis of the invoice, the purchaser pays 85% of the total cost of thermal energy. Second payment to be paid no later than the 10th day of the month following the billing period (month), the purchaser pays the difference between the cost of the actual amount of heat energy received and the amount paid previously	4.3
	Up to 31.12.2020	Payment no later than the 20th day of the month following the accounting month	0.4
	Up to 31.12.2020	First payment of 35% of the total price no later than the 18th day of the current month; second payment of 50% no later than the last day of the current month; and no later than the 10th day of the month following the settlement month payment for actually consumed thermal power amount with allowance for earlier payments	–
			7◌

Details of these transactions are set out in the table below:

Date of contract	Customer (member of the Group)	Contractor (associate of En+)	Term of contract
27.10.2017 (Note 1)	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 30.06.2018
08.12.2017 (Note 1)	Limited Liability Company "Casting and Mechanical Plant "SKAD""	"KraMZ" Ltd.	Up to 31.12.2019
29.12.2017 (the term of the contract commenced on 01.01.2018) (Note 1)	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2018, may be extended by an addendum
10.01.2018 (Note 1)	PJSC "RUSAL Bratsk"	"Irkutskenergoremont"	Up to 31.12.2018
10.01.2018 (Note 1)	Limited Liability Company "Russian Engineering Company"	"Irkutskenergoremont"	Up to 31.12.2018
26.01.2018 (Note 1)	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2018

	Repair services	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Performance of work upon overhaul of the boiler unit in 2017-2018	A prepayment of 50% of the consideration shall be paid according to the monthly financial schedule set out in the contract until the 5th day of the current month, the remaining 50% to be paid within 10 calendar days after receipt of the invoice	2.8
	Repair of metallurgical equipment (inductors of furnaces and cable hoses)	70% advance payment after receipt of invoice, and the remaining 30% to be paid within 5 bank days from the date of signing of the acceptance certificate for work performed	–
	Maintenance of equipment	A prepayment of 50% of the planned for execution of works is made according to the monthly financial schedule up to the 5th of the month, the final payment of 50% made within 10 calendar days after the end of the reporting month (taking into account actual performance and prepayment)	6.2
	Production equipment maintenance and repair works	Within 60 calendar days of signing the performed works certificate based on invoice	1.5
	Production equipment maintenance and repair works	Within 60 calendar days of signing the performed works certificate based on invoice	1.1
	Technological cleaning of boiler units for storage of wet coagulant	Within 15 calendar days from the date of signing the performed works certificate	0.3

Date of contract	Customer (member of the Group)	Contractor (associate of En+)	Term of contract
14.02.2018 (Note 1)	PJSC "RUSAL Bratsk"	JSC "IENC"	Up to 31.12.2019
26.02.2018 (Note 1)	Joint Stock Company "RUSAL Sayanogorsk Smelter"	"Khakass Utility Systems LLC"	Up to 31.12.2018
26.02.2018 (addendum to the contract dated 27.10.2017) (Note 1)	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2018
01.03.2018 (Note 1)	"RUSAL Bratsk PJSC"	"KraMZ-Auto"	Up to 31.12.2018
01.03.2018 (Note 1)	JSC "RUSAL Krasnoyarsk"	"KraMZ-Auto"	Up to 31.12.2020
01.03.2018 (Note 1)	JSC "RUSAL Krasnoyarsk"	"HPS-engineering" Ltd.	Up to 31.12.2018
Note 1	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2018

	Repair services	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Maintenance of equipment	Within 5 calendar days from the receipt of the invoice for the current month	0.6
	Providing monthly service and repair to the fuel pump station of the power shop	Within 60 calendar days after receipt of the documented original invoices corresponding to the certificates of acceptance signed by both parties	–
	Performance of work upon overhaul of the boiler unit in 2017-2018	A prepayment of 50% of the consideration shall be paid according to the monthly financial schedule set out in the contract until the 5th day of the current month, the remaining 50% to be paid within 10 calendar days after receipt of the invoice	2.4
	Services for maintenance and repair of cars	Payment is made within 10 banking days from the date of receipt of the original invoice	–
	Services for maintenance and repair of cars	Payment is made within 10 banking days from the date of receipt of the original invoice	–
	Repair of equipment	Within 60 calendar days of signing of the performed works certificate based on an invoice	0.1
	Repair services for work on overhaul of the boiler unit #7	Advance payment of 50% of the cost of work planned for execution before the 5th day of the current month. The final payment within 10 calendar days from the receipt of the original invoice issued within 3 days from the date of signing the contract, taking into account the amount of advance payment	0.6

Date of contract	Customer (member of the Group)	Contractor (associate of En+)	Term of contract
Note 1	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2018
Note 1	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2018
Note 1	RUS-Engineering LLC	Irkutskenergoremont JSC	Up to 31.12.2018
Note 1	RUS-Engineering LLC	Irkutskenergoremont	Up to 31.12.2018
Note 1	PJSC "RUSAL Bratsk"	Irkutskenergoremont	Up to 31.12.2018
Note 1	Joint stock company "RUSAL Sayanogorsk Smelter"	JSC "Baykalenergo"	Up to 31.12.2018
Note 1	JSC "RUSAL Krasnoyarsk"	"HPS-engineering" Ltd	Up to 31.12.2018

	Repair services	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Repair services for performance of work upon overhaul of the turbine unit #5	Prepayment of 50% of the consideration shall be paid according to the monthly financial schedule set out in the contract until the 5th day of the current month and the remaining 50 % to be paid within 10 calendar days after receipt of the original invoices	0.8
	Repair services for the performance of work upon overhaul of the boiler unit #8	Prepayment of 50% of the consideration shall be paid according to the monthly financial schedule set out in the contract until the 5th day of the current month and the remaining 50 % to be paid within 10 calendar days after receipt of the original invoices	–
	Fume treatment equipment repair services	Within 60 calendar days from the date of signature by Customer of the Performed Works Certificate based on an invoice	–
	Fume treatment equipment repair services	Within 60 calendar days from the date of signature by Customer of the Performed Works Certificate based on an invoice	–
	Production equipment maintenance and repair works	Within 60 calendar days of signing the Performed Works Certificate based on invoice	–
	Providing monthly service to the external heat networks and industrial plant wiring	Within 60 calendar days after receipt of the documented original invoices corresponding to the certificates of acceptance signed by both parties	0.1
	Equipment repair services	Within 60 calendar days from the date of signature by Customer of the performed works certificate based on an invoice	0.1

Date of contract	Customer (member of the Group)	Contractor (associate of En+)	Term of contract
Note 1	JSC "RUSAL Krasnoyarsk"	"HPS-engineering" Ltd	Up to 31.12.2018
Note 1	RUSAL Medical Center LLC (Bratsk Branch)	Irkutskenergoremont	Up to 31.12.2018
Note 1	RUS-Engineering LLC	Irkutskenergoremont	Up to 31.12.2018
Note 1	RUS-Engineering LLC	Irkutskenergoremont	Up to 31.12.2018
Note 1	RUS-Engineering LLC	Irkutskenergoremont	Up to 31.12.2018
Total:			

The aggregate consideration for the repair services provided under these contracts by the associates of En+ during the year ended 31 December 2018 amounted to USD16.7 million which was within the maximum aggregate consideration of USD18.351 million for 2018 as disclosed in the announcement dated 27 December 2018.

H Transport Logistics Services Contracts with associates of En+

Each of "Russian Transport Company" LLC, En+ Logistics and Global Commodity Transport Limited is a direct or indirect subsidiary of En+, and therefore each of them is an associate of En+ and thus is a connected person of the Company under the Listing Rules.

Accordingly, the transactions entered into between members of the Group as customers and "Russian Transport Company" LLC, En+ Logistics or Global Commodity Transport Limited as service provider constitute continuing connected transactions of the Company under the Listing Rules. The consideration for the transportation logistics services under each of these contracts were determined on an arm's length basis. The consideration for each of these contracts was satisfied in cash via wire transfer.

° - The sum of the figures in the tables are different to that disclosed in the announcements due to rounding.

Note:

1. These contracts were entered into pursuant to a framework agreement dated 24 December 2018 between the Company and En+ under which En+ and its associates agreed to provide repair services to members of the Group, as disclosed in the announcement of the Company dated 27 December 2018.

	Repair services	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Equipment repair services	Within 60 calendar days from the date of signature by Customer of the performed works certificate based on an invoice	–
	Planned maintenance and repairs of electric equipment	The customer shall pay for the works completed by the contractor on a monthly basis by wiring the money to the contractor's account within 15 working days from the date of receipt of invoices	–
	Fume treatment equipment repair services	Within 60 calendar days from the date of signature by Customer of the performed works certificate based on an invoice	–
	Fume treatment equipment repair services	Within 60 calendar days from the date of signature by Customer of the performed works certificate based on an invoice	–
	Fume treatment equipment repair services	Within 60 calendar days from the date of signature by Customer of the performed works certificate based on an invoice	–
			16.7*

Details of these transactions are set out in the table below:

Date of contract	Customer (member of the Group)	Service provider (associate of En+)
10.11.2017 (Note 1)	RTI Limited	"Russian Transport Company" LLC
2 Addendums dated 27.12.2017, which are the addendums to the original contract dated 29.12.2016 (Note 1)	JSC "UC RUSAL TH"	"Russian Transport Company" LLC
Addendum dated 27.12.2017, which is an addendum to the original contract dated 16.02.2017 (the terms of the addendum commenced on 01.01.2018) (Note 1)	JSC "UC RUSAL TH"	"Russian Transport Company" LLC
Addendum dated 27.12.2017, which is an addendum to the original contract dated 13.01.2017 (the terms of the addendum commenced on 01.01.2018) (Note 1)	RTI Limited	Global Commodity Transport Limited
Additional agreement dated 27.12.2017 to the original contract dated 30 December 2015 (Note 1)	JSC "UC RUSAL TH"	En+ Logistics
Contract dated 27.12.2017 (the terms of the contract commenced on 01.01.2018) (Note 1)	JSC "RUSAL Achinsk"	En+ Logistics
Contract dated 27.12.2017 (the terms of the contract commenced on 01.01.2018) (Note 1)	JSC "RUSAL Boxitogorsk"	En+ Logistics
2 Addendums dated 11.01.2018, which are the addendums to the original contract dated 13.01.2017 (the term of the addendums commenced on 01.01.2018) (Note 1)	RUSAL Krasnoturyinsk branch of RUSAL Ural JSC	"Russian Transport Company" LLC

	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Up to 31.03.2018	Payment to be made within 5 days from the date of drawing of the account	2.1
	Up to 31.12.2019	Payment before the 22nd of the month following the month of transportation	0.9
	Up to 31.12.2018	Payment on the first working day of every ten days of the calendar month	–
	Up to 31.12.2018	100% prepayment	0.1
	Up to 31.12.2018	Payment within 10 days from the date of invoicing	0.3
	Up to 31.12.2018	Payment within 10 days from the date of invoicing	0.3
	Up to 31.03.2018	Payment within 10 days from the date of invoicing	–
	Up to 31.12.2019	Payment before the 22nd of the month following the month of transportation	–

Date of contract	Customer (member of the Group)	Service provider (associate of En+)
Addendum dated 11.01.2018, which is an addendum to the original contract dated 29.12.2016 (the term of the addendum commenced on 01.01.2018) (Note 1)	RUSALTRANS LLC	"Russian Transport Company" LLC
11.01.2018 (the term of the contract commenced on 01.10.2017) (Note 1)	JSC "UC RUSAL TH"	"Russian Transport Company" LLC
Contract dated 06.02.2018 (The term of the contract commenced on 01.01.2018) (Note 1)	JSC "UC RUSAL TH"	Global Commodity Transport Limited
Addendum dated 01.03.2018, which is an addendum to the original contract dated 28.12.2016. The term of this addendum commenced on 01.01.2018.	RTI Limited	"Russian Transport Company" LLC
Addendum dated 01.03.2018, which is an addendum to the original contract dated 29.12.2016. The term of this addendum commenced on 01.01.2018.	JSC "RUSAL Achinsk"	"Russian Transport Company" LLC
06.03.2018 (addendum to the original contract dated 01.04.2017; the terms of this addendum commenced on 01.10.2017) (Note 1)	CJSC "RUSAL ARMENAL"	"Russian Transport Company" LLC
12.03.2018 (addendum to the original contract dated 01.04.2017; the terms of this addendum commenced on 01.02.2018) (Note 1)	CJSC "RUSAL ARMENAL"	"Russian Transport Company" LLC
06.03.2018 (Additional agreement to the contract dated 10.11.2017) (Note 1)	RTI Limited	"Russian Transport Company" LLC

	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	Up to 31.12.2019	Payment before the 22nd of the month following the month of transportatio	0.9
	Up to 31.03.2018	Payment to be made within 5 days from the date of drawing of the account	0.1
	Up to 31.12.2018	Within 5 business days after receipt of the original invoices and the certificate of the work performed, the customer will pay to the freight forwarder the cost of services against actual quantity of shipped cargo	–
	Up to 31.12.2018	Payment before the 22nd of the month following the month of transportation	0.1
	Up to 31.12.2018	Payment before the 22nd of the month following the month of transportation	–
	Up to 31.03.2018	Payment to be made within 5 banking days from the date of drawing of the account	0.3
	Up to 31.03.2018	Payment to be made within 5 banking days from the date of drawing of the account	–
	Up to 31.12.2018	Payment to be made within 5 days from the date of drawing of the account	0.1

Date of contract	Customer (member of the Group)	Service provider (associate of En+)
26.03.2018 (Addendum to the contract dated 07.03.2017; the term of this addendum commenced on 20.02.2018) (Note 1)	JSC "Boksit Timana"	"Russian Transport Company" LLC
29.03.2018 (Addendum to the contract dated 11.01.2018) (Note 1)	JSC "UC RUSAL TH"	"Russian Transport Company" LLC
Note 1	CJSC "RUSAL ARMENAL"	"Russian Transport Company" LLC
Note 1	CJSC "RUSAL ARMENAL"	"Russian Transport Company" LLC
Note 1	"RUSALTRANS" LLC	"Russian Transport Company" LLC
Note 1	JSC "RUSAL Ural"	"Russian Transport Company" LLC
Note 1	JSC "RUSAL Ural"	"Russian Transport Company" LLC
Note 1	"RUSALTRANS LLC"	"Russian Transport Company" LLC
Note 1	JSC "UC RUSAL TH"	"Russian Transport Company" LLC
Note 1	JSC "UC RUSAL TH"	"Russian Transport Company" LLC

Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
Up to 31.12.2019	Payment before the 22nd of the month following the month in which transportation services are provided	–
Up to 31.12.2018	Payment to be made within 5 days from the date of drawing of the account	–
Up to 31.03.2018	Payment within 10 banking days from the date of receipt of the copy of the report on the executed order	–
Up to 31.12.2018	Payment within 5 banking days from the date of receipt of the copy of the report on the executed order	–
Up to 31.12.2018	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.08.2018	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.12.2019	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.12.2019	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.12.2019	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.12.2019	Payment to be made before the 22nd day of the month following the month of transportation	–

Date of contract	Customer (member of the Group)	Service provider (associate of En+)
Note 1	RUSALTRANS LLC	"Russian Transport Company" LLC
Note 1	JSC "RUSAL Achinsk"	"Russian Transport Company" LLC
Note 1	RTI Limited	Global Commodity Transport Limited
Note 1	Boksit Timana JSC	"Russian Transport Company" LLC
Total:		

The aggregate consideration for the transport logistics services provided under the above contracts by the associates of En+ during the year ended 31 December 2018 amounted to USD5.2 million which was within the maximum aggregate consideration of USD44.247 million for 2018 as disclosed in the announcement dated 27 December 2018.

I Operation of Ondskaya Hydro Power Station

"EuroSibEnergo — Thermal Energy" Ltd is directly or indirectly held by En+ as to more than 30% of the issued share capital, it is therefore an associate of En+ and thus is a connected person of the Company under the Listing Rules.

Accordingly, the transactions entered into between members of the Group and "EuroSibEnergo — Thermal Energy" Ltd constituted continuing connected transactions of the Company under the Listing Rules. The consideration under each of these contracts was determined on an arm's length basis. The consideration for each of these contracts was satisfied in cash via wire transfer.

Note:

1. These contracts were entered into pursuant to a framework agreement dated 24 December 2018 between the Company and En+ under which En+ and its associates agreed to provide transport logistics services to members of the Group, as disclosed in the announcement of the Company dated 27 December 2018.

Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
Up to 31.12.2018	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.12.2019	Payment to be made before the 22nd day of the month following the month of transportation	–
Up to 31.12.2018	100% prepayment	–
Up to 31.12.2019	Payment to be made before the 22nd day of the month following the month of transportation	–
		5.2

Details of these transactions are set out in the table below.

Member of the Group)	Associate of En+	Date of contract	Subject matter
RUSAL Ural JSC (formerly JSC "SUAL")	"EuroSibEnergo – Thermal Energy" Ltd	11.11.2016	Lease of movable and immovable property of Ondskaya Hydro Power Station
RUSAL Ural JSC (formerly JSC "SUAL")	"EuroSibEnergo – Thermal Energy" Ltd	11.11.2016	Provision of operation and maintenance services in relation to the Ondskaya Hydro Power Station
Total:			

The aggregate consideration for operation of Ondskaya Hydro Power Station under these contracts by "EuroSibEnergo – Thermal Energy" Ltd during the year ended 31 December 2018 amounted to USD6.3 million which was within the maximum aggregate consideration of USD7.945 million for 2018 as disclosed in the Company's announcement dated 14 November 2016.

J Connection of electrical grid by the associate of En+

Each of the issued share capital of Joint Stock Company "Irkutsk electronetwork company" and JSC "IENC" is held by En+ as to more than 30% and is therefore an associate of En+ and thus is a connected person of the Company under the Listing Rules.

Accordingly, the transactions entered into between a member of the Group as customer and each of Joint Stock Company "Irkutsk electronetwork company" or JSC "IENC" as service provider constituted continuing connected transactions of the Company under the Listing Rules. The consideration for the electrical grid connection services under the contracts was determined on an arm's length basis. The consideration for the contracts was satisfied in cash via wire transfer.

	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
	From 1 January 2017 to 31 December 2018	The rent is to be paid monthly	4
	From 1.01.2017 to 31.12.2018	Consideration is to be paid monthly	2.3
			6.3

Details of the transactions are set out in the table below:

Date of contract	Customer (member of the Group)	Service provider (associate of En+)
03.10.2017	"RUSAL Taishet Aluminium Smelter" Limited Liability Company	Joint Stock Company "Irkutsk electronetwork company"
09.11.2018 (addendum to the original contract dated 10.11.2016)	United Company RUSAL Anode Plant, LLC	JSC "IENC"
Total:		

The aggregate consideration for the electrical grid connection services provided under the above contract by the associate of En+ during the year ended 31 December 2018 amounted to nil which was within the maximum aggregate consideration of USD 26.561 million for 2018 as disclosed in the announcement dated 12 November 2018.

(II) The transactions and arrangements summarized below were entered into by members of the Group on or prior to 31 December 2018 and are in relation to transactions for the year ending 31 December 2019 and subsequent years (and not for the year ended 31 December 2018):

A Transportation Contracts

As discussed above, each of KraMZ-Auto, OVE and JSC "Irkutskenergotrans" is an associate of En+, and therefore is a connected person of the Company under the Listing Rules. Accordingly, the following transactions entered into between members of the Group on one part, and each of KraMZ-Auto, OVE and JSC "Irkutskenergotrans" on the other, constitute continuing connected transactions of the Company under the Listing Rules.

Term of contract	Payment terms	Actual consideration for the year ended 31 December 2018 USD million (excluding VAT)
Up to 01.10.2020, may be extended for the next year if neither party declares its intention to terminate the contract in writing no later than 30 calendar days prior to its expiration	The payment of consideration will be made monthly against the invoices issued by the service provider and the subsequent work acceptance certificates based on stages	–
From 9 November 2018 to 31 December 2019	The payment of consideration will be made monthly against the invoices issued by the service provider and the subsequent work acceptance certificates based on stages	–
		–

During 2018, members of the Group, as customers, entered into the following transportation contracts with particulars set out below:

Date of contract	Customer (member of the Group)	Service provider (associate of En+)	Transportation services
18.01.2018	Limited Liability Company "Russian Engineering Company" (Krasnoyarsk)	KraMZ-Auto	Passenger and freight automobiles, hoisting and road cleaning machines, loading and unloading equipment, tractors
01.02.2018 (addendum to the contract dated 28.12.2017)	Limited Liability Company "Russian Engineering Company"	KraMZ-Auto	Motor transportation services
01.01.2018	JSC "RUSAL Krasnoyarsk"	KraMZ-Auto	Purchase of passenger-and-freight services (cargo, passenger vehicles, lifting machines and special equipment)
01.01.2018	JSC "RUSAL Krasnoyarsk"	KraMZ-Auto	Purchase of passenger-and-freight services (services of passenger vehicles)
01.01.2018	PJSC "RUSAL Bratsk" (Shelekhov)	KraMZ-Auto	Purchase of passenger-and-freight services (cargo, passenger vehicles, lifting machines and special equipment)
01.01.2018	PJSC "RUSAL Bratsk" (Shelekhov)	KraMZ-Auto	Purchase of passenger-and-freight services (services of passenger vehicles)
01.01.2018	"Sayanogorsk Railcar Repair Works" Limited Liability Company (SVRZ)	KraMZ-Auto	Purchase of passenger-and-freight services (cargo, passenger vehicles, lifting machines and special equipment)

Estimated consideration for the relevant year payable excluding VAT (USD)	Scheduled termination date	Payment terms
2019: 529,681 2020: 534,977	31 December 2020	Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by the customer, on the basis of performed works acceptance certificates signed by the parties
2019: 229,613 2020: 232,148	31 December 2020	Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works and acceptance certificates signed by the parties
2019: 2,769,973 2020: 2,901,853	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 801,272 2020: 860,347	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 4,876,567 2020: 5,071,607	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 98,310 2020: 102,264	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 20,969 2020: 21,808	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services

Date of contract	Customer (member of the Group)	Service provider (associate of En+)	Transportation services
01.01.2018	Sayanogorsk Railcar Repair Works Limited Liability Company (SVRZ)	KraMZ-Auto	Purchase of passenger-and-freight services (services of passenger vehicles)
01.01.2018	PJSC "RUSAL Bratsk"	KraMZ-Auto	Purchase of passenger-and-freight services (services on transportation of cargoes, special equipment services, services of passenger vehicles)
01.01.2018	JSC "RUSAL Sayanogorsk	KraMZ-Auto	Purchase of passenger-and-freight services (services of passenger vehicles)
01.01.2018	JSC "RUSAL Sayanogorsk	KraMZ-Auto	Purchase of passenger-and-freight services (cargo, passenger vehicles, lifting machines and special equipment)
28.12.2017 (the terms of the contract commenced on 01.01.2018)	Limited Liability Company "Russian Engineering Company" (Sayanogorsk)	KraMZ-Auto	Passenger vehicles (LIAZ buses) and cargo transportation (freight transport)
25.12.2017 (the terms of the contract commenced on 01.01.2018)	"IT-Service" LLC	KraMZ-Auto	Provision of vehicles and special equipment for the crew and provision of services to manage them and for their technical exploitation
28.12.2017 (the terms of the contract commenced on 01.01.2018)	RUSAL SAYANAL JSC	KraMZ-Auto	Passenger forwarding by buses

Estimated consideration for the relevant year payable excluding VAT (USD)	Scheduled termination date	Payment terms
2019: 4,817 2020: 5,298	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 2,419,369 2020: 2,518,323	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 299,344 2020: 329,279	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 2,661,527 2020: 2,767,986	31 December 2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services
2019: 94,045 2020: 103,449	31 December 2020	Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by the customer, on the basis of performed works acceptance certificates signed by the parties
2019: 26,426 2020: 27,483	31 December 2020	Payment within 60 days from the date of signing and provision of original invoice
2019: 29,634 2020: 32,597	31 December 2020	Payment within 10 days after receipt of the VAT invoice

Date of contract	Customer (member of the Group)	Service provider (associate of En+)	Transportation services
28.12.2017 (the terms of the contract commenced on 01.01.2018)	RUSAL SAYANAL JSC	KraMZ-Auto	Cargo transportation
28.12.2017 (the terms of the contract commenced on 01.01.2018)	Limited Liability Company "Russian Engineering Company" (Shelekhov)	KraMZ-Auto	Motor transportation services
18.01.2018	Limited Liability Company "Russian Engineering Company" (Krasnoyarsk)	KraMZ-Auto	Passenger and freight automobiles, hoisting and road cleaning machines, loading and unloading equipment, tractors
01.02.2018	Limited Liability Company "Russian Engineering Company"	KraMZ-Auto	Motor transportation services
23.12.2018	RUSAL Sayanogorsk JSC	OVE	Transportation and provision of railway transport services
27.12.2018	RUSAL SAYANAL JSC	OVE	Cargo forwarding

Estimated consideration for the relevant year payable excluding VAT (USD)	Scheduled termination date	Payment terms
2019: 391,336 2020: 456,357	31 December 2020	Payment within 15 days after receipt of the VAT invoice
2019: 187,327 2020: 199,036	31 December 2020	Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works acceptance certificates signed by the parties
2019: 529,681 2020: 534,977	31 December 2020	Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by the customer, on the basis of performed works acceptance certificates signed by the parties
2019: 229,613 2020: 232,148	31 December 2020	Payment to be made in two equal installations of 50% of the consideration, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after receipt of the invoice on the basis of performed works and acceptance certificates signed by the parties
2019: 4,681,606	31 December 2019	Payment to be made every ten days within 10 working days from the date of receipt of the invoice
2019: 26,167	31 December 2019	Payment to be made within 10 days after receipt of the VAT invoice

Date of contract	Customer (member of the Group)	Service provider (associate of En+)	Transportation services
27.12.2018	Kremny JSC	KraMZ-Auto	Transportation and freight services
01.01.2019	Limited Liability Company "Russian Engineering Company"	KraMZ-Auto	Motor transportation services
27.12.2018	LLC "SUAL-PM"	KraMZ-Auto	Transportation services
27.12.2018	JSC "Kremniy"	JSC "Irkutskenergotrans"	Transportation services

The consideration under these transportation contracts is to be paid in cash via wire transfer or bilateral clearing or set-off of reciprocal obligations.

B Heat Supply Contracts with the associates of En+

As discussed above, each of JSC Irkutskenergo, Khakass Municipal Systems LLC, Khakass Utility Systems LLC and Joint-Stock Company "Baykalenergo" is an associate of En+, and is thus a connected person of the Company under the Listing Rules.

Accordingly, the transactions entered into between members of the Group on one part and JSC Irkutskenergo, Khakass Municipal Systems LLC, Khakass Utility Systems LLC or Joint-Stock Company "Baykalenergo" on the other, as discussed below, constitute continuing connected transactions of the Company under the Listing Rules.

Estimated consideration for the relevant year payable excluding VAT (USD)	Scheduled termination date	Payment terms
2019: 12,493	31 December 2019	Payment to be made within 10 days after receipt of the certificate of rendered services
2019: 427,717	31 December 2019	Payment to be made in two equal installations of 50% of the total amount, one before the 15th of the month following the report month, and the other before the 30th of the month following the report month after the receipt from contractor of the original copy of the invoice for the total amount of services performed and accepted by customer, on the basis of performed works acceptance certificates signed by the parties
2019: 44,803	31 December 2019	Payment in 10 days after receiving invoice for services provided
2019: 1,018	31 December 2019	Payment in 60 days after receiving invoice for services provided

During 2018, members of the Group, as purchasers, entered into the following heat supply contracts with particulars set out below:

Date of contract	Purchaser (member of the Group)	Supplier (associate of En+)	Form of heat
01.01.2018 (Note 1)	PJSC "RUSAL Bratsk" (Shelekhov)	JSC Irkutskenergo	Thermal energy in hot water
01.01.2018 (Note 1)	PJSC "RUSAL Bratsk" (Shelekhov)	JSC Irkutskenergo	Thermal energy in a pair
28.12.2017 (the terms of the contract commenced on 01.01.2018) (Note 1)	RUSAL SAYANAL JSC	Khakass Utility Systems LLC	Heat and chemically purified water
01.02.2018 (Note 1)	Limited Liability Company "RUSALTaishet Aluminium Smelter"	JSC Baykalenergo	Thermal power

Note 1. The scheduled termination date of the contract is 31 December 2020.

	Estimated amount of heat to be supplied for the relevant year	Estimated consideration payable for the relevant years excluding VAT (USD)	Payment terms
	Thermal energy: 2019: 136,948 Gcal 2020: 136,948 Gcal Hot water (coolant component): 2019: 199,505 m^3 2020: 199,505 m^3	Thermal energy: 2019: 2,099,534 2020: 2,309,487 Hot water (coolant component): 2019: 52,742 2020: 58,017	First payment of 35% of the total price no later than the 18th day of the current month; second payment of 50% no later than the last day of the current month; and the third payment of 15% no later than the 10th day of the month following the settlement month
	Thermal energy: 2019: 75,870 Gcal 2020: 75,870 Gcal Chemically purified water: 2019: 103,185 m^3 2020: 103,185 m^3	Thermal energy: 2019: 1,429,191 2020: 1,543,526 Chemically purified water: 2019: 102,692 2020: 110,907	First payment of 35% of the total price no later than the 18th day of the current month; second payment of 50% no later than the last day of the current month; and the third payment of 15% no later than the 10th day of the month following the settlement month
	Heat: 2019: 34,000 Gcal 2020: 34,000 Gcal Chemically purified water: 2019: 77,000 m^3 2020: 77,000 m^3	2019: 532,550 2020: 612,436	Payment no later than the 20th day of the month following the accounting month
	2019 – Approximately 620.08 Gcal. 2020 – Approximately 620.08 Gcal	2019: 21,761 2020: 24,447	First payment of 35% of the total price no later than the 18th day of the current month; second payment of 50% no later than the last day of the current month; and no later than the 10th day of the month following the settlement month payment for actually consumed thermal power amount with allowance for earlier payments

Date of contract	Purchaser (member of the Group)	Supplier (associate of En+)	Form of heat
01.01.2019, which is an additional agreement to the contract dated 01.01.2013 (Note 1)	RUSAL Bratsk PJSC	JSC Irkutskenergo	Water, steam
23.12.2018 (Note 2)	RUSAL Sayanogorsk JSC	Baykalenergo JSC	Hot water
23.12.2018 (Note 2)	RUSAL Sayanogorsk JSC	Baykalenergo JSC	Hot water
24.12.2018 (Note 2)	RUSAL Sayanogorsk JSC	Khakass Municipal Systems LLC	Water, steam

C Repair Services Contracts with associates of En+

As discussed above, each of JSC "IENC" and KraMZ-Auto is an associate of En+, and is thus a connected person of the Company under the Listing Rules.

Accordingly, the transaction entered into between a member of the Group on one part and each of JSC "IENC" and KraMZ-Auto on the other, as discussed below, constitute continuing connected transactions of the Company under the Listing Rules.

Note 2. The scheduled termination date of the contract is 31 December 2019.

	Estimated amount of heat to be supplied for the relevant year	Estimated consideration payable for the relevant years excluding VAT (USD)	Payment terms
	Thermal energy in hot water: 2019 - 330 Gcal 2020 - 330 Gcal Coolant: 2019 - 559 tn 2020 - 559 tn	2019: 4,946 2020: 5,144	Advance payment at 18 months - 35% of the consideration, at 30 months -50% of the consideration, and the remaining month - 15% of the consideration
	2019: 428 Gcal	2019: 16,150	Payment to be made monthly, no later than the 20th day of the month following the reporting period
	2019: Heat - 4,362 Gcal Coolant - 54,124 m^3	2019: Thermal energy 164,603 Coolant - 16,617	Payment to be made monthly, no later than the 20th day of the month following the reporting period
	2019: Thermal energy 340, 076 Gcal Coolant - 1,350,000 m^3	2019: Heat - 5,107,080 Coolant - 126,529	First payment no later than the 20th of the month of the current billing month: 85% of the total amount. Second payment no later than the 10th day of the month following the billing month: payment representing the difference between the quantity of thermal energy actually received and the amount paid by the purchaser

During 2018, members of the Group, as customers, entered into the following repair services contracts with particulars set out below:

Date of contract	Customer (member of the Group)	Contractor (associate of En+)	Repair services
14.02.2018	PJSC "RUSAL Bratsk"	JSC "IENC"	Maintenance of equipment
01.03.2018	JSC "RUSAL Krasnoyarsk"	"KraMZ-Auto"	Services for maintenance and repair of cars

The consideration under the repair services contract is to be paid in cash via wire transfer.

D Operation of Ondskaya Hydro Power Station

As discussed above, EuroSibEnergo — Thermal Energy LLC is an associate of En+ and thus is a connected person of the Company under the Listing Rules. Accordingly, the transactions entered into between members of the Group and EuroSibEnergo — Thermal Energy LLC constitute continuing connected transactions of the Company under the Listing Rules.

During 2018, a member of the Group, entered into the following contracts with EuroSibEnergo — Thermal Energy LLC with particulars set out below:

Member of the Group)	Associate of En+	Date of contract	Subject matter
JSC RUSAL Ural (formerly JSC "Siberian and Urals Aluminium Company")	EuroSibEnergo — Thermal Energy LLC	13.12.2018 (addendum to the lease dated 11.11.2016)	Lease of movable and immovable property of Ondskaya Hydro Power Station
JSC RUSAL Ural	EuroSibEnergo — Thermal Energy LLC	Addendum dated 13.12.2018	Provision of operation and maintenance services in relation to the movable and immovable property of Ondskaya Hydro Power Station

E Connection of electrical grid by the associate of En+

The issued share capital of JSC "IENC" is held by En+ as to more than 30% and is therefore an associate of En+ and thus is a connected person of the Company under the Listing Rules. Accordingly, the transaction entered into between a member of the Group as customer and JSC "IENC" as service provider constitute continuing connected transactions of the Company under the Listing Rules.

	Scheduled termination date	Estimated consideration payable for the relevant year USD	Payment terms
	Up to 31 December 2019	2019: 653,325	Within 5 calendar days from the receipt of the invoice for the current month
	Up to 31 December 2020	2019:13,522 2020:14,590	Payment is made within 10 banking days from the date of receipt of the original invoice

	Term of contract	Payment terms	Estimated consideration payable for the relevant year, excluding VAT (USD)
	From 01.01.2019 to 31.12.2021	50% of the monthly payment to be paid before the 20th of the current lease month; the remaining 50% of the monthly payment to be paid before the 5th of the month following the lease month	2019: 4,090,909 2020: 4,090,909 2021: 4,090,909
	01.01.2019 to 31.12.2021	Consideration is to be paid monthly in cash via bank transfer	2019: 7,563,636 2020: 7,563,636 2021: 7,563,636

During 2018, a member of the Group, entered into the following contract with JSC "IENC" with particulars set out below:

Date of contract	Customer (member of the Group)	Service provider (associate of En+)
09.11.2018 (addendum to the original contract dated 10.11.2016)	United Company RUSAL Anode Plant, LLC	JSC "IENC"

The consideration is to be satisfied in cash via wire transfer.

12 Agreements subject to change of control provisions

The following agreements with the Company contain change of control provisions allowing the other parties under such agreements to cancel their commitments in full and declare (or which action would result in) all outstanding loans immediately due and payable in the relevant event:

(a) The PXF Facility - as at 31 December 2018, the outstanding nominal value of debt was USD1.7 billion and the final maturity date of the debt was 31 May 2022.

(b) Credit facility agreement dated 31 August 2017 between, Sberbank as lender and the Company as borrower - as of 31 December 2018, the outstanding nominal value of the debt was equal to USD4.2 billion and the final maturity date of the debt is 24 December 2024.

(c) A term facility agreement dated 29 January 2018 between RUSAL as borrower and Nordea Bank Abp as lender with a limit up to USD200 million, and as of 31 December 2018, the outstanding nominal value of the debt was USD200 million and the final maturity of the debt is 30 January 2021.

13 Major customers and suppliers

Large scale end-customers of the Company include Glencore International AG, Arkonik SMZ JSC, Rio Tinto Alcan, Toyota Tsusho Corporation, and Boguchansky Aluminium Smelter CJSC.

The largest customer and the five largest customers of the Group accounted for 32% and 45%, respectively, of the Group's total sales for the year ended 31 December 2018.

The major suppliers of the Company are FSC JSC and EuroSibEnergo-Hydrogeneration LLC with respect to electricity and capacity and power supply or transmission, "Russian Railways" OJSC with respect to railway transportation, ENRC Marketing AG with respect to alumina supply, and Boguchansky Aluminium Smelter CJSC with respect to primary aluminium supply.

The amount of purchases from the largest supplier and the five largest suppliers of the Group accounted for 9% and 28%, respectively, of the Group's total cost of sales for the year ended 31 December 2018.

Save for the fact that Glencore was deemed to be interested in 8.75 % (long position) of the total issued share capital of the Company within the meaning of Part XV of the SFO as at 31 December 2018 and that Mr. Ivan Glasenberg, a former non-executive Director (ceased to be a Director with effect from 10 April 2018), is a member of the board of directors and the chief executive officer of Glencore, no Director or their respective associates (as defined in the Listing Rules) or any Shareholders (which to the knowledge of the Directors own more than 5% of the share capital of the Company) had any interests in the Group's five largest customers at any time during 2018.

	Term of contract	Payment terms	Estimated consideration payable for the relevant year, excluding VAT (USD)
	09.11.2018 to 31.12.2019	The payment of consideration will be made monthly against the invoices issued by the service provider and the subsequent work acceptance certificates based on stages	2019: 36.060 million

14 Directors

The following individuals served as Directors during the financial year (unless specified otherwise):

Name	Position at year end (unless specified otherwise)
Oleg Deripaska	Non-executive Director (resigned with effect from 25 May 2018)
Vladislav Soloviev	Executive Director (resigned with effect from 28 June 2018)
Siegfried Wolf	Executive Director (resigned with effect from 28 June 2018)
Evgenii Nikitin	Executive Director (appointed on 28 June 2018)
Sergei Popov	Executive Director (appointed on 28 June 2018 and resigned with effect from 14 February 2019)
Evgenii Vavilov	Executive Director (appointed on 28 June 2018)
Mr. Evgeny Kuryanov	Executive Director (appointed on 14 February 2019)
Maxim Sokov	Non-executive Director (resigned with effect from 28 June 2018)
Daniel Lesin Wolfe	Non-executive Director (resigned with effect from 10 April 2018)
Dmitry Afanasiev	Non-executive Director (resigned with effect from 28 June 2018)
Ekaterina Nikitina	Non-executive Director (resigned with effect from 28 June 2018)
Gulzhan Moldazhanova	Non-executive Director (resigned with effect from 28 June 2018)
Ivan Glasenberg	Non-executive Director (resigned with effect from 10 April 2018)
Maksim Goldman	Non-executive Director (resigned with effect from 10 April 2018)
Olga Mashkovskaya	Non-executive Director (resigned with effect from 28 June 2018)
Marco Musetti	Non-executive Director
Vyacheslav Solomin	Non-executive Director (appointed on 28 June 2018)
Timur Valiev	Non-executive Director (appointed on 28 June 2018)
Elsie Leung Oi-sie	Independent non-executive Director

Name	Position at year end (unless specified otherwise)
Mark Garber	Independent non-executive Director (resigned with effect from 28 June 2018)
Matthias Warnig	Independent non-executive Director (resigned with effect from 31 December 2018)
Philip Lader	Independent non-executive Director (resigned with effect from 10 April 2018)
Dmitry Vasiliev	Independent non-executive Director
Bernard Zonneveld	Independent non-executive Director (appointed as Chairman of the Board with effect from 6 March 2019)
Philippe Bernard Henri Mailfait	Independent non-executive Director (appointed on 28 June 2018 and resigned with effect from 26 January 2019)
Jean-Pierre Thomas	Independent non-executive Director (appointed on 28 June 2018 and resigned with effect from 26 January 2019)
Maxim Poletaev	Independent non-executive Director (appointed on 14 February 2019)
Randolph N. Reynolds	Independent non-executive Director (appointed on 14 February 2019)
Kevin Parker	Independent non-executive Director (appointed on 14 February 2019)
Christopher Burnham	Independent non-executive Director (appointed on 14 February 2019)
Nick Jordan	Independent non-executive Director (appointed on 14 February 2019)

Particulars of appointments of Directors

A. Executive Directors

Each of the executive Directors has agreed and signed an appointment letter to act as executive Director with effect from their respective dates of appointment, with a term of up to the annual general meeting in the third year after the commencement of the appointment according to the Articles of Association, which may be terminated in accordance with the terms of their respective employment contracts and applicable legislation. The appointment of each executive Director is subject to the provisions of retirement and rotation of Directors under the Articles of Association.

B. Non-executive Directors and independent non-executive Directors

Each of the non-executive Directors and the independent non-executive Directors has signed an appointment letter with the Company with effect from their respective dates of appointment with a term of up to the annual general meeting in the third year after the commencement of the appointment according to the Articles of Association. Appointments of non-executive Directors may be terminated by the non-executive Director by giving one month's notice of termination and/or otherwise in accordance with the Articles of Association. Appointments of independent non-executive Directors may be terminated by the Company or the independent non-executive Director by giving one month's notice of termination and/or otherwise in accordance with the Articles of Association. Each of the non-executive Directors and the independent non-executive Directors is entitled to a fixed director's fee. The appointment of each non-executive Director and independent non-executive Director is subject to the provisions of retirement and rotation of Directors under the Articles of Association.

Paragraph A.4.1 of the CG Code provides that non-executive Directors should be appointed for a specific term, subject to re-election, and paragraph A.4.2 provides that every Director, including those appointed for a specific term, should be subject to retirement by rotation at least every three years. The Company has addressed these requirements by including Article 24.2 of the Articles of Association which provides that if any Director has at the start of the annual general meeting been in office for three years or more since his last appointment or re-appointment, he shall retire at the annual general meeting. As such, it is possible that a Director may be in office for more than three years depending upon the timing of the relevant annual general meeting.

There are no service contracts with any Directors who are proposed for re-election at the forthcoming annual general meeting that are not determinable by the Company within one year without payment of compensation (other than statutory compensation).

C. Confirmation of Independence

The Company has received from each of the independent non-executive Directors an annual confirmation of independence pursuant to Rule 3.13 of the Listing Rules and considers all the independent non-executive Directors to be independent. The Board considers that all independent non-executive Directors are independent by reference to the factors stated in the Listing Rules.

D. Change of particulars of Directors

Mr. Timur Valiev was a director of En+ from June to December 2018.

Mr. Vyacheslav Solomin ceased to serve as chief executive officer of En+ in October 2018. Mr. Solomin ceased to hold the position of chief executive officer of EuroSibEnergo (Russia) in November 2018.

Mr. Jean-Pierre Thomas was appointed as the chairman of the Company with effect from 1 January 2019 (ceased to be a Director with effect from 26 January 2019).

Mr. Bernard Zonneveld was appointed as the chairman of the Company with effect from 6 March 2019.

Mr. Randolph N. Reynolds ceased to serve on the boards of First Union National Bank, Ma'aden Aluminium Company and Novolipetsk Steel (NLMK). Mr. Reynolds also ceased to be the chairman of the board of the Defense Enterprise Fund and the co-chairman of the board of Junior Achievement of Russia. He also ceased to be a member of the advisory board of the Company.

E. Resignation of Directors

Each of Mr. Ivan Glasenberg, a non-executive Director, and Mr. Philip Lader, an independent non-executive Director, has tendered his resignation as a Director with effect from 10 April 2018, and ceased to be members/chairman of their respective Board committees.

Each of Mr. Maksim Goldman and Mr. Daniel Lesin Wolfe, non-executive Directors, has tendered his resignation as a Director with effect from 10 April 2018, and ceased to be members of their respective Board committees.

Mr. Vladislav Soloviev and Mr. Siegfried Wolf, both executive Directors, and Mr. Maxim Sokov, Mr. Dmitry Afanasiev, Ms. Gulzhan Moldazhanova, Ms. Olga Mashkovskaya and Ms. Ekaterina Nikitina, all being non-executive Directors, tendered their resignation as Directors with effect from 28 June 2018, the date of the 2018 annual general meeting of the Company, and ceased to be members/chairman of their respective Board committees.

Mr. Oleg Deripaska, a non-executive Director, tendered his resignation as a Director with effect from 25 May 2018, and ceased to be a member of his respective Board committee.

Mr. Mark Garber has tendered his resignation as an independent non-executive Director with effect from 28 June 2018, the date of the 2018 annual general meeting of the Company, and ceased to be members/chairman of his respective Board committees.

Mr. Matthias Warnig tendered his resignation as an independent non-executive Director with effect from 31 December 2018, the date of the 2018 annual general meeting of the Company, and ceased to be chairman of his respective Board committees.

Mr. Philippe Bernard Henri Mailfait tendered his resignation as an independent non-executive Director with effect from 26 January 2019.

Mr. Jean-Pierre Thomas tendered his resignation as an independent non-executive Director with effect from 26 January 2019, and ceased to be a member of his respective Board committees.

Mr. Sergei Popov tendered his resignation as an executive Director with effect from 14 February 2019.

F. Appointment of Directors

Each of Mr. Evgenii Nikitin, Mr. Sergei Popov and Mr. Evgenii Vavilov was appointed as an executive Director with effect from 28 June 2018. Mr. Sergei Popov resigned as Director with effect from 14 February 2019.

Each of Mr. Vyacheslav Solomin and Mr. Timur Valiev was appointed as a non-executive Director with effect from 28 June 2018. Mr. Sergei Popov resigned as Director with effect from 14 February 2019.

Each of Mr. Philippe Bernard Henri Mailfait and Mr. Jean-Pierre Thomas was appointed as an independent non-executive Director with effect from 28 June 2018 (each ceased to be a Director with effect from 26 January 2019).

Mr. Evgeny Kuryanov was appointed as an executive Director with effect from 14 February 2019.

Each of Mr. Maxim Poletaev, Mr. Randolph N. Reynolds, Mr. Kevin Parker, Mr. Christopher Burnham and Mr. Nick Jordan was appointed as an independent non-executive Director with effect from 14 February 2019.

G. Changes to the composition of Board Committees

Mr. Dmitry Vasiliev was appointed as the chairman of the Corporate Governance and Nomination Committee of the Company with effect from 28 June 2018. Mr. Christopher Burnham was appointed as a member of the Corporate Governance and Nomination Committee of the Company with effect from 6 March 2019.

Mr. Bernard Zonneveld, Mr. Marco Musetti and Mr. Timur Valiev were appointed as members of the Standing Committee of the Company with effect from 28 June 2018. Mr. Bernard Zonneveld was appointed as the chairman of the Standing Committee of the Company with effect from 6 March 2019.

Mr. Jean-Pierre Thomas was appointed as a member of each of the Corporate Governance and Nomination Committee and the Remuneration Committee of the Company, with effect from 28 June 2018 (ceased to be a Director with effect from 26 January 2019).

Mr. Randolph N. Reynolds was appointed as a member of the Corporate Governance and Nomination Committee and Mr. Nick Jordan was appointed as a member of the Remuneration Committee of the Company with effect from 14 February 2019.

Mr. Maxim Poletaev was appointed as the chairman of the Audit Committee of the Company with effect from 6 March 2019. Mr. Kevin Parker was appointed as a member of the Audit Committee of the Company with effect from 6 March 2019. Mr. Bernard Zonneveld resigned from the Audit Committee with effect from 6 March 2019.

Mr. Dmitry Vasiliev and Mr. Randolph N. Reynolds were appointed as members of the Remuneration Committee of the Company with effect from 6 March 2019. Mr. Bernard Zonneveld resigned from the Remuneration Committee with effect from 6 March 2019.

Each of Mr. Maxim Poletaev and Mr. Bernard Zonneveld, Mr. Timur Valiev and Mr. Marco Musetti, was appointed as a member of the Norilsk Nickel Investment Supervisory Committee of the Company with effect from 6 March 2019. Mr. Maxim Poletaev was also appointed as the chairman of the Norilsk Nickel Investment Supervisory Committee of the Company with effect from 6 March 2019.

Each of Mr. Kevin Parker, Mr. Dmitry Vasiliev, Mr. Nick Jordan and Mr. Vyacheslav Solomin, was appointed as a member of the Health, Safety and Environmental Committee of the Company with effect from 6 March 2019. Mr. Kevin Parker was also appointed as the chairman of the Health, Safety and Environmental Committee of the Company with effect from 6 March 2019. Mr. Bernard Zonneveld resigned from the Health, Safety and Environmental Committee with effect from 6 March 2019.

Mr. Christopher Burnham was appointed as the chairman of the Compliance Committee of the Company with effect from 6 March 2019, and Mr. Nick Jordan, Mr. Bernard Zonneveld and Mr. Kevin Parker, were appointed as members of the Compliance Committee of the Company with effect from 6 March 2019.

15 Directors' and Chief Executive Officer's interests in Shares and in shares of associated corporations of RUSAL

As at 31 December 2018, none of the Directors or the Chief Executive Officer had any interest or short position, whether beneficial or non-beneficial, in the Shares, underlying Shares and debentures of RUSAL as recorded in the register required to be kept pursuant to section 352 of the SFO or otherwise notified to RUSAL and the Hong Kong Stock Exchange pursuant to the Model Code (as incorporated by the Company in its "Codes for Securities Transactions" - for further information, please refer to the Corporate Governance Report below) were as set out below.

Interests and short positions in underlying Shares and in the underlying Shares of the associated corporations of RUSAL

As at 31 December 2018, neither any Director or the Chief Executive Officer had any interest or short position, whether beneficial or non-beneficial, in the Shares, underlying Shares and debentures of the Company or in any of its associated corporations (within the meaning of Part XV of the SFO) which were notified to the Company or the Hong Kong Stock Exchange and entered into the register required to be kept under section 352 of the SFO, or which were notified to the Company and the Hong Kong Stock Exchange pursuant to the Model Code.

16 Directors' interests in businesses that may compete with the Company

Mr. Deripaska (ceased to be a Director with effect from 25 May 2018), Ms. Gulzhan Moldazhanova (ceased to be a Director with effect from 28 June 2018), Mr. Maxim Sokov (ceased to be a Director with effect from 28 June 2018) and Ms. Olga Mashkovskaya (ceased to be a Director with effect from 28 June 2018) were interested in/were directors of En+, Mr. Philippe Bernard Henri Mailfait (ceased to be a Director with effect from 26 January 2019) is a director of En+. Mr. Christopher Burnham (appointed as an independent non-executive Director on 14 February 2019) and Mr. Nick Jordan (appointed as an independent non-executive Director on 14 February 2019) are directors of En+. Mr. Ivan Glasenberg (ceased to be a Director with effect from 10 April 2018) is interested in Glencore and is a director and the chief executive officer of Glencore. En+, SUAL Partners and Glencore are businesses which compete or are likely to compete, either directly or indirectly, with the Company. The summary below provides a description of these businesses, as well as facts demonstrating that RUSAL is capable of carrying on its own business independently of and at arm's length from these businesses.

In considering whether the Board and senior management of the Company are independent from the senior management of each of En+, SUAL Partners and Glencore, the Directors have taken into account the following general reasons, as well as the specific reasons applicable to each of En+, SUAL Partners and Glencore:

(a) the Board consists of fourteen Directors, comprising three executive Directors, three non-executive Directors and eight independent non-executive Directors;

(b) the decision-making mechanism of the Board set out in the Articles of Association provides that all Directors with a conflicting interest shall not vote when a conflicted resolution is to be discussed and voted on;

(c) the Board has eight independent non-executive Directors with extensive corporate governance and financial experience and is able to review, enhance and implement measures to manage any conflict of interests between the businesses in which the Directors have interests and the Group in order to protect minority shareholders' interests and to manage the affairs of the Group independently of the businesses in which the Directors have interests that may compete with the Company. The independent non-executive Directors make recommendations on proposed connected transactions by the Company. A committee of the independent non-executive Directors will make recommendations to the independent shareholders on how to vote for any resolution that relates to future connected transactions pursuant to the Listing Rules' requirements; and

(d) all connected transactions which are subject to reporting and announcement requirements under the Listing Rules have to be reviewed by the Audit Committee before they are approved by the Board.

In respect of each specific relevant business:

A. En+

En+ is a public company limited by shares with its registered office at 44 Esplanade St. Helier, JE4 9WG, the Channel Islands. Pursuant to the disclosure of interests notices filed on 1 February 2019, Mr. Oleg Deripaska indirectly holds 44.95% of the shares in En+. Please refer to Note 1 of the "Substantial Shareholders' Interests" section.

En+ is a parent company for vertically integrated aluminium and power group, engaged in aluminium production and energy generation. En+ specializes in metals that require high energy consumption and then looks for synergies between its energy producing and energy consuming businesses.

Key assets of En+ include:

EuroSibEnergo – a wholly-owned power company with core generating assets located in Siberia, Russia. EuroSibEnergo has in total installed capacity of 19.7 GW, out of which 15.1 GW accounts for hydro power plants, three of which are among top-20 hydro power plants in the world in terms of installed capacity. It manages assets in power generation, power trading and supply and engineering services.

RUSAL – one of the largest producers of aluminium and alumina in the world with fully integrated value chain from bauxite mining to primary aluminium production. Core aluminium producing facilities are located in Siberia enjoying access to clean environmentally friendly hydro power. RUSAL is one of the lowest cost producers globally, benefiting from cheap, clean and renewable hydro energy in Siberia.

Independence from En+

Having considered all relevant factors, including the following, the Directors are satisfied that the Group can conduct its business independently of En+:

Independence of the Board and the Group's Senior Management from the Senior Management of En+

The majority of the Board currently comprises of independent non-executive Directors. As at the Latest Practicable Date, four of the Directors were nominated by

En+, two of which Directors are also directors of En+. The overlapping Directors at the Latest Practicable Date were Mr. Christopher Burnham (being an independent non-executive Director with effect from 14 February 2019) and Mr. Nick Jordan (being an independent non-executive Director with effect from 14 February 2019). Mr. Vyacheslav Solomin was appointed as a chief executive officer of En+ effective from 1 May 2018. All of the overlapping Directors have been elected on the basis of their qualifications and breadth of experience, as set out in further details in the "Profiles of Directors and Senior Management" section in this Annual Report. The Company's non-executive Directors attend Board meetings and provide guidance to and decide on the Company's important matters. Certain of the non-executive Directors also sit on the committees of the Board and are responsible for the matters related to such committees.

For the general reasons stated above, the Directors are of the view that the Group is able to operate independently from En+, notwithstanding the fact that four Directors are nominated by En+.

Operational Independence

The Group has full control of its assets and its businesses, and operates as a business group which is separate from and fully independent of En+.

The Group has, as disclosed under the section entitled "Connected Transactions" of this Annual Report, entered into contracts with the associates of En+ for the purchase of electricity, and may continue to do so in the future.

As aluminium production is energy intensive, access to relatively inexpensive Siberian hydropower is central to the competitive strategy of the Group. However, notwithstanding the volume of such purchases from the associates of En+ and the importance of electricity costs to the production activities of the Group, the Company does not consider that it is, as a consequence, overly reliant on En+ for the following reasons:

(a) the Group has access to alternative sources of electricity as the Group's Russian smelters are connected to the Russian power grid, meaning that electricity supplies can be obtained from various power plants, all of which are also connected to the grid. These supplies are available to the Group at market prices;

(b) the Group purchases electricity in accordance with the Rules of the Wholesale Electricity and Capacity Market at contract prices in accordance with direct sale-purchase agreements with suppliers (both related or unrelated to the Controlling Shareholder) and/or at market prices for electricity sold on the market irrelative to the particular supplier. In 2018, the overall share of electricity purchased by the Group's aluminium plants from the suppliers related to the Controlling Shareholder did not exceed 63%. The Group has an option of switching to suppliers unrelated to the Controlling Shareholder including by purchasing electricity on the wholesale electricity market, though there would be certain price impact;

(c) none of the contracts is in take-or-pay format;

(d) the Group is currently already a very large volume user with significant negotiating power in the Russian power market. In 2018, the Group has consumed approximately 28% of the power generated in Siberia; and

(e) the power plants owned or controlled by En+ are located in remote regions where there is a limited number of large volume users located in proximity to such plants. Sales to distant users would involve significant transmission losses and, because Siberia is a surplus energy producer, the result is that these plants are more reliant on the customer rather than vice versa.

Financial Independence

The Group's financial auditing system is independent from En+ and employs a sufficient number of dedicated financial accounting personnel responsible for financial auditing of the Group's accounts. The Company has independent bank accounts and independent tax registration. The Group's treasury operations are handled by the Company's treasury department, whose functions include financing, treasury and cash managements and which operates independently from En+ and shares no functions or resources with En+. The Group's choice of financial institutions is mainly based on the credit standing of the institutions and the terms offered by them. As at the year end of 2018, En+ had not provided any security and/or guarantee over the Group's borrowings. As a result of the above analysis, the Directors believe that the Group is able to maintain financial independence from En+.

Extent of Competition

The only En+ businesses which compete with or are likely to compete with the Group's business, either directly or indirectly, are those excluded businesses described below. However, by reason of the nature of such excluded businesses and the clear delineation between the Group's business and such excluded business, the Group is fully capable of carrying on its business independently of and at arm's length from such excluded business.

There is no real competitive threat to the Group's business from the excluded business and there is no intention of the Company to acquire such excluded business.

As at the Latest Practicable Date, "KraMZ" Ltd. is held by En+ as to more than 30% of the issued share capital. "KraMZ" Ltd. is therefore an associate of En+. Most of the KraMZ plant's raw materials (principally aluminium) are purchased from companies within the Group (primarily KrAZ). KraMZ's main customers are industrial customers located within Russia and abroad that purchase aluminium rods, profiles, tubes and cast aluminium alloys.

B. SUAL Partners

SUAL Partners is a limited liability company incorporated under the laws of the Bahamas whose registered office is at 2nd Terrace West, Centreville, Nassau, Commonwealth of the Bahamas. Please refer to Note 2 of the "Substantial Shareholders' Interests" section for the shareholding structure of SUAL Partners. SUAL Partners is a holding company that holds interests in the Company and a separate kitchenware and houseware business.

Independence from SUAL Partners

Having considered all relevant factors, including the following, the Group is satisfied that it can conduct its business independently of SUAL Partners:

Independence of the Board and the Group's Senior Management from the Senior Management of SUAL Partners

For the general reasons stated above, the Directors are of the view that the Group is able to operate independently from SUAL Partners because the Group's day-to-day operations are managed by three executive Directors who are independent of and not connected with SUAL Partners and the senior management team, who are all independent of and not connected with SUAL Partners.

Based on the above, the Board is satisfied that the Board as a whole, together with the senior management team, are able to perform their managerial role in the Group independently.

Operational Independence

The Group has full control of its assets and its businesses, and operates as a business group which is separate from and fully independent of SUAL Partners.

Financial Independence

The Group's financial auditing system is independent from SUAL Partners and employs a sufficient number of dedicated financial accounting personnel responsible for financial auditing of the Group's accounts. The Company has independent bank accounts and independent tax registration.

The Group's treasury operations are handled by the Company's treasury department, whose functions include financing, treasury and cash management and which operates independently from SUAL Partners and shares no functions or resources with SUAL Partners.

The Group's choice of financial institutions is mainly based on the credit standing of the institutions and the terms offered by them.

As at the year end of 2018, SUAL Partners had not provided any security and/or guarantee over the Group's borrowings.

As a result of the above analysis, the Directors believe that the Group is financially independent from SUAL Partners.

Extent of Competition

The Board is of the opinion that SUAL Partners is not a competitor of the Company.

C. Glencore

Amokenga Holdings is a company incorporated in Bermuda whose registered office is at 22 Victoria Street, Canon's Court, Hamilton, HM12, Bermuda. Amokenga Holdings is ultimately controlled by Glencore, which is a public company listed on the London Stock Exchange, with a secondary listing on the Johannesburg Stock Exchange. No individual shareholder controls more than 20% of the share capital of Glencore. Glencore's industrial and marketing activities are supported by a global network of more than 90 offices located in over 50 countries and employ around 150,000 people, including contractors. Mr. Glasenberg is a shareholder, director and chief executive officer of Glencore, whose principal business is the production and trading of commodities including aluminium. Mr. Glasenberg was a non-executive Director of the Company (ceased to be a Director with effect from 10 April 2018) and was also a member of the corporate governance and nominations committee, the standing committee and the Norilsk Nickel investment supervisory committee. As he was not an executive Director, he did not participate in the day-to-day management of the Company, and accordingly was not involved in the daily operations of the aluminium trading division and so did not have access to confidential contracts entered into by that division. Notwithstanding that his role on the Board as a non-executive Director did not require his involvement in the day-to-day management of the Company, this did not preclude Mr. Glasenberg from fulfilling his fiduciary duties. In case Mr. Glasenberg had a conflicting interest, pursuant to the Articles of Association of the Company, he would abstain from voting at Board meetings when a conflicted resolution was to be discussed and voted on, subject to certain exceptions.

When the Group acquired certain of the alumina businesses of Glencore in late March 2007, it became subject to a contract for the supply of alumina to Glencore that continued through 2008, in declining amounts. The Group sold to Glencore approximately 22.38% of its excess alumina in monetary terms in 2018. The Company also has long term supply contracts with Glencore for alumina and primary aluminium, and Glencore was the Group's largest customer of alumina and primary aluminium in the financial year, accounting for approximately 37.67% of the Group's sales of primary aluminium.

Independence from Glencore

Having considered all relevant factors, including the following, the Group is satisfied that it can conduct its business independently of Glencore:

Independence of the Board and the Group's Senior Management from the Senior Management of Glencore

For the general reasons stated above, the Directors are of the view that the Group is able to operate independently from Glencore notwithstanding that one former Director is also a director of Glencore because the Group's day-to-day operations are managed by three executive Directors and the senior management team who are independent of and not connected with Glencore.

Based on the above, the Board is satisfied that the Board as a whole, together with the senior management team, are able to perform their managerial role in the Group independently.

Operational Independence

The Group has full control of its assets and its businesses, and operates as a business group which is separate from and fully independent of Glencore.

Financial Independence

The Group's financial auditing system is independent from Glencore and employs a sufficient number of dedicated financial accounting personnel responsible for financial auditing of the Group's accounts. The Company has independent bank accounts and independent tax registration.

The Group's treasury operations are handled by the Company's treasury department, whose functions include financing, treasury and cash management and which operates independently from Glencore and shares no functions or resources with Glencore.

The Group's choice of financial institutions is mainly based on the credit standing of the institutions and the terms offered by them.

As at the year end of 2018, Glencore had not provided any security and/or guarantee over the Group's borrowings. As a result of the above analysis, the Directors believe that the Group is financially independent from Glencore.

Extent of Competition

Glencore participates in the marketing of both aluminium and alumina from world markets as well as from industrial assets in which it has an interest. Glencore has an economic interest of 47.2%[19] in Century Aluminium Company, a NASDAQ-quoted company. Century owns and operates three aluminium smelters in the United States, in Hawesville, Kentucky (the Hawesville aluminium smelter), Robards, Kentucky (the Sebree aluminium smelter) and Goose Creek, South Carolina (the Mt. Holly aluminium smelter), and one aluminium smelter in Grundartangi, Iceland (the Grundartangi aluminium smelter). Glencore, in its business of trading, is also a customer of the Group.

As disclosed in the Company's announcement dated 28 January 2019, on 28 January 2019, En+ announced that it had entered into a securities exchange agreement and certain other related agreements with certain subsidiaries of Glencore, pursuant to which Glencore shall transfer 8.75% of the Company's shares to En+ in consideration for En+ issuing new GDRs to Glencore representing approximately 10.55% of the enlarged share capital of En+. After the aforementioned share swap is completed, the indirect shareholding of Glencore in the Shares will reduce to 0%.

17 Substantial Shareholders' Interests

As at 31 December 2018, so far as the Directors are aware, the following interests or short positions in the Shares or underlying Shares of the Company were notified to the Company pursuant to the provisions of Divisions 2 and 3 of Part XV of the SFO and were entered in the register required to be kept by the Company under section 336 of the SFO (unless specified otherwise):

19 Represents Glencore's economic interest, comprising 42.9 per cent. voting interest and 4.3 per cent. non-voting interest.

Interests and short positions in Shares

Name of Shareholder	Capacity	Number of Shares held as at 31 December 2018	Percentage of issued share capital as at 31 December 2018
Oleg Deripaska	Beneficiary of a trust (Note 1)	7,312,299,974 (L)	48.13%
	Beneficial owner	1,669,065 (L)	0.01%
	Total	**7,313,969,039 (L)**	**48.14%**
Fidelitas Investments Ltd. (Note 1)	Interest of controlled corporation	7,312,299,974 (L)	48.13%
B-Finance Ltd. (Note 1)	Interest of controlled corporation	7,312,299,974 (L)	48.13%
En+ (Note 1)	Beneficial owner	7,312,299,974 (L)	48.13%
Access Aluminum Holdings Limited (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
Access Industries Holdings LLC (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
Access Industries, LLC (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%

Name of Shareholder	Capacity	Number of Shares held as at 31 December 2018	Percentage of issued share capital as at 31 December 2018
GPTC LLC (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
Zonoville Investments Limited (Note 2)	Beneficial owner	1,625,652,591 (L) (Note 2)	10.70%
	Other	5,044,554,678 (L) 1,017,931,998 (S)	33.20% 6.70%
TCO Holdings Inc. (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
SUAL Partners (Note 2)	Beneficial owner	3,418,902,087 (L) 1,017,931,998 (S) (Note 2)	22.50% 6.70%
	Other	1,625,652,591 (L) (Note 2)	10.70%
	Total	**5,044,554,678 (L)** (Note 2)	**33.20%**
Victor Vekselberg (Note 3)	Beneficiary of a trust (Note 3)	5,044,554,678 (L) (Note 3)	33.20%
Glencore (Note 4)	Beneficial owner (Note 4)	1,329,588,048 (L)	8.75%

(L) Long position

(S) Short position

Notes – see notes on page 172.

Other than the interests disclosed above and the notes set out below, so far as the Directors are aware, as at 31 December 2018, the Company has not been notified of any other notifiable interests or short positions in Shares or underlying Shares.

(Note 1)

These interests were directly held by En+ as beneficial owner. Based on the information provided by Mr. Oleg Deripaska, a former non-executive Director, and the records on the electronic filing systems operated by the Hong Kong Stock Exchange, Mr. Oleg Deripaska is the founder, trustee and a beneficiary of a discretionary trust which, as at 31 December 2018, held a majority stake of the share capital of Fidelitas International Investments Corp. (formerly Fidelitas Investment Ltd.), which, as at 31 December 2018, held a majority stake of the share capital of B-Finance Ltd. Based on the information provided by Mr. Oleg Deripaska, as at 31 December 2018, B-Finance Ltd. held 53.86% of the share capital of En+. Each of B-Finance Ltd., Fidelitas International Investments Corp. and Mr. Oleg Deripaska was deemed to be interested in the Shares and underlying Shares held by En+ by virtue of the SFO.

Pursuant to the disclosure of interests notices filed on 1 February 2019, Mr. Oleg Deripaska held 86.33% of the share capital of Fidelitas International Investments Corp, which in turn held 99.99% of the share capital of B-Finance Ltd., which in turn held 44.95% of the share capital of En+. Further, the interest of Mr. Oleg Deripaska in the Company was increased from 7,313,969,039 Shares to 8,643,557,087 Shares, representing approximately 56.89% of the total issued share capital of the Company, on 26 January 2019. Pursuant to the disclosure of interests notices filed on 30 January 2019, the interest of En+ in the Company was increased from 7,312,299,974 Shares to 8,641,888,022 Shares, representing approximately 56.88% of the total issued share capital of the Company, on 26 January 2019. The disclosure of interests notice given by En+ to the Hong Kong Stock Exchange was made in accordance with the requirements of Part XV of the SFO. For the avoidance of doubt, as at the Latest Practicable Date, En+ is the registered shareholder and the legal and beneficial owner of approximately 50.10% of the total issued share capital of the Company only, while the remaining shares mentioned above which it is considered to be interested in pursuant to provisions of Part XV of the SFO will only be transferred 12 months after the first stage of the transfer that was completed following the de-listing of En+ from the SDN List (pursuant to a securities exchange agreement entered into by En+ with certain other related agreements with certain subsidiaries of Glencore). Further details of such transaction is disclosed in the Company's announcement dated 28 January 2019.

(Note 2)

These interests and short positions were directly held by SUAL Partners or Zonoville Investments Limited. Based on the records on the electronic filing systems operated by the Hong Kong Stock Exchange, as at 31 December 2018, SUAL Partners is controlled as to 35.84% by Renova Metals & Mining Ltd., which is in turn wholly-owned by Renova Holding Ltd.. Renova Holding Ltd. is controlled by TZ Columbus Services Limited as to 100% and TZ Columbus Services Limited is in turn wholly-owned by TCO Holdings Inc. Zonoville Investments Limited is controlled as to 40.32% by Access Aluminum Holdings Limited, which in turn is controlled as to 98.48% by Access Industries Holdings LLC. Access Industries Holdings LLC is wholly-owned by Access Industries Holdings (BVI) L.P. Access Industries Holdings (BVI) L.P. is controlled as to 67.16% by Access Industries, LLC, which is in turn controlled as to 69.70% by GPTC LLC.

Pursuant to the disclosure of interests notices filed on 21 February 2018, 23 February 2018 and 5 March 2018 respectively, the long position held by each of TCO Holdings Inc. and SUAL Partners, Zonoville Investments Limited, Access Aluminum Holdings Limited, Access Industries Holdings LLC, Access Industries Holdings (BVI) L.P., Access Industries, LLC and GPTC LLC was increased from 3,115,041,787 Shares to 5,044,554,678 Shares representing approximately 33.20% of the total issued share capital of the Company, and each of them also have a short position of 1,017,931,998 Shares representing approximately 6.7% of the total issued share capital of the Company.

Each of Renova Metals & Mining Limited, Renova Holding Limited, TZ Columbus Services Limited, TCO Holdings Inc., Access Aluminum Holdings Limited, Access Industries Holdings LLC, Access Industries, LLC, GPTC LLC is deemed to be interested in the Shares held by SUAL Partners and/or Zonoville Investments Limited by virtue of the SFO.

(Note 3)

The Company has been informed by a representative of Mr. Victor Vekselberg ("Mr. Vekselberg") that he is a beneficiary under a certain irrevocable and fully discretionary trust arrangement pursuant to which the trustee under such trust arrangement holds an indirect interest in approximately 36.39% of the issued shares in SUAL Partners. However, Mr. Vekselberg did not file any disclosure of interests notice on 11 October 2017 or thereafter up to the date of this report, and accordingly, from the records of his disclosure of interests filings made to the Hong Kong Stock Exchange, as at 31 December 2018, the number of Shares which he was interested in remained at 3,710,590,137, representing 24.42% of the issued share capital of the Company, although his deemed interests in the Company should, if he had made disclosure of interests filings in accordance with requirements of the SFO, be the same as TCO Holdings Inc, his controlled corporation.

(Note 4)

Based on the records on the electronic filing systems operated by the Hong Kong Stock Exchange as at 31 December 2018, the interests of Glencore were held through its controlled corporations, including, Amokenga Holdings, which directly holds the relevant interests in the Company. Amokenga Holdings is wholly-owned by Glencore Finance (Bermuda) Ltd., which is in turn wholly-owned by Glencore Group Funding Limited. Glencore Group Funding Limited is wholly-owned by Glencore International AG, which is in turn wholly-owned by Glencore. In light of the fact that Glencore, Glencore International AG, Glencore Group Funding Limited and Glencore Finance (Bermuda) Ltd. (together, the "Glencore Entities") directly or indirectly control one-third or more of the voting rights in the Shareholders' meetings of Amokenga Holdings, in accordance with the SFO, each of the Glencore Entities was deemed to be interested in the Shares held by Amokenga Holdings.

While it was disclosed in its disclosure filng dated 15 September 2017 that Glencore held interests in the Company as a beneficial owner, Glencore also disclosed in the same disclosure filing that the relevant interest in the Company was held through the above controlled corporations.

As disclosed in the Company's announcement dated 28 January 2019, on 28 January 2019, En+ announced that it had entered into a securities exchange agreement and certain other related agreements with certain subsidiaries of Glencore pursuant to which Glencore shall transfer 8.75% of the Company's shares to En+ (of which approximately 2% was to be transferred on the date upon En+'s removal from from the SDN List, and the remaining 6.75% shall be transferred 12 months later) in consideration for En+ issuing new GDRs to Glencore representing approximately 10.55% of the enlarged share capital of En+. Following the completion of the aforementioned share swap (expected to be on or about 31 January 2020), the indirect shareholding of Glencore in the Shares will be reduced to 0%.

Pursuant to the disclosure of interests notice filed on 8 February 2019, the interests of Amokenga Holdings decreased from 1,329,588,048 Shares to 1,029,588,048 Shares, representing approximately 6.78% of the total issued share capital of the Company, due to the transfer of approximately 2% Shares pursuant to the aforementioned securities exchange agreement, following the removal of En+ from the SDN List on 27 January 2019.

As of the Latest Practicable Date none of the Major Shareholders have or will have different voting rights attached to the Shares they hold in the Company.

None of the Major Shareholders have or will have different voting rights attached to the Shares they hold in the Company.

18 Pre-emptive rights

There are no applicable statutory pre-emption rights which apply to the Company and there are no restrictions on the exercise of voting rights or share transfers included in the Articles of Association. There are, however, certain restrictions and preferential terms and conditions relating to sales and acquisitions of certain Shares held by the Major Shareholders (see section 9 of the Directors' Report - Shareholders' agreements).

19 Emolument policy

There are no arrangements under which a Director has waived or agreed to waive any emoluments due by the Group.

The aggregate remuneration that the Directors have received (including fees, salaries, bonus, contributions to defined contribution benefit plans (including pension), housing and other allowances, and other benefits in kind) for the financial year ended 31 December 2018 was approximately USD15 million. Additional information on the remuneration of the Directors and the individuals with the highest emoluments can be found in notes 9 and 10 to the consolidated financial statements.

The Company does not have any agreements in place providing for indemnities to Directors in case of dismissal without cause or in case of tender offer, other than in relation to an obligation to pay unpaid salaries and expenses at termination of employment. The Company has agreements in place with several of its employees that provide for indemnities in case of dismissal without cause.

Basis for Compensation of Directors and Senior Management

Remuneration policies of RUSAL are considered by the Remuneration Committee on the basis of an employee's qualifications and performance, as well as the complexity of his or her job. Wages for each employee are generally reviewed annually and revised in accordance with a performance assessment and local labor market conditions. The following was approved by the Board, on the recommendation of the Remuneration Committee in relation to the compensation of the non-executive Directors, CEO and certain members of senior management and other employees:

A. Non-Executive Directors

1 Non-executive Chairman

From 1 January 2018 until 1 November 2018, the Chairman of the Board was entitled to receive a chairman's fee of USD400,000 per annum during the last financial year. Commencing on 1 November 2018, the Chairman of the Board was entitled to receive a chairman's fee of EUR 360,000 per annum.

2 Non-executive Directors

(a) From 1 January 2018 until 1 November 2018, all non-executive Directors were entitled to receive a GBP120,000 fee per annum; commencing on 1 November 2018, all non-executive Directors were entitled to receive a EUR150,000 fee per annum; those non-executive Directors who were employed or retained by En+, SUAL Partners, Glencore and Onexim were expected to consult with those entities as to whether the Directors, as individuals, may retain such fees or whether such fees should be paid to their respective employing entities.

(b) From 1 January 2018 until 1 November 2018, each non-executive Director was entitled to receive additional fees for committee assignments at the rate of GBP15,000 per annum for acting as the chairman and GBP10,000 per annum for participating as a member. Commencing on 1 November 2018, each non-executive Director was entitled to receive additional fees for committee assignments at the rate of EUR18,000 per annum for acting as the chairman and EUR12,000 per annum for participating as a member.

(c) The executive Directors are not entitled to a director's fee, and they are entitled to a salary pursuant to their respective employment with the Group, which is determined with reference to the relevant experience, duties and responsibilities with the Group and bonus is to be paid on the basis of achievement of performance targets.

B. Chief Executive Officer

From 1 January 2018 until 15 March 2018, the CEO's annual compensation comprised the following:

(a) USD3.5 million per annum base salary, paid monthly;

(b) annual discretionary bonus at a target level of USD3.5 million (equivalent to 100% of the base salary), to be paid within 30 working days after the Remuneration Committee of the Company determines the exact bonus amount, on the basis of the performance results of the CEO and the Company;

(c) other ancillary benefits.

From 15 March 2018 until 23 May 2018, the CEO's annual compensation comprised the following:

(a) USD3 million per annum base salary, paid monthly;

(b) annual discretionary bonus at a target level of USD3 million (equivalent to 100% of the base salary).

From 23 May 2018 until 2 November 2018, the acting CEO's annual compensation comprised the following:

(a) RUB 72 million per annum base salary, paid monthly;

(b) annual discretionary bonus target level is 100% of the base annual salary, it being noted that the exact bonus amount is determined by the Board subject to recommendation of the Remuneration Committee and depends on the performance results of the acting CEO and the Company, to be paid within 30 working days after the Board approves the exact bonus amount.

Commencing on 2 November 2018 the acting CEO became the CEO, but the figures for his annual salary and bonus remained unchanged.

No emoluments have been paid to the Directors as an inducement to join or upon joining the Group or as compensation for loss of office during the years presented.

20 Pension schemes

Information on the Company's pension schemes is set out in note 20(a) to the consolidated financial statements.

21 Sufficiency of public float

The Hong Kong Stock Exchange has granted the Company a waiver from strict compliance with Rule 8.08(1) (a) of the Listing Rules to accept a lower public float percentage of the Company of the higher of: (i) 10% of the Shares, and (ii) the percentage of public shareholding that equals HKD6 billion at the Listing Date, as the minimum percentage of public float of the Company. From the information publicly available to the Company and within the knowledge of the Directors as at the date of this Annual Report, the Company has sufficiently maintained the abovementioned public float.

22 Auditors

The consolidated financial statements have been audited by JSC KPMG as a sole auditor who, having served for the whole of the financial year, retire and, being eligible, offer themselves for re-appointment as the Company's sole auditor. A resolution for the re-appointment of JSC KPMG as sole auditor of the Company is to be proposed at the forthcoming annual general meeting of the Company.

23 Amendments to the constitution

The Articles of Association provide that the Memorandum and the Articles of Association are only capable of being amended by the passing of a special resolution. A special resolution is defined in the Articles of Association as a resolution of the Company passed by a majority of not less than three quarters of members who (being entitled to do so) vote in person, or by proxy, at a general meeting of the Company of which not less than twenty-one clear days' notice, specifying the intention to propose the special resolution, has been given. Provided that, if it is so agreed by a majority in number of the members having the right to attend and vote at such meeting upon the resolution, being a majority together holding not less than ninety-five per cent of the total voting rights of the members who have that right, a resolution may be proposed and passed as a special resolution at a meeting at which less than twenty-one clear days' notice has been given in accordance with the Jersey Companies Law.

24 Litigation

Details of the litigation in which the Company, its subsidiaries and certain beneficial owners are involved in are set out in notes 20(c) (provisions for legal claims) and 24(c) (legal contingencies) to the consolidated financial statements.

25 Social investments and charity

Contribution to the socio-economic development of the countries and regions in which RUSAL operates is a priority for the Company. Being a leading global aluminium producer, RUSAL is also one of the most active local community investors with rich experience in the development and implementation of widely outreaching social programs. RUSAL actively cooperates with regional governments, non-profits and other businesses at implementation of social programs, shares its social investing experience with local communities and supports their social initiatives. In 2018, RUSAL allocated more than USD22.2 million to sponsorship and charity projects.

26 Post balance sheet events

The details of the events subsequent to the balance sheet date up to the date of the Group's and the Company's consolidated financial statements presented in this report, are disclosed in note 28 to the consolidated financial statements.

27 Directors' interests in contracts

Save as disclosed in section 11 (Connected Transactions) and section 16 (Directors' interests in businesses that may compete with the Company) above, there has been no contract of significance to the Group, subsisting during or at the end of 2018 in which a Director is or was materially interested, either directly or indirectly.

28 Directors' Indemnification

Pursuant to a letter of indemnification, every Director shall be entitled to be indemnified by the Company against all liabilities, obligations, costs, claims, losses, damages and demands of whatever nature, whether civil, criminal, administrative, regulatory or investigative, arising directly or indirectly out of the performance, present, past or future, of his or her duties as a Director of the Company, subject to certain exceptions. The relevant letter of indemnification for each Director was in force during the financial year ended 31 December 2018 and as of the date of this report.

On behalf of the Board

Wong Po Ying, Aby
Company Secretary
29 April 2019


SEIZING
THE MOMENT
Improved agility
Guaranteed protection

07 CORPORATE GOVERNANCE REPORT

CORPORATE GOVERNANCE REPORT

1. Corporate governance practices

The Company adopts international standards of corporate governance. The Directors believe that high quality corporate governance leads to successful business development and increases the investment potential of the Company, providing more security for shareholders, partners and customers as well as reinforcing the Company's internal control systems.

By working with international institutions such as the European Bank for Reconstruction and Development and the International Finance Corporation, the Company developed and implemented its corporate governance standards, based on the principles of transparent and responsible business operations.

The Company adopted a corporate code of ethics that sets out the Company's values and principles for many of its areas of operations.

The Directors adopted a corporate governance code which is based on the CG Code in a Board meeting on 11 November 2010. The Directors believe that the Company has complied with the code provisions of the CG Code during the Review Period, other than as described in paragraphs 3(b) and 3(g) of this Corporate Governance Report.

The Directors are committed to upholding the corporate governance of the Company to ensure that formal and transparent procedures are in place to protect and maximize the interests of the Shareholders.

Set out below is a detailed discussion of the corporate governance practices adopted and observed by the Company during the Review Period.

2. Directors' securities transactions

The Company has adopted a Code for Securities Transactions by Directors of the Company. The Code for Securities Transactions was based on the Model Code as set out in Appendix 10 to the Listing Rules but it is more exacting than the required standard set out in Appendix 10. Having made specific enquiry of all Directors, all Directors confirmed that they had fully complied with the required standard set out in the Model Code and the Code for Securities Transactions throughout the Review Period.

The Company has not been notified of any other transaction by the Directors in application of the aforementioned provisions.

3. Board of Directors

(a) Composition of the Board and attendance at Board meetings and Board committee meetings

The Board currently comprises a combination of executive, non-executive and independent non-executive Directors. During the year ended 31 December 2018, the Board consisted of the Directors listed below and their attendance record for the 12 Board meetings held by the Board during the Review Period, other Board committee meetings held during the Review Period and the annual general meeting held on 28 June 2018 ("**AGM**") is as follows:

	Attendance and number of meetings				
	Board meetings (total: 12 meetings in 2018)	Corporate Governance and Nomination Committee meetings (total: 8 meetings in 2018)	Remuneration Committee meetings (total: 4 meetings in 2018)	Audit Committee meetings (total: 8 meetings in 2018)	AGM (total: 1 meeting in 2018)
Executive Directors					
Vladislav Soloviev (resigned with effect from 28 June 2018)	5	–	–	–	0
Siegfried Wolf (resigned with effect from 28 June 2018)	5	–	–	–	0
Evgenii Nikitin (appointed on 28 June 2018)	7	–	–	–	0
Sergei Popov (appointed on 28 June 2018 and resigned with effect from 14 February 2019)	7	–	–	–	0
Evgenii Vavilov (appointed on 28 June 2018)	7	–	–	–	0
Evgeny Kuryanov (appointed on 14 February 2019)	–	–	–	–	–

	Attendance and number of meetings				
	Board meetings (total: 12 meetings in 2018)	Corporate Governance and Nomination Committee meetings (total: 8 meetings in 2018)	Remuneration Committee meetings (total: 4 meetings in 2018)	Audit Committee meetings (total: 8 meetings in 2018)	AGM (total: 1 meeting in 2018)
Non-executive Directors					
Oleg Deripaska (resigned with effect from 25 May 2018)	3	–	–	–	0
Maxim Sokov (resigned with effect from 28 June 2018)	5	–	–	–	0
Dmitry Afanasiev (resigned with effect from 28 June 2018)	4 (See note 1 below)	–	–	–	0
Ivan Glasenberg (resigned with effect from 10 April 2018)	2 (See note 2 below)	1	–	–	0
Maksim Goldman (resigned with effect from 10 April 2018)	3	–	1	–	0
Daniel Lesin Wolfe (resigned with effect from 10 April 2018)	3	–	–	1	0
Gulzhan Moldazhanova (resigned with effect from 28 June 2018)	5	–	–	–	0
Olga Mashkovskaya (resigned with effect from 28 June 2018)	5	–	–	4	0
Ekaterina Nikitina (resigned with effect from 28 June 2018)	5	3	2	–	0
Marco Musetti	12	–	–	–	0
Vyacheslav Solomin (appointed on 28 June 2018)	7	–	–	–	0
Timur Valiev (appointed on 28 June 2018)	7	–	–	–	0
Independent non-executive Directors					
Philip Lader (resigned with effect from 10 April 2018)	3	2	1	2	0
Elsie Leung Oi-sie	12	–	4	8	1
Matthias Warnig (resigned with effect from 31 December 2018)	11	–	–	–	1

	Attendance and number of meetings				
	Board meetings (total: 12 meetings in 2018)	Corporate Governance and Nomination Committee meetings (total: 8 meetings in 2018)	Remuneration Committee meetings (total: 4 meetings in 2018)	Audit Committee meetings (total: 8 meetings in 2018)	AGM (total: 1 meeting in 2018)
Mark Garber (resigned with effect from 28 June 2018)	5	3	2	–	0
Dmitry Vasiliev	12	8	–	8	1
Bernard Zonneveld	12	8	4	8	1
Philippe Bernard Henri Mailfait (appointed on 28 June 2018 and resigned with effect from 26 January 2019)	6	–	–	–	0
Jean-Pierre Thomas (appointed on 28 June 2018 and resigned with effect from 26 January 2019)	7	4	2	–	0
Maxim Poletaev (appointed on 14 February 2019)	–	–	–	–	–
Randolph N. Reynolds (appointed on 14 February 2019)	–	–	–	–	–
Kevin Parker (appointed on 14 February 2019)	–	–	–	–	–
Christopher Burnham (appointed on 14 February 2019)	–	–	–	–	–
Nick Jordan (appointed on 14 February 2019)	–	–	–	–	–

Biographical details of the Directors are set out in the section headed Profiles of Directors and Senior Management on pages 81 to 97 of this Annual Report.

(b) Term of appointment of Directors

Paragraph A.4.1 of the CG Code provides that non-executive Directors should be appointed for a specific term, subject to re-election. Paragraph A.4.2 of the CG Code provides that every Director, including those appointed for a specific term, should be subject to retirement by rotation at least every three years. Each of the non-executive Directors signed an appointment letter with the Company providing for the same three years term. Article 24.2 of the Articles of Association provides that if any Director has at the start of the annual general meeting been in office for three years or more since his last appointment or re-appointment, he or she shall retire at the annual general meeting. As such, it is possible that a director may be in office for more than three years depending upon the timing for calling the annual general meeting.

Notes:

1. During 2018, Dmitry Afanasiev attended 4 Board meetings in person, and 1 Board meeting was attended by his alternate.
2. During 2018, Ivan Glasenberg attended 2 Board meetings in person, and 1 Board meeting was attended by his alternate.

(c) Board meetings

During 2018, 12 Board meetings were held.

At the Board meeting held on 6 March 2019, the Directors approved, among other things, the annual results of the Company for the year ended 31 December 2018.

The schedule for Board meetings is approved on an annual basis. The Directors are then also provided on a timely basis with the relevant documents and copies of the draft resolutions to be considered at that particular meeting. All Directors are given an opportunity to include matters in the agenda for the Board meeting and have access to the secretary of the Board to ensure that all Board procedures and all applicable rules are followed. The Board also enables the Directors to seek independent professional advice at the Company's expense in appropriate circumstances. The Board secretary is responsible for keeping minutes of the Board meetings and the secretary of the Company is responsible for the safe keeping of minutes and resolutions of the Board at the registered office of the Company.

(d) Board functions and duties

The Board is collectively responsible for the management and operations of the Company. The principal functions and duties conferred on the Board include:

- responsibility for the approval and monitoring of the overall development strategies, annual budgets, business plans and material investment plans relating to the Company's business;
- monitoring and evaluating the performance of the Company in respect of its strategies, budgets and plans;
- approving and supervising the management;
- giving an account of the Company's activities to the parties to whom an account is properly due; and
- ensuring the maintenance of accounting records in compliance with the legal obligations of the Company.

The Board has delegated the day-to-day operation of the Group to executive Directors and the executive committee to ensure effectiveness and appropriateness of functions.

The primary role of the executive committee is to assist the Chief Executive Officer and senior management with the day-to-day management of the Group and to assist the Board in formulating and implementing the strategy of the Group and monitoring its performance.

Additional duties and responsibilities of the executive committee include, but are not limited to, developing Group strategy for Board approval and implementing such strategy once approved, reviewing and opining on any matter involving expenditure of more than USD75 million before referring such matter to the Board, and overseeing and monitoring the financial performance of the Group. In addition, the executive committee is empowered to establish committees comprising of its members, as well as other managers from time to time.

The executive committee meets as frequently as necessary, but not less than twice per month. The executive committee operates as the management board of RUSAL Global. The Chief Executive Officer formally reports the decisions and actions of the executive committee to the Board at meetings of the Board.

(e) Relationships among members of the Board

Please refer to the profiles of Directors and Senior Management above for more information about the relationships among members of the Board.

(f) Shareholders' Agreements

The Shareholders' Agreement with the Company and the Shareholders' Agreement among Major Shareholders were both entered into on 22 January 2010 and are still in force. For brief details of these Shareholders' Agreements, please see Appendix A and Appendix B.

(g) Board meetings at which Directors have material interests

A.1.7 of the CG Code states that *"If a substantial shareholder or a director has a conflict of interest in a matter to be considered by the board which the board has determined to be material, the matter should be dealt with by a physical board meeting rather than a written resolution. Independent non-executive directors who, and whose close associates, have no material interest in the transaction should be present at that board meeting."*

The Board generally endeavoured throughout the twelve-month period ended 31 December 2018 to ensure that it did not deal with business by the way of written resolution where a substantial Shareholder of the Company or a Director had disclosed an interest in a matter to be considered by the Board which the Board determined to be material. As a result, there were no occurrence (out of the 22 written resolutions the Board passed during the period) when urgent business was dealt with by the Board by way of written resolution where a material interest of a Director was stated to have been disclosed.

Of the 12 Board meetings held in the twelve month period ended 31 December 2018 where one or more Directors had disclosed a material interest, all the independent non-executive Directors were present at all six of the Board meetings held.

Of the 12 Board meetings held, there were four occasions where an independent non-executive Director had a material interest in the transaction. On such occurrences, the independent non-executive Director abstained from voting and the resolutions approving entry into such transactions were passed by the requisite majority excluding the materially interested independent non-executive Director.

4. Chairman and Chief Executive Officer

The roles of the Chairman of the Board and the Chief Executive Officer are segregated and are independent to each other. The Chairman (being Mr. Matthias Warnig until he resigned with effect from 31 December 2018; being Mr. Jean-Pierre Thomas with effect from 1 January 2019 until he resigned with effect from 26 January 2019; being Mr. Bernard Zonneveld with effect from 6 March 2019) is chiefly responsible for maintaining the effective operation of the Board. The Chairman is also responsible for chairing Board meetings, briefing Board members on issues discussed at Board meetings and ensuring good corporate governance practices and procedures are established taking into account the relevant requirements set out in A2.2 to A2.9 of the CG Code. The role as Chief Executive Officer is primarily concerned with the supervision of the execution of the policies determined by the Board particularly in the areas of production and supply chain, financial management and corporate finance, sales and marketing and others. The Company has approved a policy statement setting out those responsibilities to be undertaken by the Chairman and those to be undertaken by the Chief Executive Officer. The Chairman is responsible for leadership of the Board and for creating the conditions necessary to allow the Board and individual Directors to operate effectively. The Chief Executive Officer is responsible for the day-to-day management of the Group and ensuring that the strategic decisions made by the Board are implemented.

5. Independent non-executive Directors

Rule 3.10A of the Listing Rules requires that an issuer must appoint independent non-executive directors representing at least one-third of the board. The current composition of the Board represents an appropriate mix of Directors which offers sufficient independent checks and balances and an appropriate governance structure for the Company. As at the Latest Practicable Date, 8 out of 14 Directors are independent non-executive Directors.

The Board believes that all independent non-executive Directors have appropriate and sufficient industry or finance experience and qualifications to carry out their duties so as to protect the interests of shareholders of the Company. Each of the independent non-executive Directors has undertaken to inform the Hong Kong Stock Exchange and the Securities and Futures Commission as soon as practicable if there is any subsequent change of circumstances which may affect their independence. The Company has also received a written confirmation from each of the independent non-executive Directors in respect of their independence. The Board considers that all independent non-executive Directors are independent by reference to the factors stated in the Listing Rules.

6. Nomination of Directors and the work of the Corporate Governance and Nomination Committee

The Company established a corporate governance and nomination committee with written terms of reference in compliance with the CG Code.

The primary functions of the Corporate Governance and Nomination Committee are, among other things, to develop, recommend and annually review corporate governance guidelines, policies and practices for the Company and its consolidated subsidiaries, to oversee corporate governance matters, to review and monitor the training and continuous professional development of Directors and senior management, to develop, review and monitor the Company's code of conduct and compliance manual and applicable to employees and Directors, reviewing the Company's compliance with the CG Code set out in Appendix 14 of the Listing Rules and disclosure in the Corporate Governance Report, and to make recommendations to the Board, including those in relation to the appointment and removal of Directors. The Corporate Governance and Nomination Committee is provided with sufficient resources to discharge its duties, and its terms of reference also permit it to obtain access to a legal adviser.

In recommending a candidate for appointment to the Board, the Corporate Governance and Nomination Committee is required to determine criteria, objectives and procedures for selecting Board members, including factors such as independence (in the case of independent non-executive directors), diversity, age, future succession planning, integrity, skills, expertise, experience, knowledge about the Company's business and industry, and willingness to devote adequate time and effort to Board responsibilities. In identifying suitable candidates, the Corporate Governance and Nomination Committee is required to use open advertising or the services of external advisers to facilitate the search, consider candidates from a wide range of backgrounds and consider candidates on merit against objective criteria, taking care that appointees have enough time to devote to the position.

The Corporate Governance and Nomination Committee consists of a majority of independent non-executive Directors. The members are as follows:

- Mr. Dmitry Vasiliev *(chairman of the Committee, independent non-executive Director)*
- Mr. Bernard Zonneveld *(independent non-executive Director)*
- Mr. Jean-Pierre Thomas *(independent non-executive Director)* (resigned with effect from 26 January 2019)
- Mr. Randolph N. Reynolds *(independent non-executive Director)* (appointed with effect from 14 February 2019)
- Mr. Christopher Burnham *(independent non-executive Director)* (appointed to the committee with effect from 6 March 2019)

The Corporate Governance and Nomination Committee has held 8 meetings during the Review Period. At these meetings, the Corporate Governance and Nomination Committee considered, amongst other things, the annual general meeting materials.

The members of the Corporate Governance and Nomination Committee have regularly attended and actively participated in meetings. For the attendance record of the meetings held by the Corporate Governance and Nomination Committee during 2018, please refer to paragraph 3(a) of this Corporate Governance Report.

According to the Articles of Association, at every annual general meeting, one-third of the Directors or, if their number is not three or a multiple of three, the number nearest to one-third shall retire from office; but if any Director has at the start of the annual general meeting been in office for three years or more since his or her last appointment or reappointment, he or she shall retire at the annual general meeting. The Directors to retire by rotation shall be, first, those who wish to retire and not be re-appointed to office and, second, those who have been longest in office since their last appointment or re-appointment. As between persons who became or were last re-appointed directors on the same day, those to retire shall (unless they otherwise agree among themselves) be determined by lot. The details of the Directors who will retire and offer themselves for re-election at the forthcoming annual general meeting are set out in the relevant circular issued by the Company.

The Corporate Governance and Nomination Committee also monitors the implementation of the board diversity policy of the Company. The Company recognises and embraces the benefits of having a diverse Board to enhance the quality of its performance. The current mix of skills, experience and other diversity criteria of directors, including but not limited to sex, age, nationality and educational background, provides for a balanced composition of the Board.

Diversity

Independent directors on the board

8 Independent Directors

3 Non-executive Directors

3 Executive Directors

Women on the Board

1 Woman

13 Men

The Board Diversity Policy of the Company is set out below:

1. Purpose

1.1 This Policy aims to set out the approach to achieve diversity on the Company's board of directors (the "Board").

2. Vision

2.1 The Company recognises and embraces the benefits of having a diverse Board to enhance the quality of its performance.

3. Policy Statement

3.1 With a view to achieving a sustainable and balanced development, the Company sees increasing diversity at the Board level as an essential element in supporting the attainment of its strategic objectives and its sustainable development. In designing the Board's composition, Board diversity has been considered from a number of aspects, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. All Board appointments will be based on meritocracy, and candidates will be considered against objective criteria, having due regard for the benefits of diversity on the Board.

4. Measurable Objectives

4.1 Selection of candidates will take into consideration a range of diversity perspectives, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. The ultimate decision will be based on merit and contribution that the candidates will bring to the Board.

5. Monitoring and Reporting

5.1 The Corporate Governance and Nomination Committee will monitor the implementation of this Policy. It will also report annually, in the Corporate Governance Report, on the Board's composition under diversified perspectives (including gender, ethnicity, age, length of service).

6. Review and Revision of this Policy

6.1 The Corporate Governance and Nomination Committee will review this Policy, as appropriate, to ensure the effectiveness of this Policy. The Corporate Governance and Nomination Committee will discuss any revisions that may be required, and recommend any such revisions to the Board for consideration and approval.

7. Disclosure of this Policy

7.1 This Policy will be published on the Company's website for public information.

7.2 A summary of this Policy together with the measurable objectives set for implementing this Policy, and the progress made towards achieving those objectives will be disclosed in the annual Corporate Governance Report.

7. Information relating to the remuneration policy and the work of the Remuneration Committee

The Company has established a remuneration committee with written terms of reference in compliance with the CG Code. The primary functions of the Remuneration Committee are, among other things, to make recommendations to the Board on the remuneration package of the Directors and senior management, and to assist the Board in overseeing the administration of the Company's compensation and benefits plans. Remuneration policies are determined on the basis of an employee's qualifications and performance, as well as the complexity of his or her job. Wages for each employee are generally reviewed annually and revised in accordance with a performance assessment and local labor market conditions. The Remuneration Committee consists of a majority of independent non-executive Directors. The members are as follows:

- Dr. Elsie Leung Oi-sie *(chairman of the Committee, independent non-executive Director)*
- Mr. Randolph N. Reynolds *(independent non-executive Director)* (appointed to the committee with effect from 6 March 2019)
- Mr. Jean-Pierre Thomas *(independent non-executive Director)* (resigned with effect from 26 January 2019)
- Mr. Nick Jordan *(independent non-executive Director)* (appointed with effect from 14 February 2019)
- Mr. Dmitry Vasiliev *(independent non-executive Director)* (appointed to the committee with effect from 6 March 2019)
- Mr. Bernard Zonneveld *(independent non-executive Director)* (resigned from the committee with effect from 6 March 2019)

The Remuneration Committee held 4 meetings during the Review Period. At those meetings, the Remuneration Committee discussed and recommended the Board to approve KPIs of senior executives, STIP 2017 for CEO and President, and KPIs of the senior executives for 2019. For details of the Company's emolument policy, please refer to section 19 of the Directors' Report. The members of the Remuneration Committee have regularly attended and actively participated in meetings. For the attendance record of the meetings held by the Remuneration Committee during 2018, please refer to paragraph 3(a) of this Corporate Governance Report.

Pursuant to paragraph B.1.5 of the CG Code, the remuneration of the members of the senior management by band for the financial year ended 31 December 2018 is set out below:

	Year ended 31 December	
	2018 Number of individuals	**2017 Number of individuals**
Nil to HK$38,000,000 (US$4,600,000)	23	18
HKD36,000,001 – HKD36,500,000 (USD4,600,001 – USD4,700,000)	–	1
HK$37,000,001-HK$37,500,000 (US$4,700,001 – US$4,800,000)	1	–
HKD39,000,001 – HKD35,500,000 (USD4,900,001 – USD5,000,000)	1	–
HK$41,000,001-HK$41,500,000 (US$5,200,001 – US$5,300,000)	1	–
HK$43,500,001-HK$44,000,000 (US$5,500,001 – US$5,600,000)	–	1
HK$59,500,001-HK$60,000,000 (US$7,600,001 – US$7,700,000)	1	–
HK$61,000,001-HK$61,500,000 (US$7,800,001 – US$7,900,000)		1

The total remuneration, including the basic salary, performance-linked salary, incentive-linked salary and bonus of the Directors in 2018 amounted to approximately USD15 million. All non-executive Directors are entitled to receive Director's fees and additional fees for being a member of a Board committee or chairing a Board committee. Further particulars regarding Directors' emoluments and the five highest paid employees as required to be disclosed pursuant to Appendix 16 to the Listing Rules are detailed in note 9 and note 10 to the consolidated financial statements for the year ended 31 December 2018 as disclosed in this Annual Report.

8. The work of the Audit Committee

The Company established an audit committee under the Board with written terms of reference in compliance with the CG Code.

The primary duties of the Audit Committee are to assist the Board in providing an independent view of the effectiveness of the Company's financial reporting process, risk management and internal control systems, and internal audit function, to oversee the audit process, and to perform other duties and responsibilities as are assigned to the Audit Committee by the Board. The Audit Committee is assisted by the Company's internal audit function which undertakes both regular and ad hoc reviews of risk management, internal controls and procedures, the results of which are reported to the Audit Committee.

The Audit Committee consists of a majority of independent non-executive Directors. The members are as follows:

– Mr. Bernard Zonneveld *(chairman of the Committee, independent non-executive Director)* (resigned from the committee with effect from 6 March 2019)
– Dr. Elsie Leung Oi-sie *(independent non-executive Director)*
– Mr. Dmitry Vasiliev *(independent non-executive Director)*
– Mr. Maxim Poletaev *(chairman of the committee, independent non-executive Director)* (appointed to the committee with effect from 6 March 2019)
– Mr. Kevin Parker *(independent non-executive Director)* (appointed to the committee with effect from 6 March 2019)

During the Review Period, the Audit Committee held 8 meetings. The Company's external auditors are regularly invited to attend meetings of the Audit Committee. At the meeting on 22 February 2018, members of the Audit Committee reviewed the consolidated financial statements for the year ended 31 December 2017. At a meeting on 3 August 2018, members of the Audit Committee reviewed the consolidated interim condensed financial information as at and for the three and six months ended 30 June 2018, and at a meeting on 6 March 2019, members of the Audit Committee reviewed the consolidated financial statements for the year ended 31 December 2018. The Audit Committee is of the opinion that such consolidated financial statements have complied with the applicable accounting standards, the Listing Rules other legal requirements, and that adequate disclosures have been made. Minutes of Audit Committee meetings are taken, recorded and kept.

The Audit Committee reviews the Company's financial and accounting policies and practices, meets the external auditors on a regular basis, and reviews all related party transactions before the Board's consideration. The Audit Committee also reviews the Company's financial controls, internal control and risk management system, and the Company's internal audit function.

The Audit Committee reviewed and concurred with the management confirmation that for the year ended 31 December 2018, the Group's risk management and internal control systems were effective. The Audit Committee is satisfied that the Company has complied satisfactorily with the requirements of the CG Code in respect of risk management and internal control systems.

The members of the Audit Committee have regularly attended and actively participated in meetings. For the attendance record of meetings held by the Audit Committee during 2018, please refer to paragraph 3(a) of this Corporate Governance Report.

9. Auditors' remuneration in respect of audit and non-audit services

For the year ended 31 December 2018, the total fees paid or payable in respect of audit and non-audit services provided by the Group's external auditor, JSC KPMG, are set out below:

	For the year ended 31 December 2018 USD'000
Audit services	
Annual audit services	6,200
Annual non-audit services	396

The non-audit services mainly comprised tax compliance, interim review service and certain agree-upon-procedure work.

The responsibilities of JSC KPMG with respect to the 2018 consolidated financial statements are set out in the "Independent Auditors' Report" on page 199.

The Audit Committee is responsible for making recommendations to the Board as to the appointment, re-appointment and removal of the external auditor, which is subject to the approval by the Board and at annual general meetings of the Company, by its shareholders.

10. Directors' Responsibility for the Consolidated Financial Statements

The Directors acknowledge that it is their responsibility to prepare the consolidated financial statements for the year ended 31 December 2018, in accordance with applicable laws and IFRS, and that these consolidated financial statements must give a true and fair view of the state of affairs of the Group and of the results and cash flow for that period.

The Companies (Jersey) Law 1991 requires the Directors to prepare consolidated financial statements for each financial year which give a true and fair view of the state of affairs of the Company and its subsidiaries and of the profit or loss of the Company and its subsidiaries for that period. In preparing these consolidated financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- assess the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with Companies (Jersey) Law 1991. They have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Company and to prevent and detect fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in Jersey governing the preparation and dissemination of consolidated financial statements may differ from legislation in other jurisdictions.

The Chief Financial Officer of the Group is required to regularly present and explain to the Audit Committee and the Board reports on the Group's financial position and operating results, and report other matters that may have a material impact upon the financial performance and operations in order that the Audit Committee and the Board may make informed decisions.

The consolidated financial statements have been prepared in accordance with IFRS. The reporting responsibility of the external auditors of the Company on the financial statements of the Group are set out in the independent auditors' report on pages 199 and 203 of this Annual Report.

11. Risk Management and Internal Control

The Company's risk management and internal control systems have been designed to achieve strategic objectives of the Company, safeguard the assets of the Company, determine the nature and extent of the risks, maintain proper accounting records, ensure execution with appropriate authority and compliance with relevant laws and regulations. The risk management system has always represented the core part of the Company's internal control system, however it has become of even greater importance due to the increased level of uncertainty and volatility on global markets, including those related to the significant political risks faced by the Company. The Board fully acknowledges its responsibility to establish and maintain appropriate and effective risk management and internal control systems that are designed to achieve the Company's strategic objectives based on compliance with the risk appetite of Shareholders alongside with interests of other stakeholders.

In accordance with CG Code provision C.2.1., the Board reviews the Company's risk management and internal control systems on a quarterly basis to ensure their effectiveness. The Company has an internal audit function in the bounds of the Directorate for Control, responsible for internal audit and business coordination (hereinafter referred to as the Directorate for Control), and Audit Committee that carries out the analysis and independent appraisal of the adequacy and effectiveness of the Group's risk management and internal control systems.

The Board and the Directorate for Control provide assurance in terms of adequacy of resources, staff qualifications and experience, training programs and budgets of the core functions of the Group such as accounting, internal audit and financial reporting. The Board has established a risk management group within the Directorate for Control, which is responsible for developing and monitoring the Company's risk management policies. The risk management group includes employees that are appropriately qualified to manage financial, operational and compliance risks. The Directorate for Control reports regularly to the Board on its activities including those related to the risk management system.

The Company aims to promote a risk-aware culture among all its employees including all the management layers and those directly engaged in the production process. The Company's risk management policies, that are designed to identify, analyze and manage the risks, are delivered to relevant employees so that they can understand the coherence between their responsibilities and the risks faced by the Company as a whole. Thus, all the Company risks are consolidated in the Risk Map of the Company that is being monitored by all the management layers and responsible employees are allocated to each risk. The Directorate for Control considers risk management instruments to be applied to each risk. An annual insurance program is developed based on the Risk Map of the Company. In respect of potentially risky instruments, such as hedging of commodity prices, foreign currency exchange rates and interest rates, special approval by the Hedge Committee of the Company is required. Such a transparent attitude to risk management improves risk awareness of employees including understanding of appropriate risk limits, relevant controls and instruments to monitor risks, adherence to risk limits as well as the ability to respond to the changes of the business environment on a timely basis. It is noted that after 6 April 2018 the Company was unable to use derivatives to reduce or eliminate exposure to risks including those related to foreign currency exchange rates, interest rates, commodity market prices, for such financial instruments are mainly nominated in USD and, thus, the OFAC Sanctions significantly impeded application thereof despite the issuance of the General License 14. The Company is only to resume an access to the financial hedging market in 2019 after delisting from the SDN List.

The Company's Audit Committee oversees how management monitors compliance with the Company's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Company. The Company's Audit Committee is assisted in its oversight role by the Company's internal audit function, which undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit Committee.

The Board, the Company's Audit Committee and the Directorate for Control aim to ensure that the internal control capability is regularly improved and enhanced.

However it is important to note that the Company's internal control and risk management system are designed to manage rather than eliminate the risk of failure to achieve business objectives, and can only provide reasonable and not absolute assurance against material misstatement or loss.

The results of the Board's quarterly reviews of the Company's risk management and internal control system during the year 2018 are as follows:

Operational Controls

Operational controls have been established for the management of a wide range of risks, including those related to the production process, procurement, cash flow management, foreign currency exchange rates, fraud, competitors and politics (i.e. other than those related to compliance and financial reporting), covering the core scope of responsibility of the Directorate for Control. The Audit Committee issued an annual plan of audits and revisions to be performed over 12 months. However, unplanned audits and revisions were performed on a regular basis to guarantee that operational controls are effective and efficient. The operational controls system is based on both best practice patterns and recommendations of audits and revisions (compliance with such recommendations is also regularly checked). The Directorate for Control reported to the Board on results of audits and revisions on a quarterly basis. During 2018, the Directorate for Controls assessed all the material risks identified and developed relevant risk management patterns to be applied in accordance with the Company's risk management policies and the risk appetites of Shareholders.

Financial Controls

The Company's risk management and internal control systems are effective in terms of financial controls as the Board fully acknowledges its responsibility to provide stakeholders with true and fair financial statements which reflect all the material aspects of the Company's affairs and thus may be relied on for reasonable decisions. The financial reporting function was regularly audited by the Directorate for Control and external auditors to prevent material misstatement due to fraud or error. The Board aims to increase the level of automation of the financial reporting function on an on-going basis to increase the efficiency and effectiveness of financial controls of the Company. The Board ensures that financial controls of the Company are strong and based on best practice patterns. Financial controls were checked in the bounds of all the audits and revisions performed by the Directorate for Control.

Compliance Controls

The Company operates in five continents and has business affairs in many countries all over the world which creates a need to comply with various legal requirements including those related to environment. The Board and the Directorate for Control acknowledge the importance to comply with legal and environmental requirements in order to be a green aluminium manufacturer and a good corporate citizen. Compliance controls are checked in the bounds of all the audits and revisions performed by the Directorate for Control.

The internal control and risk management capability is regularly improved and enhanced. The key steps and directions thereof for the year 2018 are as follows:

Key steps and directions of the procurement optimization in 2018:

- Control of procurement of materials and equipment and selection of transportation and construction services, including participation in procurement corporate committees. The relevant savings amounted to USD6.9 million.
- Implementation of the project for the disposal of the Company's non-liquid and non-core assets. The relevant income amounted to USD77 million.
- Optimization of patterns used by the Company to work with business-to-business trading platforms.
- Maintenance of procurement transparency through rebranding and monitoring of the suppliers' hotline.
- Leadership in working with flux and ligature testing to find alternative suppliers in order to move from sole purchasing to having more competition and facilitate purchasing managers to obtain low prices with standard quality.
- Development and implementation of tools to improve the efficiency of procurement.

Key steps and directions of the risk management optimization in 2018:

- Organization of independent risk audits of Company's production facilities conducted by specialists Willis Group for risk mitigation purposes and the optimization of Company's insurance programs.
- Development and analysis of the annual Risk Map which was updated on a quarterly basis.
- Quarterly reporting on the Company's risk management affairs to the Audit Committee.
- Update of the insurance program for 2018-2019.
- IrkAZ pilot project to unify and optimize the risk management process for standalone production and mine facilities was initiated in 2018.

Information Disclosure Controls

Since the Company's listing, it has been subject to requirements relating to continuous disclosure obligations, including determination and disclosure of inside information. In the beginning of 2010, the Board delegated its authority to assess whether information constitutes inside information, whether it is subject to immediate disclosure or whether any safe harbor provisions may apply; to determine the timing and format of disclosure; to appoint officers responsible for collection, preliminary analysis and processing of the information within various business subdivisions of the Group; to appoint the Company's authorized representatives to the Hong Kong Stock Exchange; and to decide on trading halts and other issues to be raised with the Disclosure Committee. At the same time, an internal policy regulating the treatment of inside information was adopted within the Group.

The internal control system applied in the Group with respect to inside information ensures that any piece of information that may constitute inside information is promptly escalated to the Disclosure Committee and, should it constitute inside information, is disclosed. Disclosure of inside information is made through the tools available to the Company under applicable legislation in every jurisdiction where the Company is subject to such disclosure (e.g. via the Hong Kong Stock Exchange web-page in Hong Kong and Interfax agency in Russia).

It is important to note that the Directorate for Control did not identify in the year 2018 any significant violations of operational, financial or compliance controls nor any significant risks such as those that may potentially give rise to uncertainties about ability of the Company to continue to operate as a going concern.

12. Relevant Officers' Securities Transactions

The Company has also adopted a code for Securities Transactions by Relevant Officers of the Company (the "**Relevant Officers Code**"). The Relevant Officers Code was based on Appendix 10 to the Listing Rules but it was made more exacting. It applies to any employee of the Company or a director or employee of a subsidiary of the Company who, because of such office or employment, is likely to be in possession of unpublished price sensitive information in relation to the Company or its securities. The Relevant Officers Code was adopted by the Board on 9 April 2010.

13. Directors' Continuous Professional Development

Pursuant to Code Provision A.6.5 of the CG Code, all Directors should participate in continuous professional development to develop and refresh their knowledge and skills. During the Review Period, all Directors of the Company, namely, Mr. Oleg Deripaska (resigned with effect from 25 May 2018), Mr. Maxim Sokov (resigned with effect from 28 June 2018), Mr. Vladislav Soloviev (resigned with effect from 28 June 2018), Mr. Dmitry Afanasiev (resigned with effect from 28 June 2018), Mr. Ivan Glasenberg (resigned with effect from 10 April 2018), Mr. Maksim Goldman (resigned with effect from 10 April 2018), Ms. Gulzhan Moldazhanova (resigned with effect from 28 June 2018), Mr. Daniel Lesin Wolfe (resigned with effect from 10 April 2018), Ms. Olga Mashkovskaya (resigned with effect from 28 June 2018), Ms. Ekaterina Nikitina (resigned with effect from 28 June 2018), Mr. Mark Garber (resigned with effect from 28 June 2018), Mr. Philip Lader (resigned with effect from 10 April 2018), Mr. Matthias Warnig (resigned with effect from 31 December 2018), Mr. Siegfried Wolf (resigned with effect from 28 June 2018), Dr. Elsie Leung Oi-sie, Mr. Dmitry Vasiliev, Mr. Bernard Zonneveld, Mr. Marco Musetti, Mr. Evgenii Nikitin (appointed on 28 June 2018), Mr. Sergei Popov (appointed on 28 June 2018 and resigned with effect from 14 February 2019), Mr. Evgenii Vavilov (appointed on 28 June 2018), Mr. Vyacheslav Solomin (appointed on 28 June 2018), Mr. Timur Valiev (appointed on 28 June 2018), Mr. Philippe Bernard Henri Mailfait (appointed on 28 June 2018 and resigned with effect from 26 January 2019) and Mr. Jean-Pierre Thomas (appointed on 28 June 2018 and resigned with effect from 26 January 2019), received regular briefings and updates on the Group's business, operations, risk management and corporate governance matters. Materials on new or changes to salient rules and regulations applicable to the Group were provided to the Directors.

14. Going Concern

As of 31 December 2018, there are no material uncertainties relating to events or conditions that may cast significant doubt upon the Company's ability to continue as a going concern.

15. Investor Relations

The Company has established a designated department for investor relations, which is responsible for matters concerning investor relations, and the department has developed its own systems and process for communicating with investors. The Company's management also maintains close communication with investors, analysts and the media.

The Memorandum and Articles of Association of the Company was not amended during 2018.

16. Shareholders' Right

Right to convene an extraordinary general meeting

Shareholder(s) holding, at the date of deposit of a written requisition to the Directors or the secretary of the Company, 5 per cent or more of the Company's voting share capital may require an extraordinary general meeting to be called for the transaction of any business specified in such requisition.

If the Directors do not within 21 days from the date of the deposit of the requisition call a meeting to be held within 2 months of the date of the deposit of the requisition, the requisitionists or any of them holding more than half of the total voting rights of all of them may call a meeting which may not be held after 3 months from that date. All reasonable expenses incurred by the requisitionists as a result of the failure of the Board shall be reimbursed to the requisitionists by the Company.

No business other than that stated in the requisition as the objects of the meeting shall be transacted at the meeting.

Putting forward proposals at general meetings

Shareholder(s) holding 2.5 per cent or more of the total voting rights of all Shareholders or 50 or more of them holding Shares on which there has been paid up an average sum, per Shareholder, equivalent of HKD2,000 or more have the right at their own expense (unless the Company otherwise resolves) to require the Company to (a) give to shareholders entitled to receive notice of the next annual general meeting notice of any resolution which may properly be moved and is intended to be moved at that meeting and (b) circulate to shareholders entitled to have notice of any general meeting sent to them any statement of not more than 1000 words with respect to the matter referred to in any proposed resolution or the business to be dealt with at that meeting.

The Company does not have to give notice of any resolution or circulate any statement unless (a) a copy of the requisition signed by the requisitionists is deposited at the Company's registered office (i) at least 6 weeks before the meeting in the case of a requisition requiring notice of a resolution (although this requirement does not apply if an annual general meeting is called for a date 6 weeks or less after the copy has been deposited) or (ii) at least 1 week before the meeting in the case of any other requisition and (b) there is deposited with the requisition a sum reasonably sufficient to meet the Company's expenses in giving effect to the requisition.

The Company shall also not be bound to circulate any statement if, on the application either of the Company or of any other person who claims to be aggrieved, a court is satisfied that the rights are being abused to secure needless publicity for defamatory matter; and the court may order the Company's costs on an application to be paid in whole or in part by the requisitionists, notwithstanding that they are not parties to the application.

Company's contact details

Any proposal to convene an extraordinary general meeting, to put forward a proposal at a general meeting and any general enquiries of the Board should be sent to "The Board of Directors c/o the Company Secretary, United Company RUSAL Plc, 44 Esplanade, St Helier, Jersey, JE4 9WG".

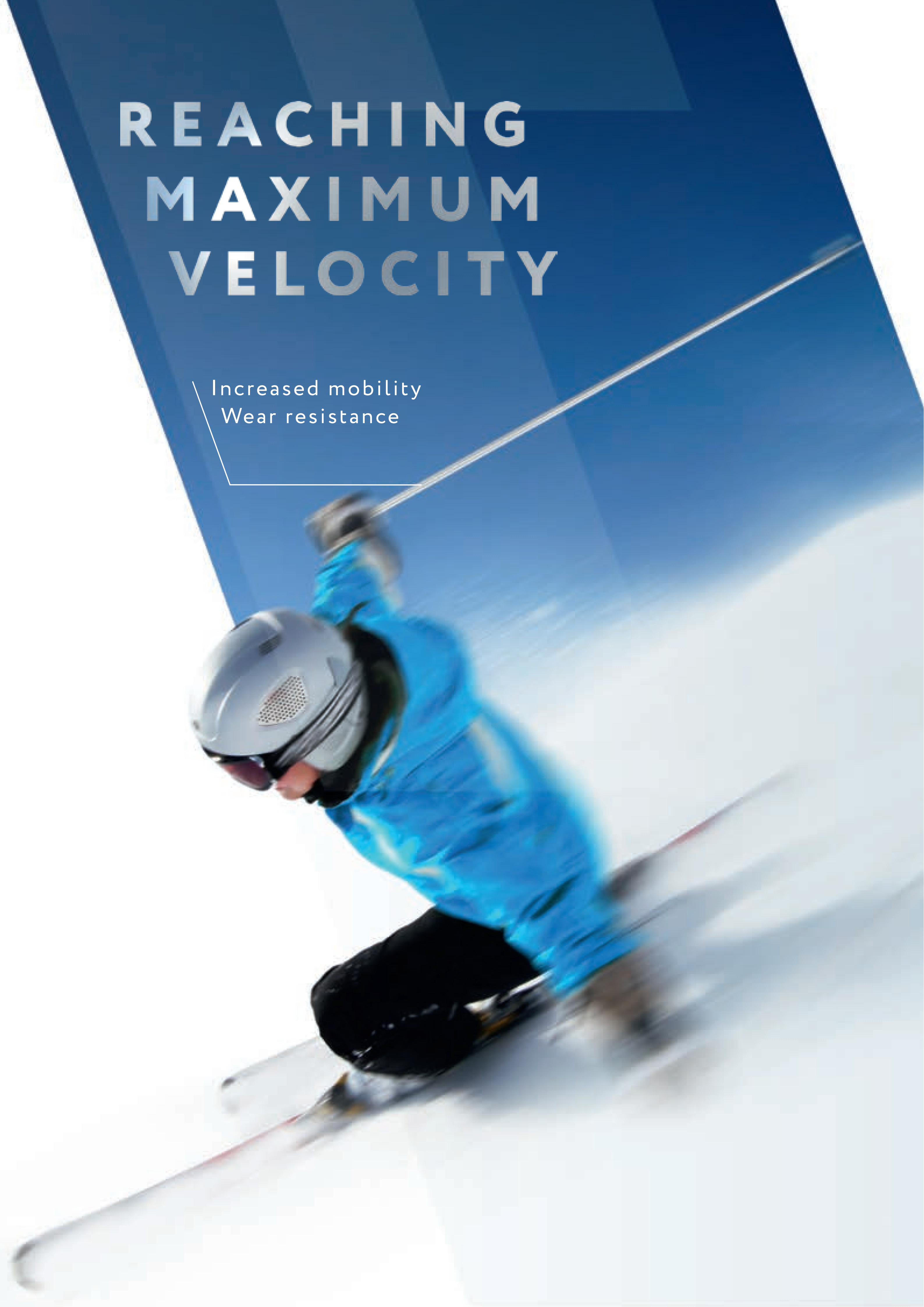
17. Company Secretary

The Company engages Ms. Aby Wong Po Ying of Intertrust Resources Management Limited as its company secretary. The primary contract person in the Company is Mr. Eugene Choi, Authorized Representative of the Company.

18. Dividends Policy

On 26 August 2015, the Board of the Company approved and adopted a new dividend policy (the "Dividends Policy") for the subsequent periods to pay dividends at the level of 15% of the Company's covenant EBITDA. The payment of dividends will be subject to compliance with requirements of the Group's credit facilities, including financial covenants, and relevant Jersey legislation.

On 24 August 2017, the Board has approved an update to (which is additional and does not replace) the Dividends Policy pursuant to which the Company intends to provide Shareholders with dividends on a quarterly basis, subject to the Company's financial results, compliance with requirements of the Group's credit facilities, including financial covenants, and relevant Jersey legislation (the "Updated Dividends Policy"). Pursuant to the Updated Dividends Policy, the amount of quarterly dividends and its payment shall be determined by the Board subject to applicable requirements and restrictions. The total amount of dividend payments in a year cannot exceed 15% of the Covenant EBITDA (as defined in the PXF Facility) for each fiscal year.


REACHING
MAXIMUM
VELOCITY
Increased mobility
Wear resistance

08 FINANCIAL STATEMENTS

FINANCIAL STATEMENTS

Statement of Directors' Responsibilities

The Directors acknowledge that it is their responsibility to prepare the consolidated financial statements for the year ended 31 December 2018, in accordance with applicable law and regulations.

Company law requires the Directors to prepare consolidated financial statements for each financial year. Under that law the Directors have elected to prepare the consolidated financial statements in accordance with International Financial Reporting Standards and applicable law.

Under company law the Directors must not approve the consolidated financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Company and of the profit or loss of the Company for that period. In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- assess the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with Companies (Jersey) Law 1991. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the company and to prevent and detect fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the company's website. Legislation in Jersey governing the preparation and dissemination of consolidated financial statements may differ from legislation in other jurisdictions.

INDEPENDENT AUDITOR'S REPORT

To the Members of United Company RUSAL Plc

Report on the Audit of the Consolidated Financial Statementes

Opinion

We have audited the consolidated financial statements of United Company RUSAL Plc (the "Company") and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as at 31 December 2018, the consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS"), and have been prepared in accordance with the requirements of the Companies (Jersey) Law 1991 and the disclosure requirements of the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants* ("IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to Note 1(d) of the consolidated financial statement, which describes the inclusion of the Company, its ultimate beneficial owner and certain companies under common control in the Specially Designated Nationals List issued by the Office of Foreign Assets Control of the Department of the Treasury of the United States of America in April 2018 with further removal of the Company from the above-mentioned List in January 2019.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of Property, Plant and Equipment

Please refer to the Note 13 in the consolidated financial statements.

The key audit matter

The Group has significant property, plant and equipment balance which is material to the financial statements as at 31 December 2018.

Current global market conditions, including fluctuations in LME aluminium prices, market premiums and alumina purchase prices, may indicate that some property, plant and equipment items may be subject to either impairment loss or reversal of previously recognised impairment loss. This is in particular related to such cash generating units (CGUs) as alumina plants and bauxite mines.

As at the reporting date management performs valuation of the recoverable amount of the Group's assets and cash generating units as their value in use.

Due to the inherent uncertainty involved in forecasting and discounting future cash flows, which are the basis of the assessment of recoverability, this is one of the key judgmental areas that our audit is concentrated on.

How the matter was addressed in our audit

For aluminium, alumina and bauxite CGUs we evaluated the reasonableness of the expected cash flow forecasts by comparing them with the latest budgets approved by the Board of Directors, externally derived data as well as our own assessments in relation to key inputs such as production levels, forecasted aluminium sales prices, forecasted alumina purchase prices, costs inflation, foreign currency exchange rates, discount rates and terminal growth rates. We also considered the historic accuracy of management's forecasts by comparing prior year forecasts to actual results.

We used our own valuation specialists to assist us in evaluating the assumptions and methodology used by the Group.

In particular, we challenged:

- aluminium and alumina smelters and bauxite mines costs projections by comparing them with historical results and industry peers;
- the key assumptions for long-term revenue growth rates in the forecasts by comparing them with historical results, economic and industry forecasts; and
- the discount rates used. Specifically, we recalculated the Group's weighted average cost of capital using market comparable information.

We also performed sensitivity analysis on the discounted cash flow forecasts and assessed whether the Group's disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions, including forecasted aluminium and alumina prices and discount rates, reflected the risks inherent in the valuation of property, plant and equipment.

Other Information

The Directors are responsible for the other information. The other information comprises the information included in the Group's Annual Report but does not include the consolidated financial statements and our auditors' report thereon. The Annual Report is expected to be made available to us after the date of this auditors' report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

Responsibilities of the Directors and Those Charged with Governance for the Consolidated Financial Statements

The Directors are responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, the Companies (Jersey) Law 1991 and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the Directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Directors.
- Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

Matter on which we are required to report by exception.

We have nothing to report in respect of the following matters where the Companies (Jersey) Law 1991 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the Company; or
- returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements of the Company are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

The engagement partner on the audit resulting in this independent auditors' report is Yerkozha Akylbek.

Yerkozha Akylbek
For and on behalf of JSC "KPMG"
Recognized Auditors
Moscow, Russia
6 March 2019

CONSOLIDATED STATEMENT OF INCOME

FOR THE YEAR ENDED 31 DECEMBER 2018

	NOTE	YEAR ENDED 31 DECEMBER 2018 USD MILLION	2017 USD MILLION
Revenue	5	10,280	9,969
Cost of sales	6(a)	(7,446)	(7,183)
Gross profit		**2,834**	**2,786**
Distribution expenses	6(b)	(462)	(446)
Administrative expenses	6(b)	(629)	(632)
Impairment of non-current assets	6(b)	(157)	(84)
Net other operating expenses	6(b)	(105)	(101)
Results from operating activities		**1,481**	**1,523**
Finance income	7	203	21
Finance expenses	7	(686)	(876)
Share of profits of associates and joint ventures	15	955	620
Profit before taxation		**1,953**	**1,288**
Income tax	8	(255)	(66)
Profit for the year		**1,698**	**1,222**
Attributable to Shareholders of the Company		1,698	1,222
Profit for the year		**1,698**	**1,222**
Earnings per share			
Basic and diluted earnings per share (USD)	12	**0.112**	**0.080**
Adjusted EBITDA	6(d)	2,163	2,120

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 DECEMBER 2018

	NOTE	YEAR ENDED 31 DECEMBER 2018 USD MILLION	2017 USD MILLION
Profit for the year		**1,698**	**1,222**
Other comprehensive income			
Items that will never be reclassified subsequently to profit or loss:			
Actuarial gain/(loss) on post retirement benefit plans	20	6	(7)
		6	**(7)**
Items that are or may be reclassified subsequently to profit or loss:			
Share of other comprehensive income of associates	15	10	(28)
Foreign currency translation differences for equity-accounted investees	15	(810)	244
Foreign currency translation differences on foreign operations		(139)	13
		(939)	**229**
Other comprehensive (loss)/income for the year, net of tax		**(933)**	**222**
Total comprehensive income for the year		**765**	**1,444**
Attributable to:			
Shareholders of the Company		765	1,444
Total comprehensive income for the year		**765**	**1,444**

There was no significant tax effect relating to each component of other comprehensive income.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2018

	NOTE	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
ASSETS			
Non-current assets			
Property, plant and equipment	13	4,421	4,323
Intangible assets	14	2,409	2,552
Interests in associates and joint ventures	15	3,698	4,448
Deferred tax assets	8	93	63
Derivative financial assets	21	33	34
Other non-current assets		57	72
Total non-current assets		**10,711**	**11,492**

	NOTE	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Current assets			
Inventories	16	3,006	2,414
Short-term investments		105	21
Trade and other receivables	17(a)	1,102	984
Dividends receivable		–	3
Derivative financial assets	21	9	29
Cash and cash equivalents	17(c)	844	831
Total current assets		**5,066**	**4,282**
Total assets		**15,777**	**15,774**

	NOTE	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
EQUITY AND LIABILITIES			
Equity	18		
Share capital		152	152
Share premium		15,786	15,786
Other reserves		2,863	2,847
Currency translation reserve		(9,750)	(8,801)
Accumulated losses		(3,842)	(5,540)
Total equity		**5,209**	**4,444**
Non-current liabilities			
Loans and borrowings	19	7,372	7,744
Provisions	20	366	427
Deferred tax liabilities	8	502	522
Derivative financial liabilities	21	24	61
Other non-current liabilities		50	104
Total non-current liabilities		**8,314**	**8,858**

	NOTE	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Current liabilities			
Loans and borrowings	19	914	735
Trade and other payables	17(b)	1,274	1,658
Derivative financial liabilities	21	7	52
Provisions	20	59	27
Total current liabilities		**2,254**	**2,472**
Total liabilities		**10,568**	**11,330**
Total equity and liabilities		**15,777**	**15,774**
Net current assets		**2,812**	**1,810**
Total assets less current liabilities		**13,523**	**13,302**

Approved and authorised for issue by the board of directors on 6 March 2019.

Evgenii V. Nikitin
Chief Executive Officer

Alexandra Y. Bouriko
Chief Financial Officer

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED 31 DECEMBER 2018

	Note	Share capital USD MILLION	Share premium USD MILLION	Other reserves USD MILLION	Currency translation reserve USD MILLION	Accumulated losses USD MILLION	Total equity USD MILLION
Balance at 1 January 2018		**152**	**15,786**	**2,847**	**(8,801)**	**(5,540)**	**4,444**
Profit for the year		–	–	–	–	1,698	1,698
Other comprehensive income for the year		–	–	16	(949)	–	(933)
Total comprehensive income for the year		**–**	**–**	**16**	**(949)**	**1,698**	**765**
Balance at 31 December 2018		**152**	**15,786**	**2,863**	**(9,750)**	**(3,842)**	**5,209**
Balance at 1 January 2017		**152**	**15,786**	**2,882**	**(9,058)**	**(6,463)**	**3,299**
Profit for the year		–	–	–	–	1,222	1,222
Other comprehensive income for the year		–	–	(35)	257	–	222
Total comprehensive income for the year		**–**	**–**	**(35)**	**257**	**1,222**	**1,444**
Dividends	11	–	–	–	–	(299)	(299)
Balance at 31 December 2017		**152**	**15,786**	**2,847**	**(8,801)**	**(5,540)**	**4,444**

CONSOLIDATED STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 DECEMBER 2018

	NOTE	YEAR ENDED 31 DECEMBER 2018 USD MILLION	2017 USD MILLION
OPERATING ACTIVITIES			
Profit for the year		**1,698**	**1,222**
Adjustments for:			
Depreciation	6, 13	511	484
Amortisation	6, 14	2	4
Impairment of non-current assets	6(b)	157	84
Impairment of trade and other receivables	6(b)	36	6
(Reversal of)/impairment of inventories	16	(20)	2
(Reversal of)/pension provision		(2)	2
Reversal of tax provision		–	(2)
Change in fair value of derivative financial instruments	7	(171)	287

	NOTE	YEAR ENDED 31 DECEMBER 2018 USD MILLION	2017 USD MILLION
Net foreign exchange loss/(gain)		80	(4)
Loss on disposal of property, plant and equipment	6(b)	12	25
Interest expense	7	503	589
Interest income	7	(32)	(17)
Income tax expense	8	255	66
Share of profits of associates and joint ventures	15	(955)	(620)
Cash from operating activities before changes in working capital and provisions		**2,074**	**2,128**
Increase in inventories		(498)	(462)
Increase in trade and other receivables		(154)	(167)
Increase in prepaid expenses and other assets		–	(1)
(Decrease)/increase in trade and other payables		(608)	330
Decrease in provisions		(10)	(26)
Cash generated from operations before income tax paid		**804**	**1,802**

	NOTE	YEAR ENDED 31 DECEMBER 2018 USD MILLION	2017 USD MILLION
Income taxes paid	8	(124)	(100)
Net cash generated from operating activities		**680**	**1,702**
INVESTING ACTIVITIES			
Proceeds from disposal of property, plant and equipment		22	46
Interest received		29	8
Acquisition of property, plant and equipment		(812)	(822)
Dividends from associates and joint ventures		909	806
Acquisition of intangible assets		(22)	(20)
Other investments		(153)	(11)
Acquisition of a subsidiaries		(53)	(1)
Changes in restricted cash	17(c)	(26)	(4)
Net cash (used in)/generated from investing activities		**(106)**	**2**

	NOTE	YEAR ENDED 31 DECEMBER 2018 USD MILLION	2017 USD MILLION
FINANCING ACTIVITIES			
Proceeds from borrowings		1,996	5,928
Repayment of borrowings		(2,142)	(6,339)
Refinancing fees and other expenses		(6)	(36)
Interest paid		(490)	(493)
Settlement of derivative financial instruments		125	(182)
Dividends	11	–	(299)
Net cash used in financing activities		**(517)**	**(1,421)**
Net increase in cash and cash equivalents		**57**	**283**
Cash and cash equivalents at the beginning of the year	17(c)	814	531
Effect of exchange rate fluctuations on cash and cash equivalents		(70)	–
Cash and cash equivalents at the end of the year	17(c)	**801**	**814**

Restricted cash amounted to USD43 million and USD17 million at 31 December 2018 and 31 December 2017, respectively.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER 2018

1 Background

(a) Organisation

United Company RUSAL Plc (the "Company" or "RUSAL") was established by the controlling shareholder of RUSAL Limited ("RUSAL") as a limited liability company under the laws of Jersey on 26 October 2006. On 27 January 2010, the Company successfully completed a dual placing on the Main Board of The Stock Exchange of Hong Kong Limited ("Stock Exchange") and the Professional Segment of NYSE Euronext Paris ("Euronext Paris") (the "Global Offering") and changed its legal form from a limited liability company to a public limited company.

On 23 March 2015, the shares of the Company were admitted to listing on PJSC Moscow Exchange MICEX-RTS ("Moscow Exchange") in the First Level quotation list. The trading of shares on Moscow Exchange commenced on 30 March 2015. There was no issue of new shares.

The Company has filed the application for the delisting of its global depositary receipts ("GDSs") with the Euronext Paris. The GDSs were delisted on 7 May 2018.

The Company's registered office is 44 Esplanade, St Helier, Jersey, JE4 9WG, Channel Islands.

The Company directly or through its wholly-owned subsidiaries controls a number of production and trading entities (refer to note 26) engaged in the aluminium business and other entities, which together with the Company are referred to as "the Group".

The shareholding structure of the Company as at 31 December 2018 and 31 December 2017 was as follows:

	31 DECEMBER 2018	31 DECEMBER 2017
En+ Group Plc ("En+")	48.13%	48.13%
SUAL Partners Limited ("SUAL Partners")	22.50%	15.80%
Zonoville Investments Limited ("Zonoville")	4.00%	4.70%
Amokenga Holdings Limited ("Amokenga Holdings")	8.75%	8.75%
Onexim Holdings Limited ("Onexim")	–	6.00%
Held by Directors	–	0.01%
Mr. Oleg V. Deripaska	0.01%	0.01%
Publicly held	16.61%	16.60%
Total	**100.00%**	**100.00%**

At the date these consolidated financial statements were authorised for issue the shareholding structure of the Company was as follows:

En+ Group Plc ("En+")	50.10%
SUAL Partners Limited ("SUAL Partners")	22.50%
Zonoville Investments Limited ("Zonoville")	4.00%
Amokenga Holdings Limited ("Amokenga Holdings")	6.78%
Mr. Oleg V. Deripaska	0.01%
Publicly held	16.61%
Total	**100.00%**

According to the information disclosed at the Stock Exchange of Hong Kong Limited Zonoville Investments Limited and SUAL Partners Limited are associates. Amokenga Holdings is ultimately controlled by Glencore International Plc. As at reporting date ultimate beneficiary of En+ is Mr. Oleg Deripaska. Ultimate beneficiary of Onexim is Mr. Mikhail Prokhorov. Major ultimate beneficiaries of SUAL Partners are Mr. Victor Vekselberg and Mr. Len Blavatnik.

At 31 December 2018, 31 December 2017 and at the date of these financial statements the directors consider the immediate parent of the Group to be EN+, which is incorporated in Jersey with its registered office at 44 Esplanade, St Helier, Jersey, JE4 9WG, Channel Islands.

Based on publicly available information at the Company's disposal at the date of these financial statements there is no individual that has an indirect prevailing ownership interest in the Company exceeding 25% or has an opportunity to exercise control over the Company.

Related party transactions are disclosed in note 25.

(b) Operations

The Group operates in the aluminium industry primarily in the Russian Federation, Ukraine, Guinea, Jamaica, Ireland, Italy, Nigeria and Sweden and is principally engaged in the mining and refining of bauxite and nepheline ore into alumina, the smelting of primary aluminium from alumina and the fabrication of aluminium and aluminium alloys into semi-fabricated and finished products. The Group sells its products primarily in Europe, Russia, other countries of the Commonwealth of Independent States ("CIS"), Asia and North America.

(c) Business environment in emerging economies

The Russian Federation, Ukraine, Jamaica, Nigeria and Guinea have been experiencing political and economic changes that have affected, and may continue to affect, the activities of enterprises operating in these environments. Consequently, operations in these countries involve risks that typically do not exist in other markets, including reconsideration of privatisation terms in certain countries where the Group operates following changes in governing political powers.

The conflict in Ukraine and related events has increased the perceived risks of doing business in the Russian Federation. The imposition of economic sanctions on Russian individuals and legal entities by the European Union, the United States of America, Japan, Canada, Australia and others, as well as retaliatory sanctions imposed by the Russian government, has resulted in increased economic uncertainty including more volatile equity markets, a depreciation of the Russian Rouble, a reduction in both local and foreign direct investment inflows and a significant tightening in the availability of credit. In particular, some Russian entities may be experiencing difficulties in accessing international equity and debt markets and may become increasingly dependent on Russian state banks to finance their operations. The longer term effects of recently implemented sanctions, as well as the threat of additional future sanctions, are difficult to determine.

The consolidated financial statements reflect management's assessment of the impact of the Russian, Ukrainian, Jamaican, Nigerian and Guinean business environments on the operations and the financial position of the Group. The future business environment may differ from management's assessment.

(d) OFAC Sanctions

On 6 April 2018, the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC") designated, amongst others, the Company, as a Specially Designated National ("SDN") (the "OFAC Sanctions").

As a result, all property or interests in property of the Company and its subsidiaries located in the United States or in the possession of U.S. Persons were blocked, must have been frozen, and could not be transferred, paid, exported, withdrawn, or otherwise dealt in. Several general licenses were issued at the time of the designation and later on authorizing certain transactions with the Company, its majority shareholder En+ Group Plc ("En+"), and with their respective debt and equity.

On 27 January 2019 OFAC announced removal of the Company and En+ from OFAC's SDN List with immediate effect. The removal was subject to and conditional upon the satisfaction of a number of conditions including, but not limited to, corporate governance changes, including, inter alia, overhauling the composition of the Board to ensure that independent directors constitute the majority of the Board, stepping down of the Chairman of the Board, and ongoing reporting and certifications by the Company to OFAC concerning compliance with the conditions for removal.

2 Basis of preparation

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs"), which collective term includes all International Accounting Standards and related interpretations, promulgated by the International Accounting Standards Board ("IASB"), and the disclosure requirements of the Hong Kong Companies Ordinance.

These consolidated financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

This is the first set of the Group's annual financial statements in which IFRS 15 *Revenue from Contracts with Customers* and IFRS 9 *Financial Instruments* have been applied. Changes to significant accounting policies are described in Note 3. A number of other new standards are also effective from 1 January 2018 but they do not have a material effect on the Group's financial statements.

Due to the transition methods chosen by the Group in applying these standards, comparative information throughout these financial statements has not been restated to reflect the requirements of the new standards.

A number of new standards and amendments to standards are effective for annual periods beginning after 1 January 2019 and earlier application is permitted; however, the Group has not early adopted the following new or amended standards in preparing these consolidated financial statements.

The following amended standards and interpretations are not expected to have a significant impact on the Group's consolidated financial statements.

- IFRIC 23 Uncertainty over Tax Treatments.
- Prepayment Features with Negative Compensation (Amendments to IFRS 9).
- Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28).
- Plan Amendment, Curtailment or Settlement (Amendments to IAS 19).
- Annual Improvements to IFRS Standards 2015–2017 Cycle – various standards.
- Amendments to References to Conceptual Framework in IFRS Standards.
- IFRS 17 Insurance Contracts.

Of those standards that are not yet effective, based on the information collected to date and analysis performed by the Group, IFRS 16 *Leases is expected to have a material impact on the Group's financial statements in the period of initial application*.

IFRS 16 replaces existing leases guidance including IAS 17 *Leases*, IFRIC 4 *Determining whether an Arrangement contains a Lease*, SIC-15 *Operating Leases—Incentives* and SIC-27 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

The standard is effective for annual periods beginning on or after 1 January 2019. The Group has not elected the early adoption option.

IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low value items. Lessor accounting remains similar to the current standard – i.e. lessors continue to classify leases as finance or operating leases.

As a lessee, the Group can either apply the standard using a:

- retrospective approach; or
- modified retrospective approach with optional practical expedients.

The lessee applies the election consistently to all of its leases.

The Group will apply IFRS 16 initially on 1 January 2019, using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognised as an adjustment to the opening balance of retained earnings at 1 January 2019, with no restatement of comparative information.

When applying the modified retrospective approach to leases previously classified as operating leases under IAS 17, the lessee can elect, on a lease-by-lease basis, whether to apply a number of practical expedients on transition. The Group is assessing the potential impact of using these practical expedients.

3 Significant accounting policies

(a) Changes in accounting policies

The Group has initially adopted IFRS 15 *Revenue from Contracts with Customers* and IFRS 9 *Financial Instruments* from 1 January 2018.

The effect of initially applying these standards is mainly attributed to the following:

- timing of recognition of revenue for the transportation services after the control for the related goods has been transferred to customer (revenue is to be recognised over time from goods control transfer till completion of the transportation);
- classification of revenue earned from the contracts which bear price finalisation options as other revenue instead of revenue from contracts with customers;
- an increase in impairment losses recognised on financial assets;
- disclosures to be presented as required by the new standards.

(i) IFRS 15 Revenue from Contracts with Customers

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. It replaced IAS 18 *Revenue*, IAS 11 *Construction Contracts* and related interpretations.

The Group has adopted IFRS 15 using the cumulative effect method (without practical expedients), with the effect of initially applying this standard recognised at the date of initial application (i.e. 1 January 2018). Accordingly, the information presented for 2017 has not been restated – i.e. it is presented, as previously reported, under IAS 18, IAS 11 and related interpretations.

The details of the new significant accounting policies and the nature of the changes to previous accounting policies in relation to the Group's various goods and services are set out below.

	Nature, timing of satisfaction of performance obligations, significant payment terms	Nature of change in accounting policy
Sales of goods	Comprise sale of primary aluminium, alloys, alumina, bauxite and other products. Customers obtain control of the goods supplied when the goods are delivered to the point when risks are transferred based on Incoterms delivery terms stated in the contract. Invoices are generated and revenue is recognised at that point in time. Invoices are usually payable within 60 days or in advance. Under certain Group sale contracts the final price for the goods shipped is determined a few months later than the delivery took place. Under current requirements the Group determines the amount of revenue at the moment of recognition based on estimated selling price at the date of the invoice issued. At price finalisation the difference between estimated price and actual one is recognised as other revenue.	Under IAS 18 revenue was recognised when related risks and rewards of ownership were transferred under delivery terms of the contracts. Revenue was recognised at this point provided that the revenue and costs can be measured reliably, the recovery of the consideration is probable and there is no continuing management involvement with the goods. Under IFRS 15, revenue is recognised when a customer obtains control of the goods. It has not significantly impacted the Group's revenue recognition approach and the timing of revenue recognition. For the contract with revenue finalisation feature IFRS 15 also has not resulted in a significant change in the amount of revenue recognised and the moment of recognition. But IFRS 15 effected the classification of the revenue recognised: revenue initially recognised at the moment of control transfer to the customer is recognised as revenue from contract with customers. The amount of price adjustment on finalisation is recognised as other revenue.

	Nature, timing of satisfaction of performance obligations, significant payment terms	Nature of change in accounting policy
Rendering of transportation services	As part of sales of goods the Group also performs transportation to the customer under contract terms. In certain cases the control for goods delivered is transferred to customer at earlier point than the transportation is completed. The fee for the transportation services is included in the amount invoiced for the goods supplied (refer to the above caption).	Under IAS 18 revenue was recognised both for goods and transportation services at the point in time when the risks and rewards of goods ownership transfer to customer. Under IFRS 15 the transportation revenue is recognised over time from goods control transfer till completion of the transportation. This has resulted in certain deferral of revenue recognition, but did not have a significant impact.
Rendering of electricity supply services	The Group is involved in sales of energy to 3rd and related parties. Invoices are issued once a month at the end of month and paid within 30 days.	Under previously effective accounting policies revenue was recognised on the last day of the month. Under IFRS 15 revenue is recognised over time. Effectively it has not impacted either total amount of revenue recognized, or its classification.

The impact of transition to IFRS 15 on retained earnings is not significant. Thus no transitional adjustments were made by theGroup.

(ii) IFRS 9 Financial Instruments

IFRS 9 *Financial Instruments* sets out requirements for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces IAS 39 *Financial Instruments: Recognition and Measurement*.

The details of new significant accounting policies and the nature and effects of the changes to previous accounting policies are set out below.

Classification and measurement of financial assets and financial liabilities

IFRS 9 contains a new classification and measurement approach for financial assets that reflects the business model in which assets are managed and their cash flow characteristics.

IFRS 9 contains three principal classification categories for financial assets: measured at amortised cost, fair value through other comprehensive income ("FVOCI") and fair value through profit or loss ("FVTPL"). The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. The standard eliminates the existing IAS 39 categories of held to maturity, loans and receivables and available for sale. Under IFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification of financial liabilities.

The Group's financial assets most fall within category of financial assets measured at amortised cost both under IAS 39 and IFRS 9 requirements. The only exception is derivative financial assets measured at fair value through profit or loss. The same applies to the Group's financial liabilities. Thus the adoption of IFRS 9 has not had a significant effect on the Group's accounting policies related to classification and measurement of financial assets and financial liabilities as well as derivative financial instruments. The impact of IFRS 9 on the impairment of financial assets is set out below.

Impairment of financial assets

IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' (ECL) model. The new impairment model applies inter alia to financial assets measured at amortised cost. Under IFRS 9, credit losses are recognised earlier than under IAS 39. The Group's financial assets at amortised cost consist of trade and other receivables and cash and cash equivalents.

Under IFRS 9, loss allowances are measured on either of the following bases:

- *12-month ECLs*: these are ECLs that result from possible default events within the 12 months after the reporting date; and
- *lifetime ECLs*: these are ECLs that result from all possible default events over the expected life of a financial instrument.

The Group measures loss allowances at an amount equal to lifetime ECLs, except for bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition. The Group measures loss allowances for trade receivables at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information.

The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when:

- the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising security (if any is held); or
- the financial asset is more than 90 days past due, but additional analysis is conducted for each such receivable and assessment is updated accordingly.

The maximum period considered when estimating ECLs is the maximum contractual period over which the

Group is exposed to credit risk.

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial asset in case of long-term assets.

At each reporting date, the Group assesses whether financial assets carried at amortised cost are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Loss allowances for financial assets measured at amortised cost are deducted from the gross carrying amount of the assets. Impairment losses related to trade and other receivables are presented as part of net other operating expenses.

For assets in the scope of the IFRS 9 impairment model, impairment losses are generally expected to increase and become more volatile. The Group has determined that the application of IFRS 9's impairment requirements at 1 January 2018 does not result in significant additional impairment allowance and thus has not recognized any additional allowance as part of transition to the new standards.

The following analysis provides further detail about the calculation of ECLs related to trade receivables on the adoption of IFRS 9. The Group uses an allowance matrix to measure the ECLs of trade receivables from the customers. Loss rates are calculated using a 'roll rate' method based on the probability of a receivable progressing through successive stages of delinquency to write-off. The ECLs were calculated based on actual credit loss experience over the past two years. The Group performed the calculation of ECL rates separately for the customers of each key trading company of the Group. Exposures within each trading company were not further segmented except for individually significant customers which bear specific credit risk depending on the repayment history of the customer and relationship with the Group. Actual credit loss experience was not further adjusted as at 1 January 2018 as the Group has not expected significant adverse changes in economic conditions during the period over which the historical data was collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables. Potential impact of the sanctions described in Note 1(d) on further expected credit losses assessment was not considered as could not be reliably estimated during the reporting period and is not expected to have a significant impact after 31 December 2018 due to sanctions lifting in January 2019 (note 1(d)).

The following table provides information about determined ECLs rates for trade receivables both as at 1 January 2018 and 31 December 2018.

	Weighted-average loss rate		
	1 January 2018	31 December 2018	Credit-impaired
Current (not past due)	1%	2%	No
1–30 days past due	11%	10%	No
31–60 days past due	28%	40%	No
61–90 days past due	64%	50%	No
More than 90 days past due	90%	85%	Yes

There were no changes during the period to the Group's exposure to credit risk that may impact the above loss rates calculation. Fluctuations reflect differences between economic conditions during the period over which the historical data has been collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables.

Hedge accounting

When initially applying IFRS 9, the Group may choose as its accounting policy to continue to apply the hedge accounting requirements of IAS 39 instead of the requirements in IFRS 9. The Group has chosen to apply the hedge accounting requirements of IAS 39.

Transition

Changes in accounting policies resulting from the adoption of IFRS 9 have been applied retrospectively, except as described below.

The Group has taken an exemption not to restate comparative information for prior periods with respect to classification and measurement (including impairment) requirements. Accordingly, the information presented for 2017 does not generally reflect the requirements of IFRS 9 but rather those of IAS 39.

The determination of the business model within which a financial asset is held has been made on the basis of the facts and circumstances that existed at the date of initial application.

(b) Basis of measurement

The consolidated financial statements have been prepared in accordance with the historical cost basis except as set out in the significant accounting policies in the related notes below.

(c) Functional and presentation currency

The Company's functional currency is the United States Dollar ("USD") because it reflects the economic substance of the underlying events and circumstances of the Company. The functional currencies of the Group's significant subsidiaries are the currencies of the primary economic environment and key business processes of these subsidiaries and include USD, Russian Roubles ("RUB"), Ukrainian Hryvna and Euros ("EUR"). The consolidated financial statements are presented in USD, rounded to the nearest million, except as otherwise stated herein.

(d) Use of judgements, estimates and assumptions

The preparation of consolidated financial statements in conformity with IFRSs requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the consolidated financial statements, and the reported revenue and costs during the relevant period.

Management bases its judgements and estimates on historical experience and various other factors that are believed to be appropriate and reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRSs that have a significant effect on the consolidated financial statements and estimates with a significant risk of material adjustment in the next year relate to:

- measurement of recoverable amount of property, plant and equipment (note 13) and goodwill (note 14);
- measurement of net realizable value of inventories (note 16);
- measurement of recoverable amount of investments in associates and joint ventures (note 15);
- estimates in respect of legal proceedings, restoration and exploration, taxation and pension reserve (note 20).

(e) Basis of consolidation

(i) Subsidiaries

Subsidiaries are entities controlled by the group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. When assessing whether the Group has power, only substantive rights (held by the Group and other parties) are considered.

An investment in a subsidiary is consolidated into the consolidated financial statements from the date that control commences until the date that control ceases. Intra-group balances, transactions and cash flows and any unrealised profits arising from intra-group transactions are eliminated in full in preparing the consolidated financial statements. Unrealised losses resulting from intra-group transactions are eliminated in the same way as unrealised gains but only to the extent that there is no evidence of impairment.

When the group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset or, when appropriate, the cost on initial recognition of an investment in an associate or joint venture.

(ii) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

(f) Foreign currencies

(i) Foreign currency transactions

Transactions in foreign currencies are translated into the respective functional currencies of Group entities at the exchange rates ruling at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between the amortised cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortised cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary items in a foreign currency are measured based on historical cost and translated using the exchange rate at the date of transaction. Foreign currency differences arising on retranslation are recognised in the statement of income, except for differences arising on the retranslation of qualifying cash flow hedges to the extent the hedge is effective, which is recognised in the other comprehensive income.

(ii) Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated from their functional currencies to USD at the exchange rates ruling at the reporting date. The income and expenses of foreign operations are translated to USD at exchange rates approximating exchange rates at the dates of the transactions.

Foreign currency differences arising on translation are recognised in the statement of comprehensive income and presented in the currency translation reserve in equity. For the purposes of foreign currency translation, the net investment in a foreign operation includes foreign currency intra-group balances for which settlement is neither planned nor likely in the foreseeable future and foreign currency differences arising from such a monetary item are recognised in the statement of comprehensive income.

When a foreign operation is disposed of, such that control, significant influence or joint control is lost, the cumulative amount of the currency translation reserve is transferred to the statement of income as part of the gain or loss on disposal. When the Group disposes of only part of its interest in a subsidiary that includes a foreign operation while retaining control, the relevant proportion of the cumulative amount is reattributed to non-controlling interests. When the Group disposes of only part of its investment in an associate or joint venture that includes a foreign operation while retaining significant influence or joint control, the relevant proportion of the cumulative amount is reclassified to the statement of income.

4 Segment reporting

(a) Reportable segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenue and incur expenses, including revenue and expenses that relate to transactions with any of the Group's other components. All operating segments' operating results are reviewed regularly by the Group's CEO to make decisions about resources to be allocated to the segment and assess its performance and for which discrete consolidated financial information or statements are available.

Individually material operating segments are not aggregated for financial reporting purposes unless the segments have similar economic characteristics and are similar in respect of the nature of products and services, the nature of production processes, the type or class of customers, the methods used to distribute the products or provide the services and the nature of the regulatory environment. Operating segments which are not individually material may be aggregated if they share a majority of these criteria.

The Group has four reportable segments, as described below, which are the Group's strategic business units. These business units are managed separately and the results of their operations are reviewed by the CEO on a regular basis.

Aluminium. The Aluminium segment is involved in the production and sale of primary aluminium and related products.

Alumina. The Alumina segment is involved in the mining and refining of bauxite into alumina and the sale of alumina.

Energy. The Energy segment includes the Group companies and projects engaged in the mining and sale of coal and the generation and transmission of electricity produced from various sources. Where the generating facility is solely a part of an alumina or aluminium production facility it is included in the respective reportable segment.

Mining and Metals. The Mining and Metals segment includes the equity investment in PJSC MMC Norilsk Nickel ("Norilsk Nickel").

Other operations include manufacturing of semi-finished products from primary aluminium for the transportation, packaging, building and construction, consumer goods and technology industries; and the activities of the Group's administrative centres. None of these segments meet any of the quantitative thresholds for determining reportable segments in 2018 and 2017.

The Aluminium and Alumina segments are vertically integrated whereby the Alumina segment supplies alumina to the Aluminium segment for further refining and smelting with limited sales of alumina outside the Group. Integration between the Aluminium, Alumina and Energy segments also includes shared servicing and distribution.

(b) Segment results, assets and liabilities

For the purposes of assessing segment performance and allocating resources between segments, the Group's senior executive management monitor the results, assets and liabilities attributable to each reportable segment on the following bases:

Segment assets include all tangible, intangible assets and current assets with the exception of income tax assets and corporate assets. Segment liabilities include trade and other payables attributable to the production and sales activities of the individual segments. Loans and borrowings are not allocated to individual segments as they are centrally managed by the head office.

Revenue and expenses are allocated to the reportable segments with reference to sales generated by those segments and the expenses incurred by those segments or which otherwise arise from the depreciation or amortisation of assets attributable to those segments excluding impairment.

The measure used for reporting segment results is the statement of income before income tax adjusted for items not specifically attributed to individual segments, such as finance income, costs of loans and borrowings and other head office or corporate administration costs. The segment profit or loss is included in the internal management reports that are reviewed by the Group's CEO. Segment profit or loss is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

In addition to receiving segment information concerning segment results, management is provided with segment information concerning revenue (including inter-segment revenue), the carrying value of investments and share of profits/(losses) of associates and joint ventures, depreciation, amortisation, impairment and additions of non-current segment assets used by the segments in their operations. Inter-segment pricing is determined on a consistent basis using market benchmarks.

Segment capital expenditure is the total cost incurred during the year to acquire property, plant and equipment and intangible assets other than goodwill.

(i) Reportable segments

Year ended 31 December 2018

	Aluminium USD MILLION	Alumina USD MILLION	Energy USD MILLION	Mining and Metals USD MILLION	Total segment result USD MILLION
Revenue from external customers	8,334	1,325	–	–	9,659
Inter-segment revenue	228	3,381	–	–	3,609
Total segment revenue	**8,562**	**4,706**	**–**	**–**	**13,268**
Segment profit	**791**	**1,221**	**–**	**–**	**2,012**
Reversal of/(impairment) of non-current assets	7	(87)	–	–	(80)
Share of profits of associates and joint ventures	–	–	72	885	957
Depreciation/amortisation	(346)	(138)	–	–	(484)
Non-cash income/(expense) other than depreciation	13	(1)	–	–	12
Additions to non-current segment assets during the year	271	332	–	–	603
Non-cash disposals to non-current segment assets related to site restoration	–	(5)	–	–	(5)
Segment assets	6,864	2,656	–	–	9,520
Interests in associates and joint ventures	–	–	594	3,101	3,695
Total segment assets					**13,215**
Segment liabilities	(634)	(568)	(10)	–	(1,212)
Total segment liabilities					**(1,212)**

Year ended 31 December 2017

	Aluminium USD MILLION	Alumina USD MILLION	Energy USD MILLION	Mining and Metals USD MILLION	Total segment result USD MILLION
Revenue from external customers	8,378	1,084	–	–	9,462
Inter-segment revenue	192	2,373	–	–	2,565
Total segment revenue	**8,570**	**3,457**	**–**	**–**	**12,027**
Segment profit/(loss)	**1,482**	**479**	**–**	**–**	**1,961**
Impairment of non-current assets	(43)	(59)	–	–	(102)
Share of profits of associates and joint ventures	–	–	91	528	619
Depreciation/amortisation	(349)	(121)	–	–	(470)
Non-cash (expense)/income other than depreciation	(7)	6	–	–	(1)
Additions to non-current segment assets during the year	350	260	–	–	610
Non-cash additions/(disposals) to non-current segment assets related to site restoration	1	(2)	–	–	(1)
Segment assets	6,751	2,281	–	–	9,032
Interests in associates and joint ventures	–	–	646	3,796	4,442
Total segment assets					**13,474**
Segment liabilities	(1,137)	(671)	(9)	(1)	(1,818)
Total segment liabilities					**(1,818)**

(ii) Reconciliation of reportable segment revenue, profit or loss, assets and liabilities

		YEAR ENDED 31 DECEMBER	
		2018 USD MILLION	2017 USD MILLION
Revenue	Reportable segment revenue	13,268	12,027
	Elimination of inter-segment revenue	(3,609)	(2,565)
	Unallocated revenue	621	507
Consolidated revenue		**10,280**	**9,969**
Profit	Reportable segment profit	2,012	1,961
	Impairment of non-current assets	(157)	(84)
	Share of profits of associates and joint ventures	955	620
	Finance income	203	21
	Finance expenses	(686)	(876)
	Unallocated expenses	(374)	(354)
Consolidated profit before taxation		**1,953**	**1,288**

		31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Assets	Reportable segment assets	13,215	13,474
	Unallocated assets	2,562	2,300
Consolidated total assets		**15,777**	**15,774**

		31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Liabilities	Reportable segment liabilities	(1,212)	(1,818)
	Unallocated liabilities	(9,356)	(9,512)
Consolidated total liabilities		**(10,568)**	**(11,330)**

(iii) Geographic information

The Group's operating segments are managed on a worldwide basis, but operate in four principal geographical areas: the CIS, Europe, Africa and the Americas. In the CIS, production facilities operate in Russia and Ukraine. In Europe, production facilities are located in Italy, Ireland and Sweden. African production facilities are represented by bauxite mines and an alumina refinery in Guinea and an aluminium plant in Nigeria. In the Americas the Group operates one production facility in Jamaica, one in Guyana and a trading subsidiary in the United States of America.

The following table sets out information about the geographical location of (i) the Group's revenue from external customers and (ii) the Group's property, plant and equipment, intangible assets and interests in associates and joint ventures ("specified non-current assets"). The geographical location of customers is based on the location at which the services were provided or the goods were delivered. The geographical location of the specified non-current assets is based on the physical location of the asset. Unallocated specified non-current assets comprise mainly goodwill and interests in associates and joint ventures.

	REVENUE FROM EXTERNAL CUSTOMERS YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Russia	2,485	2,052
Netherlands	1,121	728
USA	887	1,440
Japan	800	872
Turkey	750	657
Norway	372	295
Italy	359	255

	REVENUE FROM EXTERNAL CUSTOMERS YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Poland	333	409
Sweden	333	247
France	311	277
South Korea	282	380
Greece	262	450
Germany	227	235
China	53	52
Other countries	1,705	1,620
	10,280	**9,969**

	SPECIFIED NON-CURRENT ASSETS	
	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Russia	7,031	7,588
Ireland	376	407
Guinea	152	200
Ukraine	158	183
Sweden	126	153
Unallocated	2,868	2,961
	10,711	**11,492**

5 Revenue

Accounting policies

The effect of initially applying IFRS 15 on the Group's revenue from contracts with customers and key accounting policies applied are described in Note 3. Due to the transition method chosen in applying IFRS 15, comparative information has not been restated to reflect the new requirements.

Disclosures

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Revenue from contracts with customers	**10,280**	**9,969**
Sales of products	**10,073**	**9,804**
Sales of primary aluminium and alloys	8,293	8,324
Sales of alumina and bauxite	984	778
Sales of foil and other aluminium products	346	323
Sales of other products	450	379
Provision of services	**207**	**165**
Supply of energy	143	121
Provision of transportation services	8	6

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Provision of other services	56	38
Total revenue by types of customers	**10,280**	**9,969**
Third parties	6,150	6,727
Related parties – companies capable of exerting significant influence	3,671	2,859
Related parties – companies under common control	166	190
Related parties – associates and joint ventures	293	193
Total revenue by primary regions	**10,280**	**9,969**
Europe	4,804	4,212
CIS	2,944	2,400
America	1,076	1,660
Asia	1,400	1,603
Other	56	94

The Group's customer base is diversified and includes only one major customer - Glencore International AG (a member of Glencore International Plc which is a shareholder of the Company with a 8.75% share – refer to note 1(a)) - with whom transactions have exceeded 10% of the Group's revenue. In 2018 revenues from sales of primary aluminium and alloys to this customer amounted to USD3,115 million (2017: USD2,431 million).

Revenue from sale of primary aluminium and alloys relates to aluminium segment (Note 4). Revenue from sales of alumina and bauxite relates to alumina segment which also includes sale of other products. Revenue from sale of foil and other aluminium products and other products and services relates mostly to the revenue of non-reportable segments.

6 Cost of sales and operating expenses

(a) Cost of sales

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Cost of alumina, bauxite and other materials	**(3,720)**	**(3,138)**
Third parties	*(3,588)*	*(2,964)*
Related parties – companies capable of exerting significant influence	*(78)*	*(113)*
Related parties – companies under common control	*(54)*	*(61)*
Purchases of primary aluminium	**(467)**	**(686)**
Third parties	*(145)*	*(384)*
Related parties – companies capable of exerting significant influence	–	*(10)*
Related parties – companies under common control	*(15)*	*(13)*
Related parties – associates and joint ventures	*(307)*	*(279)*

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Energy costs	**(2,147)**	**(2,149)**
Third parties	*(1,267)*	*(1,258)*
Related parties – companies capable of exerting significant influence	*(4)*	*(10)*
Related parties – companies under common control	*(839)*	*(864)*
Related parties – associates and joint ventures	*(37)*	*(17)*
Personnel costs	**(582)**	**(582)**
Depreciation and amortisation	**(498)**	**(472)**
Change in finished goods	**347**	**184**
Other costs	**(379)**	**(340)**
Third parties	*(196)*	*(169)*
Related parties – companies capable of exerting significant influence	–	*(1)*
Related parties – companies under common control	*(35)*	*(35)*
Related parties – associates and joint ventures	*(148)*	*(135)*
	(7,446)	**(7,183)**

(b) Distribution, administrative and other operating expenses, and impairment of non-current assets

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Transportation expenses	(373)	(368)
Personnel costs	(330)	(333)
Impairment of non-current assets	(157)	(84)
Consulting and legal expenses	(79)	(76)
Lease and security	(48)	(54)
Impairment of trade and other receivables	(36)	(6)
Packaging materials	(36)	(33)
Taxes other than on income	(31)	(40)
Charitable donations	(22)	(24)
Repair and other services	(19)	(31)

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Depreciation and amortisation	(15)	(16)
Loss on disposal of property, plant and equipment	(12)	(25)
Auditors' remuneration	(6)	(6)
Other expenses	(189)	(167)
	(1,353)	**(1,263)**

(c) Personnel costs

Accounting policies

Personnel costs comprise salaries, annual bonuses, annual leave and cost of non-monetary benefits. Salaries, annual bonuses, paid annual leave and cost of non-monetary benefits are accrued in the year in which the associated services are rendered by employees. Where payment or settlement is deferred and the effect would be material, these amounts are stated at their present values.

The employees of the Group are also members of retirement schemes operated by local authorities. The Group is required to contribute a certain percentage of their payroll to these schemes to fund the benefits. The Group's total contribution to those schemes charged to the statement of income during the years presented is shown below.

The Group's net obligation in respect of defined benefit pension and other post-retirement plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any plan assets are deducted. The discount rate is the yield at the reporting date on government bonds that have maturity dates approximating the terms of the Group's obligations. The calculation is performed using the projected unit credit method. When the calculation results in a benefit to the Group, the recognised asset is limited to the net total of any unrecognised past service costs and the present value of any future refunds from the plan or reductions in future contributions to the plan.

Where there is a change in actuarial assumptions, the resulting actuarial gains and losses are recognised directly in other comprehensive income.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognised in the statement of income on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognised immediately.

The Group recognises gains and losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs.

The gain or loss on curtailment comprises any resulting change in the fair value of plan assets, any change in the present value of the defined benefit obligation, any related actuarial gains and losses.

Disclosures

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Contributions to defined contribution retirement plans	173	194
Contributions to defined benefit retirement plans	–	3
Total retirement costs	173	197
Wages and salaries	739	718
	912	**915**

(d) EBITDA and operating effectiveness measures

Adjusted EBITDA is the key non-IFRS financial measure used by the Group as reference for assessing operating effectiveness.

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Results from operating activities	1,481	1,523
Add:		
Amortisation and depreciation	513	488
Impairment of non-current assets	157	84
Loss on disposal of property, plant and equipment	12	25
Adjusted EBITDA	**2,163**	**2,120**

7 Finance income and expenses

Accounting policies

Finance income comprises interest income on funds invested, changes in the fair value of financial assets at fair value through profit or loss and foreign currency gains. Interest income is recognised as it accrues, using the effective interest method.

Finance expenses comprise interest expense on borrowings, unwinding of the discount on provisions, foreign currency losses and changes in the fair value of financial assets at fair value through profit or loss. All borrowing costs are recognised in the statement of income using the effective interest method, except for borrowing costs related to the acquisition, construction and production of qualifying assets which are recognised as part of the cost of such assets.

Foreign currency gains and losses are reported on a net basis.

Disclosures

		YEAR ENDED 31 DECEMBER	
		2018 USD MILLION	2017 USD MILLION
Finance income	Interest income on third party loans and deposits	31	16
	Interest income on loans to related parties – companies under common control	1	1
	Change in fair value of derivative financial instruments (refer to note 21)	171	–
	Net foreign exchange gain	–	4
		203	**21**

		YEAR ENDED 31 DECEMBER	
		2018 USD MILLION	2017 USD MILLION
Finance expenses	Interest expense on bank loans and bonds wholly repayable within 5 years and other bank charges	(239)	(306)
	Interest expense on bank loans and bonds wholly repayable after 5 years	(259)	(275)
	Interest expense on company loans from related parties – companies exerting significant influence	(2)	(2)
	Change in fair value of derivative financial instruments (refer to note 21)	–	(287)
	Net foreign exchange loss	(183)	–
	Interest expense on provisions	(3)	(6)
		(686)	**(876)**

8 Income tax

Accounting policies

Income tax expense comprises current and deferred tax. Income tax expense is recognised in the statement of income and other comprehensive income except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of goodwill, the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit, and differences relating to investments in subsidiaries to the extent that they probably will not reverse in the foreseeable future. New information may become available that causes the Company to change its judgement regarding the adequacy of existing tax liability. Such changes to tax liabilities will impact tax expenses in the period that such a determination is made. Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset when they relate to income taxes levied by the same taxation authority and the Group has both the right and the intention to settle its current tax assets and liabilities on a net or simultaneous basis.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which temporary differences can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividends is recognised.

Disclosures

(a) Income tax expense

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Current tax		
Current tax for the year	305	140
Deferred tax		
Origination and reversal of temporary differences	(50)	(74)
Actual tax expense	**255**	**66**

The Company is a tax resident of Cyprus with an applicable corporate tax rate of 12.5%. Subsidiaries pay income taxes in accordance with the legislative requirements of their respective tax jurisdictions. For subsidiaries domiciled in Russia, the applicable tax rate is 20%; in Ukraine of 18%; Guinea of 0%; China of 25%; Kazakhstan of 20%; Australia of 30%; Jamaica of 25%; Ireland of 12.5%; Sweden of 22% and Italy of 27.9%. For the Group's subsidiaries domiciled in Switzerland the applicable tax rate for the period is the corporate income tax rate in the Canton of Zug, Switzerland, which may vary depending on the subsidiary's tax status. The rate consists of a federal income tax and cantonal/communal income and capital taxes. The latter includes a base rate and a multiplier, which may change from year to year. Applicable income tax rates for 2017 are 9.27% and 14.60% for different subsidiaries. For the Group's significant trading companies, the applicable tax rate is 0%. The applicable tax rates for the year ended 31 December 2018 were the same as for the year ended 31 December 2017 except for tax rates for subsidiaries domiciled in Switzerland which amounted to 9.6% and 14.51% accordingly.

	YEAR ENDED 31 DECEMBER			
	2018		2017	
	USD MILLION	%	USD MILLION	%
Profit before taxation	**1,953**	**100**	**1,288**	**100**
Income tax at tax rate applicable to the tax residence of the Company	244	13	161	13
Effect of different income tax rates	(50)	(3)	(56)	(4)
Effect of changes in investment in Norilsk Nickel	(63)	(3)	(35)	(3)
Change in unrecognised deferred tax assets	11	1	14	1
Change in recognised temporary differences	–	–	(22)	(2)
Effect of reversal of impairment	(35)	(2)	–	–
Other non-deductible taxable items	31	2	4	–
Income tax related to prior periods, including provision	117	6	–	–
Actual tax expense	**255**	**14**	**66**	**5**

(b) Recognised deferred tax assets and liabilities

Deferred tax assets and liabilities are attributable to the following temporary differences:

USD million	Assets		Liabilities		Net	
	31 December 2018	31 December 2017	31 December 2018	31 December 2017	31 December 2018	31 December 2017
Property, plant and equipment	55	48	(574)	(595)	(519)	(547)
Inventories	54	45	(14)	(13)	40	32
Trade and other receivables	17	12	(9)	(6)	8	6
Derivative financial assets/(liabilities)	6	16	(8)	(7)	(2)	9
Tax loss carry-forwards	41	19	–	–	41	19
Others	224	162	(201)	(140)	23	22
Deferred tax assets/(liabilities)	397	302	(806)	(761)	(409)	(459)
Set-off of deferred taxation	(304)	(239)	304	239	–	–
Net deferred tax assets/(liabilities)	**93**	**63**	**(502)**	**(522)**	**(409)**	**(459)**

(c) Movement in deferred tax assets/(liabilities) during the year

USD million	1 January 2017	Recognised in profit or loss	Foreign currency translation	31 December 2017
Property, plant and equipment	(533)	(14)	–	(547)
Inventories	39	(7)	–	32
Trade and other receivables	8	(2)	–	6
Derivative financial assets/(liabilities)	(11)	20	–	9
Tax loss carry-forwards	9	10	–	19
Others	(46)	67	1	22
Total	**(534)**	**74**	**1**	**(459)**

USD million	1 January 2018	Recognised in profit or loss	Foreign currency translation	31 December 2018
Property, plant and equipment	(547)	28	–	(519)
Inventories	32	8	–	40
Trade and other receivables	6	2	–	8
Derivative financial assets/(liabilities)	9	(11)	–	(2)
Tax loss carry-forwards	19	22	–	41
Others	22	1	–	23
Total	**(459)**	**50**	**–**	**(409)**

Recognised tax losses expire in the following years:

Year of expiry	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Without expiry	41	19
	41	**19**

(d) Unrecognised deferred tax assets

Deferred tax assets have not been recognised in respect of the following items:

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Deductible temporary differences	789	691
Tax loss carry-forwards	232	322
	1,021	**1,013**

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profits will be available against which the Group can utilise the benefits therefrom. Tax losses expire in the following years:

Year of expiry	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Without expiry	231	316
From 2 to 5 years	1	4
Up to 1 year	–	2
	232	**322**

(e) Unrecognised deferred tax liabilities

Retained earnings of the Group's subsidiaries where dividend distributions are subject to taxation included USD1,778 million and USD1,387 million as at 31 December 2018 and 31 December 2017, respectively, for which deferred taxation has not been provided because remittance of the earnings has been indefinitely postponed through reinvestment and, as a result, such amounts are considered to be permanently invested. It was not practicable to determine the amount of temporary differences relating to investments in subsidiaries where the Group is able to control the timing of reversal of the difference. Reversal is not expected in the foreseeable future. For other subsidiaries in the Group, including the significant trading companies, the distribution of dividends does not give rise to taxes.

(f) Current taxation in the consolidated statement of financial position represents:

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Net income tax receivable at the beginning of the year	16	19
Income tax for the year	(305)	(140)
Income tax paid	124	100
Dividend withholding tax	47	26
Income tax provision (note 20)	20	–
Translation difference	(7)	11
	(105)	**16**
Represented by:		
Income tax payable (note 17)	(127)	(16)
Prepaid income tax (note 17)	22	32
Net income tax recoverable	**(105)**	**16**

9 Directors' remuneration

Directors' remuneration disclosed pursuant to section 383(1) of the Hong Kong Companies Ordinance and Part 2 of the Companies (Disclosure of information about Benefits of Directors) Regulations are as follows:

	Year ended 31 December 2018			
	Directors' fees USD thousand	Salaries, allowances, benefits in kind USD thousand	Discretionary bonuses USD thousand	Total USD thousand
Executive Directors				
Evgenii Nikitin (a)	–	591	616	1,207
Sergei Popov (a)	–	54	86	140
Evgenii Vavilov (a)	–	20	7	27
Oleg Deripaska (d)	–	400	4,280	4,680
Vladislav Soloviev (e)	–	1,631	3,939	5,570
Siegfried Wolf (e)	–	911	–	911

	Year ended 31 December 2018			
	Directors' fees USD thousand	Salaries, allowances, benefits in kind USD thousand	Discretionary bonuses USD thousand	Total USD thousand
Non-executive Directors				
Marco Musetti	186	–	–	186
Vyacheslav Solomin (b)	82	–	–	82
Timur Valiev (b)	88	–	–	88
Maksim Goldman (f)	58	–	–	58
Dmitry Afanasiev (e)	89	–	–	89
Ivan Glasenberg (f)	58	–	–	58
Gulzhan Moldazhanova (e)	93	–	–	93
Ekaterina Nikitina(e)	96	–	–	96
Olga Mashkovskaya (e)	89	–	–	89
Daniel Lesin Wolfe (f)	58	–	–	58
Maksim Sokov (e)	96	–	–	96

	Year ended 31 December 2018			
	Directors' fees USD thousand	Salaries, allowances, benefits in kind USD thousand	Discretionary bonuses USD thousand	Total USD thousand
Independent Non-executive Directors				
Matthias Warnig (Chairman)	452	–	–	452
Philippe Bernard Henri Mailfait (c)	82	–	–	82
Jean-Pierre Thomas (c)	95	–	–	95
Bernard Zonneveld	230	–	–	230
Philip Lader (f)	97	–	–	97
Elsie Leung Oi-Sie	203	–	–	203
Mark Garber (e)	114	–	–	114
Dmitry Vasiliev	193	–	–	193
	2,459	**3,607**	**8,928**	**14,994**

	Year ended 31 December 2017			
	Directors' fees USD thousand	Salaries, allowances, benefits in kind USD thousand	Discretionary bonuses USD thousand	Total USD thousand
Executive Directors				
Oleg Deripaska (d)	–	1,804	4,000	5,804
Vladislav Soloviev(e)	–	3,957	4,220	8,177
Siegfried Wolf (e)	–	1,711	–	1,711
Non-executive Directors				
Maksim Goldman (f)	195	–	–	195
Dmitry Afanasiev (e)	184	–	–	184
Ivan Glasenberg (f)	195	–	–	195
Gulzhan Moldazhanova (e)	176	–	–	176
Ekaterina Nikitina(e)	182	–	–	182
Olga Mashkovskaya(e)	169	–	–	169

	Year ended 31 December 2017			
	Directors' fees USD thousand	Salaries, allowances, benefits in kind USD thousand	Discretionary bonuses USD thousand	Total USD thousand
Daniel Lesin Wolfe (f)	195	–	–	195
Maksim Sokov(e)	182	–	–	182
Marco Musetti	181	–	–	181
Independent Non-executive Directors				
Matthias Warnig (Chairman)	462	–	–	462
Bernard Zonneveld	215	–	–	215
Philip Lader (f)	314	–	–	314
Elsie Leung Oi-Sie	202	–	–	202
Mark Garber (e)	215	–	–	215
Dmitry Vasiliev	183	–	–	183
	3,250	**7,472**	**8,220**	**18,942**

a. Evgenii Nikitin, Sergei Popov and Evgenii Vavilov were appointed as Executive Directors in June 2018.

b. Vyacheslav Solomin and Timur Valiev were appointed as Non-executive Directors in June 2018.

c. Philippe Bernard Henri Mailfait and Jean-Pierre Thomas were appointed as Independent Non-executive Directors in June 2018.

d. Oleg Deripaska resigned from his position as member of the Board of Directors in May 2018.

e. Vladislav Soloviev, Siegfried Wolf, Gulzhan Moldazhanova, Ekaterina Nikitina, Olga Mashkovskaya, Maksim Sokov, Dmitry Afanasiev and Mark Garber resigned from their positions as members of the Board of Directors in June 2018.

f. Maksim Goldman, Ivan Glasenberg, Philip Lader and Daniel Lesin Wolfe resigned from their positions as members of the Board of Directors in April 2018.

The remuneration of the executive directors disclosed above includes compensation received starting from the date of the appointment and/or for the period until their termination as a member of the Board of Directors.

Retirement scheme contributions for the directors, who are members of management, are not disclosed as the amount is considered not significant for either year presented. There are no retirement scheme contributions for non-executive directors.

10 Individuals with highest emoluments

Of the five individuals with the highest emoluments, one was director in the year ended 31 December 2018 and two were directors in the year ended 31 December 2017, whose emoluments are disclosed in note 9. The aggregate of the emoluments in respect of the other individuals are as follows:

	YEAR ENDED 31 DECEMBER	
	2018 USD THOUSAND	2017 USD THOUSAND
Salaries	11,449	8,990
Discretionary bonuses	11,238	9,041
	22,687	**18,031**

The emoluments of the other individuals with the highest emoluments are within the following bands:

	YEAR ENDED 31 DECEMBER	
	2018 Number of individuals	2017 Number of individuals
HK$36,000,001-HK$36,500,000 (US$4,600,001 – US$4,700,000)	–	1
HK$37,000,001-HK$37,500,000 (US$4,700,001 – US$4,800,000)	1	–
HK$39,000,001-HK$39,500,000 (US$4,900,001 – US$5,000,000)	1	–
HK$41,000,001-HK$41,500,000 (US$5,200,001 – US$5,300,000)	1	–
HK$43,500,001-HK$44,000,000 (US$5,500,001 – US$5,600,000)	–	1
HK$59,500,001-HK$60,000,000 (US$7,600,001 – US$7,700,000)	1	–
HK$61,000,001-HK$61,500,000 (US$7,800,001 – US$7,900,000)	–	1

No emoluments have been paid to these individuals as an inducement to join or upon joining the Group or as compensation for loss of office during the years presented.

Retirement scheme contributions to individuals with highest emoluments are not disclosed as the amount is considered not significant for either year presented.

11 Dividends

No dividends were declared and paid by the Company during the year ended 31 December 2018.

On 24 August 2017 the Board of Directors of the Company approved an interim dividend of USD299.3 million (USD0.0197 per ordinary share) for 2017. The interim dividend was paid on 10 October 2017.

The Company is subject to external capital requirements (refer to note 22(f)).

12 Earnings per share

The calculation of earnings per share is based on the profit attributable to ordinary equity shareholders of the Company and the weighted average number of shares in issue during the years ended 31 December 2018 and 31 December 2017. Weighted average number of shares:

	YEAR ENDED 31 DECEMBER	
	2018	2017
Issued ordinary shares at beginning of the year	15,193,014,862	15,193,014,862
Effect of treasury shares	–	–
Weighted average number of shares at end of the year	15,193,014,862	15,193,014,862
Profit for the year, USD million	**1,698**	**1,222**
Basic and diluted earnings per share, USD	**0.112**	**0.080**

There were no outstanding dilutive instruments during the years ended 31 December 2018 and 2017.

13 Property, plant and equipment

Accounting policies

(i) Recognition and measurement

Items of property, plant and equipment, are measured at cost less accumulated depreciation and impairment losses. The cost of property, plant and equipment at 1 January 2004, the date of transition to IFRSs, was determined by reference to its fair value at that date.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, the costs of dismantling and removing the items and restoring the site on which they are located and capitalised borrowing costs. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

The cost of periodic relining of electrolysers is capitalised and depreciated over the expected production period.

Gains or losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognised net within gain/(loss) on disposal of property, plant and equipment in the statement of income.

(ii) Subsequent costs

The cost of replacing a part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in the statement of income as incurred.

(iii) Exploration and evaluation assets

Exploration and evaluation activities involve the search for mineral resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource. Exploration and evaluation activities include:

- researching and analysing historical exploration data;
- gathering exploration data through topographical, geochemical and geophysical studies;
- exploratory drilling, trenching and sampling;
- determining and examining the volume and grade of the resource;
- surveying transportation and infrastructure requirements; and
- conducting market and finance studies.

Administration costs that are not directly attributable to a specific exploration area are charged to the statement of income.

License costs paid in connection with a right to explore in an existing exploration area are capitalised and amortised over the term of the permit.

Exploration and evaluation expenditure is capitalised as exploration and evaluation assets when it is expected that expenditure related to an area of interest will be recouped by future exploitation, sale, or, at the reporting date, the exploration and evaluation activities have not reached a stage that permits a reasonable assessment of the existence of commercially recoverable ore reserves. Capitalised exploration and evaluation expenditure is recorded as a component of property, plant and equipment at cost less impairment losses. As the asset is not available for use, it is not depreciated. All capitalised exploration and evaluation expenditure is monitored for indications of impairment. Where there are indicators of potential impairment, an assessment is performed for each area of interest in conjunction with the group of operating assets (representing a cash-generating unit) to which the exploration is attributed. Exploration areas at which reserves have been discovered but which require major capital expenditure before production can begin are continually evaluated to ensure that commercial quantities of reserves exist or to ensure that additional exploration work is underway or planned. To the extent that capitalised expenditure is not expected to be recovered it is charged to the statement of income.

Exploration and evaluation assets are transferred to mining property, plant and equipment or intangible assets when development is sanctioned.

(iv) Stripping costs

Expenditure relating to the stripping of overburden layers of ore, including estimated site restoration costs, is included in the cost of production in the period in which it is incurred.

(v) Mining assets

Mining assets are recorded as construction in progress and transferred to mining property, plant and equipment when a new mine reaches commercial production.

Mining assets include expenditure incurred for:

- Acquiring mineral and development rights;
- Developing new mining operations.

Mining assets include interest capitalised during the construction period, when financed by borrowings.

(vi) Depreciation

The carrying amounts of property, plant and equipment (including initial and any subsequent capital expenditure) are depreciated to their estimated residual value over the estimated useful lives of the specific assets concerned, or the estimated life of the associated mine or mineral lease, if shorter. Estimates of residual values and useful lives are reassessed annually and any change in estimate is taken into account in the determination of remaining depreciation charges. Leased assets are depreciated over the shorter of the lease term and their useful lives. Freehold land is not depreciated.

The property, plant and equipment is depreciated on a straight-line or units of production basis over the respective estimated useful lives as follows:

– Buildings	30 to 50 years;
– Plant, machinery and equipment	5 to 40 years;
– Electrolysers	4 to 15 years;
– Mining assets	units of production on proven and probable reserves;
– Other (except for exploration and evaluation assets)	1 to 20 years.

Disclosures

USD million	Land and buildings	Machinery and equipment
Cost/Deemed cost		
Balance at 1 January 2017	3,394	5,852
Acquisition through business combination	–	–
Additions	–	17
Disposals	(18)	(44)
Transfers	65	359
Foreign currency translation	47	58
Balance at 31 December 2017	**3,488**	**6,242**
Balance at 1 January 2018	3,488	6,242
Additions	1	23
Acquired through business combination	–	–
Disposals	(6)	(63)
Transfers	106	280
Foreign currency translation	(80)	(108)
Balance at 31 December 2018	**3,509**	**6,374**

Electrolysers	Other	Mining assets	Construction in progress	Total
2,217	169	510	1,511	13,653
–	10	–	–	10
109	5	17	704	852
(13)	(3)	(74)	(18)	(170)
24	1	14	(463)	–
3	1	25	17	151
2,340	**183**	**492**	**1,751**	**14,496**
2,340	183	492	1,751	14,496
101	–	7	705	837
–	16	–	–	16
–	(2)	(4)	(86)	(161)
118	5	8	(517)	–
(15)	(1)	(60)	(67)	(331)
2,544	**201**	**443**	**1,786**	**14,857**

USD million	Land and buildings	Machinery and equipment
Accumulated depreciation and impairment losses		
Balance at 1 January 2017	1,824	4,290
Depreciation charge	80	269
Impairment loss/(reversal) of impairment loss	(1)	(33)
Disposals	(4)	(30)
Foreign currency translation	43	45
Balance at 31 December 2017	**1,942**	**4,541**

Electrolysers	Other	Mining assets	Construction in progress	Total
1,879	143	455	997	9,588
149	7	1	–	506
5	(2)	(29)	80	20
(11)	(1)	(23)	–	(69)
3	1	23	13	128
2,025	**148**	**427**	**1,090**	**10,173**

USD million	Land and buildings	Machinery and equipment
Balance at 1 January 2018	1,942	4,541
Depreciation charge	85	296
Impairment loss/(reversal) of impairment loss	(53)	16
Disposals	(2)	(53)
Transfers	14	(60)
Foreign currency translation	(68)	(87)
Balance at 31 December 2018	**1,918**	**4,653**
Net book value		
At 31 December 2017	**1,546**	**1,701**
At 31 December 2018	**1,591**	**1,721**

	Electrolysers	Other	Mining assets	Construction in progress	Total
	2,025	148	427	1,090	10,173
	151	5	2	–	539
	–	2	6	76	47
	–	(2)	–	(7)	(64)
	46	1	–	(1)	–
	(12)	(1)	(58)	(33)	(259)
	2,210	**153**	**377**	**1,125**	**10,436**
	315	**35**	**65**	**661**	**4,323**
	334	**48**	**66**	**661**	**4,421**

Depreciation expense of USD496 million (2017: USD468 million) has been charged to cost of goods sold, USD3 million (2017: USD3 million) to distribution expenses and USD12 million (2017: USD13 million) to administrative expenses.

During the year ended 31 December 2018 interest expense of USD20 million was capitalised following commencement of active construction at several projects (2017: USD16 million).

Included into construction in progress at 31 December 2018 and 2017 are advances to suppliers of property, plant and equipment of USD32 million and USD134 million, respectively.

The carrying value of property, plant and equipment subject to lien under loan agreements was USD3 million as at 31 December 2018 (31 December 2017: USD3 million), refer to note 19.

(a) Impairment

In accordance with the Group's accounting policies, each asset or cash generating unit is evaluated every reporting period to determine whether there are any indications of impairment. If any such indication exists, a formal estimate of recoverable amount is performed and an impairment loss recognised to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an asset or cash generating group of assets is measured at the higher of fair value less costs to sell and value in use.

Fair value is determined as the amount that would be obtained from the sale of the asset in an arm's length transaction between knowledgeable and willing parties and is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal.

Value in use is also generally determined as the present value of the estimated future cash flows, but only those expected to arise from the continued use of the asset in its present form and its eventual disposal. Present values are determined using a risk-adjusted pre-tax discount rate appropriate to the risks inherent in the asset. Future cash flow estimates are based on expected production and sales volumes, commodity prices (considering current and historical prices, price trends and related factors), bauxite reserve estimate, operating costs, restoration and rehabilitation costs and future capital expenditure.

Bauxite reserves are estimates of the amount of product that can be economically and legally extracted from the Group's properties. In order to calculate reserves, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. The Group determines ore reserves under the Australasian Code for Reporting of Mineral Resources and Ore Reserves September 1999, known as the JORC Code. The JORC Code requires the use of reasonable investment assumptions to calculate reserves.

Management identified several factors that indicated that for a number of Group's cash-generating units previously recognised impairment loss may require reversal and for a number of cash-generating units impairment loss shall be recognised. These include significant fluctuations of aluminium and alumina prices during the year as result of LME and overall market instability. In aluminium production, the Group faced increase in cash cost due to increase in alumina costs partially counterbalanced by application of cash cost control measures. For alumina cash generating units, major influence was on the part of recovery in alumina prices, increase in prices of energy resources being a significant part of cash cost and unbalanced change in alumina and bauxite prices. Bauxite cash generating units incurred more or less stable sale price of bauxite.

For the purposes of impairment testing the recoverable amount of each cash generating unit was determined by discounting expected future net cash flows of the cash generating unit.

Based on results of impairment testing as at 31 December 2018, management has concluded that a reversal of previously recognised impairment loss relating to property, plant and equipment should be recognised in these consolidated financial statements in respect BAZ and UAZ cash generating unit in the amount of USD177 million. Additionally, management has concluded that an impairment loss in respect of Cobad cash generating unit in the amount of USD78 million should be recognised in these consolidated financial statements.

Based on results of impairment testing as at 31 December 2017, management has concluded that a reversal of previously recognised impairment loss relating to property, plant and equipment should be recognised in these consolidated financial statements in respect of the Windalco cash generating unit in the amount of USD63 million.

For the purposes of impairment testing the recoverable amount of each cash generating unit was determined by discounting expected future net cash flows of the cash generating unit. The pre-tax discount rates applied to the above mentioned cash generating units, estimated in nominal terms based on an industry weighted average cost of capital, are presented in the table below.

	YEAR ENDED 31 DECEMBER	
	2018	2017
Kubikenborg Aluminium	11.1%	14.4%
Windalco	21.0%	22.7%
BAZ and UAZ (Bogoslovsk and Ural aluminium smelters)	19.2%	–
Compagnie de Bauxites de Dian-Dian (Cobad)	22.0%	–
Aughinish Alumina	13.4%	14.3%

The recoverable amount of a number of the cash generating units tested for impairment are particularly sensitive to changes in forecast aluminium and alumina prices, foreign exchange rates and applicable discount rates.

Additionally, management identified specific items of property, plant and equipment that are no longer in use and therefore are not considered to be recoverable amounting to USD146 million at 31 December 2018 (2017: USD83 million). These assets have been impaired in full. No further impairment of property, plant and equipment or reversal of previously recorded impairment was identified by management.

(b) Leased assets

Leases under the terms of which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Upon initial recognition the leased asset is measured at an amount equal to the lower of its fair value and the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to that asset.

The corresponding finance lease obligation is included within interest-bearing liabilities. The interest element is allocated to accounting periods during the lease term to reflect a constant rate of interest on the remaining balance of the obligation for each accounting period.

Assets held under other leases (operating leases) are not recognised in the statement of financial position. Payments made under the lease are charged to the statement of income in equal instalments over the accounting periods covered by the lease term, except where an alternative basis is more representative of the pattern of benefits to be derived from the leased assets. Lease incentives received are recognised in the statement of income as an integral part of the aggregate net lease payments made. Contingent rentals are charged to the statement of income in the accounting period in which they are incurred.

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Owned and leased properties		
In the Russian Federation		
Freehold	1,400	1,380
Short-term leases	18	18
Medium-term leases	7	7
Outside the Russian Federation		
Freehold	166	141
	1,591	**1,546**
Representing		
Land and buildings	**1,591**	**1,546**

Included in the above mentioned amounts is the land held on long lease in the Russian Federation that comprised USD25 million and USD25 million at 31 December 2018 and 31 December 2017, respectively. The Group does not hold land in Hong Kong.

14 Intangible assets

Accounting policies

(i) Goodwill

On the acquisition of a subsidiary, an interest in a joint venture or an associate or an interest in a joint arrangement that comprises a business, the identifiable assets, liabilities and contingent liabilities of the acquired business (or interest in a business) are recognised at their fair values unless the fair values cannot be measured reliably. Where the fair values of assumed contingent liabilities cannot be measured reliably, no liability is recognised but the contingent liability is disclosed in the same manner as for other contingent liabilities.

Goodwill arises when the cost of acquisition exceeds the fair value of the Group's interest in the net fair value of identifiable net assets acquired. Goodwill is not amortised but is tested for impairment annually. For this purpose, goodwill arising on a business combination is allocated to the cash-generating units expected to benefit from the acquisition and any impairment loss recognised is not reversed even where circumstances indicate a recovery in value.

When the fair value of the Group's share of identifiable net assets acquired exceeds the cost of acquisition, the difference is recognised immediately in the statement of income.

In respect of associates or joint ventures, the carrying amount of goodwill is included in the carrying amount of the interest in the associate and joint venture and the investment as a whole is tested for impairment whenever there is objective evidence of impairment. Any impairment loss is allocated to the carrying amount of the interest in the associate and joint venture.

(ii) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the statement of income when incurred.

Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditure is capitalised only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalised includes the cost of materials, direct labour and overhead costs that are directly attributable to preparing the asset for its intended use and capitalised borrowing costs. Other development expenditure is recognised in the statement of income when incurred.

Capitalised development expenditure is measured at cost less accumulated amortisation and accumulated impairment losses.

(iii) Other intangible assets

Other intangible assets that are acquired by the Group, which have finite useful lives, are measured at cost less accumulated amortisation and accumulated impairment losses.

(iv) Subsequent expenditure

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognised in the statement of income when incurred.

(v) Amortisation

Amortisation is recognised in the statement of income on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use. The estimated useful lives are as follows:

— software	5 years;
— other	2-8 years.

The amortisation method, useful lives and residual values are reviewed at each financial year end and adjusted if appropriate.

Disclosures

	GOODWILL USD MILLION	OTHER INTANGIBLE ASSETS USD MILLION	TOTAL USD MILLION
Cost			
Balance at 1 January 2017	2,837	541	3,378
Additions	17	20	37
Disposals	–	(15)	(15)
Foreign currency translation	63	1	64
Balance at 31 December 2017	**2,917**	**547**	**3,464**
Balance at 1 January 2018	2,917	547	3,464
Additions	48	39	87
Disposals	–	(8)	(8)
Foreign currency translation	(215)	(5)	(220)
Balance at 31 December 2018	**2,750**	**573**	**3,323**

	GOODWILL USD MILLION	OTHER INTANGIBLE ASSETS USD MILLION	TOTAL USD MILLION
Amortisation and impairment losses			
Balance at 1 January 2017	**(449)**	**(459)**	**(908)**
Amortisation charge	–	(4)	(4)
Balance at 31 December 2017	(449)	(463)	(912)
Balance at 1 January 2018	**(449)**	**(463)**	**(912)**
Amortisation charge	–	(2)	(2)
Balance at 31 December 2018	(449)	(465)	(914)
Net book value			
At 31 December 2017	**2,468**	**84**	**2,552**
At 31 December 2018	**2,301**	**108**	**2,409**

The amortisation charge is included in cost of sales in the consolidated statement of income.

Goodwill recognised in these consolidated financial statements initially arose on the formation of the Group in 2000 and the acquisition of a 25% additional interest in the Group by its controlling shareholder in 2003. The amount of goodwill was principally increased in 2007 as a result of the acquisition of certain businesses of SUAL Partners and Glencore.

(a) Impairment testing of goodwill and other intangible assets

For the purposes of impairment testing, the entire amount of goodwill is allocated to the aluminium segment of the Group's operations. The aluminium segment represents the lowest level within the Group at which the goodwill is monitored for internal management purposes. The recoverable amount represents value in use as determined by discounting the future cash flows generated from the continuing use of the plants within the Group's aluminium segment.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to goodwill.

At 31 December 2018, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2017 and performed an impairment test for goodwill at 31 December 2018 using the following assumptions to determine the recoverable amount of the segment:

- Total production was estimated based on average sustainable production levels of 3.8 million metric tonnes of primary aluminium, of 8.1 million metric tonnes of alumina and of 16.5 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;
- Sales prices were based on the long-term aluminium price outlook derived from available industry and market sources at USD2,117 per tonne for primary aluminium in 2019, USD2,159 in 2020, USD2,193 in 2021, USD2,193 in 2022, USD2,216 in 2023. Operating costs were projected based on the historical performance adjusted for inflation;
- Nominal foreign currency exchange rates applied to convert operating costs of the Group denominated in RUB into USD were RUB66.8 for one USD in 2019, RUB68.3 in 2020, RUB66.7 in 2021, RUB65.1 in 2022, RUB65.0 in 2023. Inflation of 4.0% – 4.5% in RUB and 1.6% - 2.4% in USD was assumed in determining recoverable amounts;
- The pre-tax discount rate was estimated in nominal terms based on the weighted average cost of capital basis and was 15.9%;
- A terminal value was derived following the forecast period assuming a 1.7% annual growth rate.

Values assigned to key assumptions and estimates used to measure the units' recoverable amount was based on external sources of information and historic data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results were particularly sensitive to the following key assumptions:

- A 5% reduction in the projected aluminium price level would have resulted in a decrease in the recoverable amount by 22% but would not lead to an impairment;
- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 14% decrease in the recoverable amount but would not lead to an impairment;
- A 1% increase in the discount rate would have resulted in a 8% decrease in the recoverable amount but would not lead to an impairment.

Based on results of impairment testing of goodwill, management concluded that no impairment should be recorded in the consolidated financial statements as at 31 December 2018.

At 31 December 2017, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2016 and performed an impairment test for goodwill at 31 December 2017 using the following assumptions to determine the recoverable amount of the segment:

- Total production was estimated based on average sustainable production levels of 3.8 million metric tonnes of primary aluminium, of 8.0 million metric tonnes of alumina and of 12.3 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;
- Sales prices were based on the long-term aluminium price outlook derived from available industry and market sources at USD2,058 per tonne for primary aluminium in 2018, USD2,043 in 2019, USD2,035 in 2020, USD2,037 in 2021, USD2,053 in 2022. Operating costs were projected based on the historical performance adjusted for inflation;
- Nominal foreign currency exchange rates applied to convert operating costs of the Group denominated in RUB into USD were RUB62.3 for one USD in 2018, RUB61.4 in 2019, RUB62.2 in 2020, RUB60.5 in 2021, RUB59.5 in 2022. Inflation of 3.9% – 4.9% in RUB and 1.3% - 2.3% in USD was assumed in determining recoverable amounts;
- The pre-tax discount rate was estimated in nominal terms based on the weighted average cost of capital basis and was 13.1%;
- A terminal value was derived following the forecast period assuming a 1.7% annual growth rate.

Values assigned to key assumptions and estimates used to measure the units' recoverable amount was based on external sources of information and historic data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results were particularly sensitive to the following key assumptions:

- A 5% reduction in the projected aluminium price level would have resulted in a decrease in the recoverable amount by 26% but would not lead to an impairment;
- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 17% decrease in the re-

coverable amount but would not lead to an impairment;
- A 1% increase in the discount rate would have resulted in a 7% decrease in the recoverable amount but would not lead to an impairment.

Based on results of impairment testing of goodwill, management concluded that no impairment should be recorded in the consolidated financial statements as at 31 December 2017.

15 Interests in associates and joint ventures

Accounting policies

An associate is an entity in which the Group or Company has significant influence, but not control or joint control, over its management, including participation in the financial and operating policy decisions.

A joint venture is an arrangement whereby the Group or Company and other parties contractually agree to share control of the arrangement, and have rights to the net assets of the arrangement.

An investment in an associate or a joint venture is accounted for in the consolidated financial statements under the equity method, unless it is classified as held for sale (or included in a disposal group that is classified as held for sale). Under the equity method, the investment is initially recorded at cost, adjusted for any excess of the Group's share of the acquisition-date fair values of the investee's identifiable net assets over the cost of the investment (if any). Thereafter, the investment is adjusted for the post acquisition change in the Group's share of the investee's net assets and any impairment loss relating to the investment. Any acquisition-date excess over cost, the Group's share of the post-acquisition, post-tax results of the investees and any impairment losses for the year are recognised in the consolidated statement of income, whereas the Group's share of the post-acquisition post-tax items of the investees' other comprehensive income is recognised in the consolidated statement of other comprehensive income.

When the Group's share of losses exceeds its interest in the associate or the joint venture, the Group's interest is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the investee.

Unrealised profits and losses resulting from transactions between the Group and its associates and joint venture are eliminated to the extent of the Group's interest in the investee, except where unrealised losses provide evidence of an impairment of the asset transferred, in which case they are recognised immediately in profit or loss.

In accordance with the Group's accounting policies, each investment in an associate or joint venture is evaluated every reporting period to determine whether there are any indications of impairment after application of the equity method of accounting. If any such indication exists, a formal estimate of recoverable amount is performed and an impairment loss recognised to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an investment in an associate or joint venture is measured at the higher of fair value less costs to sell and value in use.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to investments in associates or joint venture. In addition to the considerations described above the Group may also assess the estimated future cash flows expected to arise from dividends to be received from the investment, if such information is available and considered reliable.

Disclosures

	31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Balance at the beginning of the year	4,448	4,147
Group's share of profits, impairment and reversal of impairment	955	620
Prepayment for shares	41	–
Dividends	(946)	(535)
Group's share of other comprehensive income of associates	10	(28)
Foreign currency translation	(810)	244
Balance at the end of the year	**3,698**	**4,448**
Goodwill included in interests in associates	2,163	2,609

The following list contains only the particulars of associates and joint ventures, all of which are corporate entities, which principally affected the results or assets of the Group.

Name of associate/joint venture	Place of incorporation and operation	Particulars of issued and paid-up capital
PJSC MMC Norilsk Nickel	Russian Federation	158,245,476 shares, RUB1 par value
Queensland Alumina Limited	Australia	2,212,000 shares, AUD2 par value
BEMO project	Cyprus, Russian Federation	BOGES Limited, BALP Limited – 10,000 shares EUR1.71 each

The summary of the consolidated financial statements of associates and joint ventures for the year ended 31 December 2018 is presented below:

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited	
	Group share	100%	Group share	100%
Non-current assets	5,123	10,697	104	503
Current assets	1,267	4,554	38	196
Non-current liabilities	(2,633)	(9,420)	(67)	(194)
Current liabilities	(656)	(2,358)	(75)	(379)
Net assets	**3,101**	**3,473**	**–**	**126**
Revenue	3,247	11,670	140	701
Profit/(loss) from continuing operations	885	3,085	–	(1)
Other comprehensive income	(693)	(853)	–	(13)
Total comprehensive income	**192**	**2,232**	**–**	**(14)**

Ownership interest		
Group's effective interest	Group's nominal interest	Principal activity
27.82%	27.82%	Nickel and other metals production
20%	20%	Production of alumina under a tolling agreement
50%	50%	Energy/Aluminium production

BEMO project		Other joint ventures	
Group share	100%	Group share	100%
1,366	2,849	146	293
126	252	104	287
(986)	(1,972)	(37)	(74)
(37)	(75)	(85)	(230)
469	**1,054**	**128**	**276**
288	575	969	2,704
41	69	29	58
(92)	(184)	(15)	(30)
(51)	**(115)**	**14**	**28**

The summary of the consolidated financial statements of associates and joint ventures for the year ended 31 December 2017 is presented below:

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited	
	Group share	100%	Group share	100%
Non-current assets	5,889	12,109	119	552
Current assets	1,259	4,526	29	153
Non-current liabilities	(2,698)	(9,625)	(76)	(207)
Current liabilities	(654)	(2,352)	(72)	(358)
Net assets	**3,796**	**4,658**	**–**	**140**
Revenue	2,545	9,146	134	670
Profit/(loss) from continuing operations	528	2,129	–	14
Other comprehensive income	188	223	–	9
Total comprehensive income	**716**	**2,352**	**–**	**23**

(a) PJSC MMC Norilsk Nickel

The Group's investment in Norilsk Nickel is accounted for using equity method and the carrying value as at 31 December 2018 and 31 December 2017 amounted USD3,101 million and USD3,796 million, respectively. The market value amounted USD8,286 million and USD8,294 million as at 31 December 2018 and 31 December 2017, respectively, and is determined by multiplying the quoted bid price per share on the Moscow Exchange on the year-end date by the number of shares held by the Group.

(b) Queensland Alumina Limited ("QAL")

The carrying value of the Group's investment in Queensland Alumina Limited as at both 31 December 2018 and 31 December 2017 amounted to USD nil million. At 31 December 2018 management has not identified any impairment reversal indicators relating to the Group's investment in QAL and as a result no detailed impairment testing was performed in relation to this investment.

	BEMO project		Other joint ventures	
	Group share	100%	Group share	100%
	1,422	2,970	170	328
	100	200	107	301
	(960)	(1,920)	(40)	(81)
	(39)	(78)	(108)	(280)
	523	**1,172**	**129**	**268**
	273	546	859	2,377
	58	(17)	34	64
	25	51	(1)	8
	83	**34**	**33**	**72**

(c) BEMO project

The carrying value of the Group's investment in BEMO project as at 31 December 2018 and 31 December 2017 amounted USD469 million and USD523 million, respectively.

For the purposes of impairment testing, the BEMO project was separated into two cash generating units – the Boguchansky Aluminium Smelter ("BoAZ') and the BEMO HPP ("BoGES"). The recoverable amount was determined by discounting the expected future net cash flows of each cash generating unit.

At 31 December 2018 management has not identified any impairment indicators relating to the Group's investment in BoGES as well as any impairment reversal indicators relating to investments in BoAZ and as a result no detailed impairment testing was performed in relation to this investment.

At 31 December 2018, accumulated losses of USD639 million (2017: USD573 million) related to impairment charges at BoAZ have not been recognised because the Group's investment has already been fully written down to USD nil million.

Summary of the additional financial information of the Group's effective interest in BEMO project for the year ended 31 December 2018 and 31 December 2017 is presented below (all in USD million):

Year of expiry	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Cash and cash equivalents	51	21
Current financial liabilities	(12)	(11)
Non-current financial liabilities	(947)	(920)
Depreciation and amortisation	(19)	(18)
Interest income	2	1
Interest expense	(19)	(25)
Income tax expense	(11)	(4)

16 Inventories

Accounting policies

Inventories are measured at the lower of cost or net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

The cost of inventories is determined under the weighted average cost method, and includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on normal operating capacity.

The production costs include mining and concentrating costs, smelting, treatment and refining costs, other cash costs and depreciation and amortisation of operating assets.

The Group recognises write-downs of inventories based on an assessment of the net realisable value of the inventories. A write-down is applied to the inventories where events or changes in circumstances indicate that the net realisable value is less than cost. The determination of net realisable value requires the use of judgement and estimates. Where the expectation is different from the original estimates, such difference will impact the carrying value of the inventories and the write-down of inventories charged to the statement of income in the periods in which such estimate has been changed.

Disclosures

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Raw materials and consumables	1,158	1,001
Work in progress	711	682
Finished goods and goods held for resale	1,245	898
	3,114	2,581
Provision for inventory obsolescence	(108)	(167)
	3,006	2,414

Inventories at 31 December 2018 and 31 December 2017 are stated at cost.

Inventory with a carrying value of USD367 million was pledged under existing secured bank loans at 31 December 2017, refer to note 19.

Inventory with a carrying value of USD314 million was pledged under existing trading contracts at 31 December 2017.

No inventory is pledged as security as at 31 December 2018.

The analysis of the amount of inventories recognised as an expense is as follows:

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Carrying amount of inventories sold	7,414	7,027
Reversal/(write-down) of inventories	20	(2)
	7,434	**7,025**

17 Non-derivative financial instruments

Accounting policies

Non-derivative financial instruments comprise investments in securities, trade and other receivables (excluding prepayments and tax assets), cash and cash equivalents, loans and borrowings and trade and other payables (excluding advances received and tax liabilities).

Non-derivative financial instruments except for trade and other receivables are recognised initially at fair value plus any directly attributable transaction costs. Trade and other receivables are recognised at transaction price.

A financial instrument is recognised when the Group becomes a party to the contractual provisions of the instrument. Financial assets are derecognised if the Group's contractual rights to the cash flows from the financial assets expire or if the Group transfers the financial asset to another party without retaining control or substantially all risks and rewards of the asset. Financial liabilities are derecognised if the Group's obligations specified in the contract expire or are discharged or cancelled.

The effect of initially applying IFRS 9 on the Group's financial assets and liabilities and key accounting policies applied are described in Note 3. Due to the transition method chosen in applying IFRS 9, comparative information has not been restated to reflect the new requirements.

Disclosures

(a) Trade and other receivables

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Trade receivables from third parties	384	358
Impairment loss on trade receivables	(33)	(16)
Net trade receivables from third parties	**351**	**342**
Trade receivables from related parties, including:	**87**	**54**
Related parties – companies capable of exerting significant influence	76	31
Impairment loss on trade receivables from related parties - companies capable of exerting significant influence	(6)	–
Net trade receivables to related parties - companies capable of exerting significant influence	70	31
Related parties – companies under common control	13	11
Related parties – associates and joint ventures	4	12
VAT recoverable	305	333
Impairment loss on VAT recoverable	(33)	(28)
Net VAT recoverable	**272**	**305**

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Advances paid to third parties	185	98
Impairment loss on advances paid	(1)	(1)
Net advances paid to third parties	**184**	**97**
Advances paid to related parties, including:	**51**	**46**
Related parties – companies capable of exerting significant influence	1	–
Related parties – companies under common control	1	6
Related parties – associates and joint ventures	49	40
Prepaid expenses	**4**	**3**
Prepaid income tax	**22**	**32**
Prepaid other taxes	**22**	**28**
Other receivables from third parties	112	83
Impairment loss on other receivables	(10)	(8)
Net other receivables from third parties	**102**	**75**
Other receivables from related parties, including:	**7**	**2**

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Related parties – companies under common control	10	4
Impairment loss on other receivables from related parties - companies under common control	(3)	(3)
Net other receivables to related parties - companies under common control	7	1
Related parties – associates and joint ventures	–	1
	1,102	**984**

All of the trade and other receivables are expected to be settled within one year or are repayable on demand.

(i) Ageing analysis

Included in trade and other receivables are trade receivables (net of allowance for doubtful debts) with the following ageing analysis as of the reporting dates:

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Current (not past due)	358	319
1–30 days past due	62	61
31–60 days past due	6	4
61–90 days past due	2	2
More than 90 days past due	10	10
Amounts past due	80	77
	438	**396**

Ageing analysis is performed based on number of days receivable is overdue. Trade receivables are on average due within 60 days from the date of billing. The receivables that are neither past due nor impaired (i.e. current) relate to a wide range of customers for whom there was no recent history of default.

Receivables that were past due but not impaired relate to a number of customers that have a good track record with the Group. Based on past experience, management believes that no impairment allowance is necessary in respect of these balances as there has not been a significant change in credit quality and the balances are still considered fully recoverable. The Group does not hold any collateral over these balances. Further details of the Group's credit policy are set out in note 22(e).

(ii) Loss allowance over trade receivables

The effect of initially applying IFRS 9 on the Group's financial assets in respect of loss alowances and key accounting policies applied are described in Note 3. Due to the transition method chosen in applying IFRS 9, comparative information has not been restated to reflect the new requirements.

Loss allowance in respect of trade receivables are recorded using an allowance account.

The movement in the allowance for doubtful debts during the year, including both specific and collective loss components, is as follows:

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Balance at the beginning of the year	(16)	(14)
Impairment loss	(23)	(2)
Balance at the end of the year	**(39)**	**(16)**

As at 31 December 2017, the Group's trade receivables of USD16 million were individually determined to be impaired.

The Group does not hold any collateral over these balances.

(b) Trade and other payables

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Accounts payable to third parties	**520**	**605**
Accounts payable to related parties, including:	**64**	**96**
Related parties – companies capable of exerting significant influence	5	14
Related parties – companies under common control	35	53
Related parties – associates and joint ventures	24	29
Advances received	**32**	**390**
Advances received from related parties, including:	**259**	**308**
Related parties – companies capable of exerting significant influence	259	288
Related parties – associates and joint ventures	–	20
Other payables and accrued liabilities	**176**	**174**
Current tax liabilities	**127**	**16**
Other taxes payable	**96**	**69**
	1,274	**1,658**

All of the trade and other payables are expected to be settled or recognised as income within one year or are repayable on demand.

Included in trade and other payables are trade payables with the following ageing analysis as at the reporting date. Ageing analysis is performed based on number of days payable is overdue.

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Current	502	639
Past due 0-90 days	50	51
Past due 91-120 days	8	1
Past due over 120 days	24	10
Amounts past due	82	62
	584	**701**

(c) Cash and cash equivalents

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Bank balances, USD	50	559
Bank balances, RUB	238	31
Bank balances, EUR	290	90
Bank balances, other currencies	27	11
Cash in transit	16	30
Short-term bank deposits	169	93
Securities	11	–
Cash and cash equivalents in the consolidated statement of cash flows	801	814
Restricted cash	43	17
	844	**831**

As at 31 December 2018 and 31 December 2017 included in cash and cash equivalents was restricted cash of USD43 million and USD17 million, respectively, pledged under a Swiss Law Pledged Agreement with BNP Paribas (Suisse) SA and Allied Irish Bank.

18 Equity

(a) Share capital

	31 DECEMBER 2018		31 DECEMBER 2017	
	USD	Number of shares	USD	Number of shares
Ordinary shares at the end of the year, authorised	200 million	20 billion	200 million	20 billion
Ordinary shares at 1 January	151,930,148	15,193,014,862	151,930,148	15,193,014,862
Ordinary shares at the end of the year of USD0.01 each, issued and paid	**151,930,148**	**15,193,014,862**	**151,930,148**	**15,193,014,862**

(b) Other reserves

The acquisition of RUSAL Limited by the Company has been accounted for as a non-substantive acquisition. The consolidated share capital and share premium represent only the share capital and share premium of the Company and the share capital and other paid-in capital of RUSAL Limited prior to the acquisition has been included in other reserves.

In addition, other reserves include the cumulative unrealised actuarial gains and losses on the Group's defined post retirement benefit plans, the effective portion of the accumulative net change in fair value of cash flow hedges and the Group's share of other comprehensive income of associates.

(c) Distributions

In accordance with the Companies (Jersey) Law 1991 (the "Law"), the Company may make distributions at any time in such amounts as are determined by the Company out of the assets of the Company other than the capital redemption reserves and nominal capital accounts, provided that the directors of the Company make a solvency statement in accordance with that Law of Jersey at the time the distributions are proposed. Dividend pay-outs are restricted in accordance with the credit facilities.

(d) Currency translation reserve

The currency translation reserve comprises all foreign exchange differences arising from the translation of the consolidated financial statements of foreign operations and equity accounted investees. The reserve is dealt with in accordance with the accounting policies set out in note 3(f).

(e) Movement in components of equity within the Company

USD million	Share capital	Reserves	Total
Balance at 1 January 2017	**152**	**9,529**	**9,681**
Profit for the year	–	3,787	3,787
Dividends	–	(299)	(299)
Balance at 31 December 2017	**152**	**13,017**	**13,169**
Balance at 1 January 2018	**152**	**13,017**	**13,169**
Profit for the year	–	1,132	1,132
Other comprehensive income	–	3	3
Balance at 31 December 2018	**152**	**14,152**	**14,304**

19 Loans and borrowings

This note provides information about the contractual terms of the Group's loans and borrowings. For more information about the Group's exposure to interest rate and foreign currency risk refer to notes 22(c) (ii) and 22(c) (iii), respectively.

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Non-current liabilities		
Secured bank loans	5,566	6,200
Unsecured bank loans	226	145
Bonds	1,580	1,399
	7,372	**7,744**

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Current liabilities		
Secured bank loans	476	662
Unsecured bank loans	12	3
Bonds	377	22
Accrued interest	49	48
	914	**735**

(a) Loans and borrowings

Terms and debt repayment schedule as at 31 December 2018

	TOTAL USD million	2019 USD million
Secured bank loans		
Variable		
USD – 3M Libor + 3.75%	3,328	–
USD – 3M Libor + 2.5%	1,683	278
Fixed		
RUB – 9.25%	194	194
RUB – 9.15%	833	–
RUB - 5%	4	4
	6,042	**476**

	2020 USD million	2021 USD million	2022 USD million	2023 USD million	Later years USD million
	–	537	635	890	1,266
	562	562	281	–	–
	–	–	–	–	–
	–	134	158	221	320
	–	–	–	–	–
	562	**1,233**	**1,074**	**1,111**	**1,586**

	TOTAL USD million	2019 USD million
Unsecured bank loans		
Variable		
USD – 1M Libor + 2.4%	200	–
Fixed		
RUB 8.75%	33	11
RUB 5%	5	1
Total	**6,280**	**488**
Accrued interest	49	49
Total	**6,329**	**537**

The secured bank loans are secured by pledges of shares of the following Group companies as at 31 December 2018:

- 100% of Gershvin Investments Corp. Limited
- 100% of Aktivium Holding B.V.

The secured bank loans are also secured by pledges of shares of associate both as at 31 December 2018 and 31 December 2017:

- 25% +1 share of Norilsk Nickel.

The secured bank loans are also secured by the following:

- property, plant and equipment with a carrying amount of USD3 million (31 December 2017: USD3 million);
- inventory with a carrying value of USD nil (31 December 2017: USD367 million).

As at 31 December 2018 and 31 December 2017 rights, including all monies and claims, arising out of certain sales contracts between the Group's trading subsidiaries and its ultimate customers, were assigned to secure the syndicated Pre-Export Finance Term Facility Agreement (PXF) dated 24 May 2017.

2020 USD million	2021 USD million	2022 USD million	2023 USD million	Later years USD million
–	200	–	–	–
11	11	–	–	–
2	2	–	–	–
575	**1,446**	**1,074**	**1,111**	**1,586**
–	–	–	–	–
575	**1,446**	**1,074**	**1,111**	**1,586**

The nominal value of the Group's loans and borrowings was USD6,332 million at 31 December 2018 (31 December 2017: USD7,072 million).

In January 2018 the Company entered into a bilateral facility agreement with Nordea Bank AB with the following key terms: principal amount of USD200 million, tenor of 3 years, interest rate of 1M Libor + 2.4% per annum with a bullet repayment. The proceeds were applied for partial prepayment of Group's existing debt.

On 13 December 2018 the Group executed amendment to the existing credit facility with Sberbank for conversion of ½ of the principal outstanding amount of the loan into roubles with interest rate 9.15%. As at the date of this financial statement the amount of USD2,107 million was converted into rubles.

As at the date of this report the Group through its subsidiaries has outstanding REPO loan backed by Norilsk Nickel shares in number of 1,413,379, in the amount equal to USD194 million and maturing in June 2019.

During 2018 the Group made a principal repayment in total amounts of USD579 million, EUR55 million (USD68 million) and RUR18 million (USD3 million) under credit facilities with Gazprombank, VTB Capital and Credit Bank of Moscow.

Fair value of the Group's liabilities measured at amortised cost approximates their fair values as at 31 December 2018.

Terms and debt repayment schedule as at 31 December 2017

	TOTAL USD million	2019 USD million
Secured bank loans		
Variable		
USD – 3M Libor + 3.75%	4,161	–
USD – 3M Libor + 2.5%	1,678	–
USD – 3M Libor + 3.5%*	385	82
EUR – 3M Libor + 3.5%*	66	13
USD – 3M Libor + 4.8%	95	95
USD – 2.15% + cost of funds	100	100
USD – 2.25% + cost of funds	25	25
EUR – 2.25% + cost of funds	14	14
USD – 2.05% + cost of funds	9	9
EUR – 2.05% + cost of funds	24	24
USD – 1M Libor + 2.2%	117	117
EUR – 1M Libor + 2.2%	28	28

	2020 USD million	2021 USD million	2022 USD million	2023 USD million	Later years USD million
	–	–	670	792	2,699
	278	562	562	276	–
	81	81	81	60	–
	14	14	14	11	–
	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–

	TOTAL USD million	2019 USD million
Fixed		
RUB – 5%	9	4
USD – 4%	31	31
EUR – 2.6%	120	120
	6,862	**662**
Unsecured bank loans		
Variable		
USD – 3M Libor + 3.0%*	100	–
Fixed		
RUB 8.75%	43	3
RUB 5%	5	–
Total	**7,010**	**665**
Accrued interest	48	48
Total	**7,058**	**713**

	2020 USD million	2021 USD million	2022 USD million	2023 USD million	Later years USD million
	5	–	–	–	–
	–	–	–	–	–
	–	–	–	–	–
	378	**657**	**1,327**	**1,139**	**2,699**
	100	–	–	–	–
	13	13	14		
	1	2	2	–	–
	492	**672**	**1,343**	**1,139**	**2,699**
	–	–	–	–	–
	492	**672**	**1,343**	**1,139**	**2,699**

The secured bank loans are secured by pledges of shares of the following Group companies as at 31 December 2017:

- 11% of RUSAL Ural
- 25% + 1 shares of RUSAL Sayanogorsk
- 25% + 1 shares of RUSAL Bratsk
- 100% of Gershvin Investments Corp. Limited
- 100% of Aktivium Holding B.V.
- 50% interest in RUSAL Taishet

On 17 March 2017 the Group executed amendments to the existing credit facilities with Sberbank. Under USD credit agreements the interest rate decreased from 3M Libor + 5.75% p.a. (incl. 1.05% PIK) to 3M Libor + 4.75% p.a. (subject to min 3M Libor at the level of 1%), effective from 29 December 2016. Under RUB credit facility outstanding exposure was converted into USD (at the rate of Central Bank of Russia as of the date of conversion). The interest rate of 3M Libor + 4.75% p.a. (subject to min 3M Libor at the level of 1%), is effective from 18 March 2017. On 31 August 2017 the Group has agreed with Sberbank to extend final maturity under loans secured by Norilsk Nickel shares to 2024, decrease interest margin from 4.75% to 3.75% and adjust covenants mostly in line with PXF.

On 28 March 2017 the Group through its subsidiaries entered into the REPO transaction backed by bonds issued by RUSAL Bratsk – in number of 7,527,646 series 08 bonds. As a result of the transactions the Group raised funding in the amount of EUR100 million (USD107 million) with fifteen months maturity at an effective rate of 2.6% p.a.

On 24 May 2017 the Group entered into a new syndicated Pre-Export Finance Term Facility Agreement (PXF) in the amount of USD1.7 billion, interest rate 3M LIBOR+3% per annum, maturity 5 years (repayment starting in 2 years). The proceeds of the facility were used for the purpose of refinancing the Group's current debt. In December 2017, the margin was reduced to 2.5 per cent per annum.

On 22 August 2017 the Group executed amendments to Gazprombank facilities, reducing interest margin from 4.5% to 3.5%, extending final maturity and adjusting covenants in line with PXF. As at the date of these financial statements Gazprombank facilities were repaid in full out of proceeds of the third Eurobond placement in February 2018.

During 2017 the Group made principal repayments in the total amounts of USD3,211 million and EUR79 million (USD104 million) under the Combined PXF Facility, credit facilities with Sberbank, Gazprombank, VTB Capital, Sovcombank and Credit Bank of Moscow.

(b) Bonds

As at 31 December 2018 6,877,652 series 08 bonds and 4,221,951 series BO-01 bonds were outstanding (traded in the market).

The closing market price at 31 December 2018 for series 08 bonds was RUB1,008 per bond and RUB1,013 per bond for series BO-01 bonds.

As at 31 December 2018 three tranches of Eurobonds and the first and the second tranches of Panda Bonds were outstanding.

In February 2018 the Group completed its third offering of Eurobonds with the following key terms: principal amount of USD500 million, tenor of 5 years, coupon rate of 4.85% per annum. The bonds proceeds were applied for partial prepayment of Group's existing debt.

In February 2018 the Group has fully redeemed 1,289,314 series 07 bonds for USD23 million.

20 Provisions

Accounting policies

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as finance costs.

Disclosures

USD million	Pension liabilities	Site restoration	Provisions for legal claims	Tax provisions	Total
Balance at 1 January 2017	57	381	–	25	463
Provisions made during the year	7	6	3	–	16
Provisions reversed during the year	–	(41)	–	(10)	(51)
Actuarial loss	7	–	–	–	7
Provisions utilised during the year	(4)	–	–	(13)	(17)
Foreign currency translation	2	36	–	(2)	36
Balance at 31 December 2017	**69**	**382**	**3**	**–**	**454**
Non-current	**64**	**363**	**–**	**–**	**427**
Current	**5**	**19**	**3**	**–**	**27**

USD million	Pension liabilities	Site restoration	Provisions for legal claims	Tax provisions	Total
Balance at 1 January 2018	69	382	3	–	454
Provisions made during the year	3	20	4	20	47
Provisions reversed during the year	–	(16)	–	–	(16)
Actuarial gain	(6)	–	–	–	(6)
Provisions utilised during the year	(4)	(7)	(4)	–	(15)
Foreign currency translation	(8)	(31)	–	–	(39)
Balance at 31 December 2018	**54**	**348**	**3**	**20**	**425**
Non-current	**50**	**316**	**–**	**–**	**366**
Current	**4**	**32**	**3**	**20**	**59**

(a) Pension liabilities

Group subsidiaries in the Russian Federation

The Group voluntarily provides long-term and post-employment benefits to its former and existing employees including death-in-service, jubilee, lump sum upon retirement, material support for pensioners and death-in-pension benefits. Furthermore, the Group provides regular social support payments to some of its veterans of World War II.

The above employee benefit programs are of a defined benefit nature. The Group finances these programs on a pay-as-you-go basis, so plan assets are equal to zero.

Group subsidiaries in Ukraine

Due to legal requirements, the Ukrainian subsidiaries are responsible for partial financing of the state hardship pensions for those of its employees who worked, or still work, under severe and hazardous labour conditions (hardship early retirement pensions). These pensions are paid until the recipient reaches the age of entitlement to the State old age pension (55-60 years for female (dependent on year of birth) and 60 years for male employees). In Ukraine, the Group also voluntarily provides long-term and post-employment benefits to its employees including death-in-service, lump sum benefits upon retirement and death-in-pension benefits.

The above employee benefit programs are of a defined benefit nature. The Group finances these programs on a pay-as-you-go basis, so plan assets are equal to zero.

Group subsidiaries outside the Russian Federation and Ukraine

At its Guinean and Nigerian entities the Group provides a death-in-service benefit and lump-sum benefits upon disability and old-age retirement.

At its Guyana subsidiary, the Group provides a death-in-service benefit.

At its Italian subsidiary (Eurallumina) the Group only provides lump sum benefits upon retirement, which relate to service up to 1 January 2007.

In Sweden (Kubikenborg Aluminium AB), the Group provides defined benefit lifelong and temporary pension benefits. The lifelong benefits are dependent on the past service and average salary level of the employee, with an accrual rate that depends on the salary bracket the employee is in. The liability relates only to benefits accrued before 1 January 2004.

The number of employees in all jurisdictions eligible for the plans as at 31 December 2018 and 2017 was 58,089 and 57,423, respectively. The number of pensioners in all jurisdictions as at 31 December 2018 and 2017 was 44,966 and 45,044, respectively.

The Group expects to pay under the defined benefit retirement plans an amount of USD4 million during the 12 month period beginning on 1 January 2019.

Actuarial valuation of pension liabilities

The actuarial valuation of the Group and the portion of the Group funds specifically designated for the Group's employees were completed by a qualified actuary, Robert van Leeuwen AAG, as at 31 December 2018, using the projected unit credit method as stipulated by IAS 19.

The key actuarial assumptions (weighted average, weighted by DBO) are as follows:

	31 DECEMBER 2018 % PER ANNUM	31 DECEMBER 2017 % PER ANNUM
Discount rate	7.9	7.2
Expected return on plan assets	N/A	N/A
Future salary increases	7.8	8.3
Future pension increases	4.6	4.6
Staff turnover	4.7	4.0

	31 DECEMBER 2018 % PER ANNUM	31 DECEMBER 2017 % PER ANNUM
Mortality	USSR population table for 1985, Ukrainian population table for 2000	USSR population table for 1985, Ukrainian population table for 2000
Disability	70% Munich Re for Russia; 40% of death probability for Ukraine	70% Munich Re for Russia; 40% of death probability for Ukraine

As at 31 December 2018 and 31 December 2017 the Group's obligations were fully uncovered as the Group has only wholly unfunded plans.

(b) Site restoration

The mining, refining and smelting activities of the Group can give rise to obligations for site restoration and rehabilitation. Restoration and rehabilitation works can include facility decommissioning and dismantling, removal or treatment of waste materials, land rehabilitation, and site restoration. The extent of work required and the associated costs are dependent on the requirements of law and the interpretations of the relevant authorities.

The Group provides for site restoration obligations when there is a specific legal or constructive obligation for mine reclamation, landfill closure (primarily comprising red mud basin disposal sites) or specific lease restoration requirements. The Group does not record any obligations with respect to decommissioning of its refining or smelting facilities and restoration and rehabilitation of the surrounding areas unless there is a specific plan to discontinue operations at a facility. This is because any significant costs in connection with decommissioning of refining or smelting facilities and restoration and rehabilitation of the surrounding areas would be incurred no earlier than when the facility is closed and the facilities are currently expected to operate over a term in excess of 50-100 years due to the perpetual nature of the refineries and smelters and continuous maintenance and upgrade programs resulting in the fair values of any such liabilities being negligible.

Costs included in the provision encompass obligated and reasonably estimable restoration and rehabilitation activities expected to occur progressively over the life of the operation and at the time of closure in connection with disturbances at the reporting date. Routine operating costs that may impact the ultimate restoration and rehabilitation activities, such as waste material handling conducted as an integral part of a mining or production process, are not included in the provision. Costs arising from unforeseen circumstances, such as the contamination caused by unplanned discharges, are recognised as an expense and liability when the event gives rise to an obligation which is probable and capable of reliable estimation.

Restoration and rehabilitation provisions are measured at the expected value of future cash flows, discounted to their present value and determined according to the probability of alternative estimates of cash flows occurring for each operation. Discount rates used are specific to the country in which the operation is located. Significant judgements and estimates are involved in forming expectations of future activities and the amount and timing of the associated cash flows. Those expectations are formed based on existing environmental and regulatory requirements.

When provisions for restoration and rehabilitation are initially recognised, the corresponding cost is capitalised as an asset, representing part of the cost of acquiring the future economic benefits of the operation. The capitalised cost of restoration and rehabilitation activities is amortised over the estimated economic life of the operation on a units of production or straight-line basis. The value of the provision is progressively increased over time as the effect of discounting unwinds, creating an expense recognised as part of finance expenses.

Restoration and rehabilitation provisions are also adjusted for changes in estimates. Those adjustments are accounted for as a change in the corresponding capitalised cost, except where a reduction in the provision is greater than the unamortised capitalised cost, in which case the capitalised cost is reduced to nil and the remaining adjustment is recognised in the statement of income. Changes to the capitalised cost result in an adjustment to future amortisation charges. Adjustments to the estimated amount and timing of future restoration and rehabilitation cash flows are a normal occurrence in light of the significant judgements and estimates involved. Factors influencing those changes include revisions to estimated reserves, resources and lives of operations; developments in technology; regulatory requirements and environmental management strategies; changes in the estimated costs of anticipated activities, including the effects of inflation and movements in foreign exchange rates; and movements in general interest rates affecting the discount rate applied.

The site restoration provision recorded in these consolidated financial statements relates primarily to mine reclamation and red mud basin disposal sites at alumina refineries and is estimated by discounting the risk-adjusted expected expenditure to its present value based on the following key assumptions:

	31 DECEMBER 2018	31 DECEMBER 2017
Timing of inflated cash outflows	2019: USD31 million	2018: USD19 million
	2020-2024: USD203 million	2019-2023: USD225 million
	2025-2034: USD95 million	2024-2033: USD105 million
	after 2034: USD168 million	after 2033: USD182 million
Risk free discount rate after adjusting for inflation [(a)]	3.10%	2.29%

At each reporting date the Directors have assessed the provisions for site restoration and environmental matters and concluded that the provisions and disclosures are adequate.

(c) Provisions for legal claims

In the normal course of business the Group may be involved in legal proceedings. Where management considers that it is more likely than not that proceedings will result in the Group compensating third parties a provision is recognised for the best estimate of the amount expected to be paid. Where management considers that it is more likely than not that proceedings will not result in the Group compensating third parties or where, in rare circumstances, it is not considered possible to provide a sufficiently reliable estimate of the amount expected to be paid, no provision is made for any potential liability under the litigation but the circumstances and uncertainties involved are disclosed as contingent liabilities. The assessment of the likely outcome of legal proceedings and the amount of any potential liability involves significant judgement. As law and regulations in many of the countries in which the Group operates are continuing to evolve, particularly in the areas of taxation, sub-soil rights and protection of the environment, uncertainties regarding litigation and regulation are greater than those typically found in countries with more developed legal and regulatory frameworks.

The Group's subsidiaries are subject to a variety of lawsuits and claims in the ordinary course of its business. As at 31 December 2018, there were several claims filed against the Group's subsidiaries contesting breaches of contract terms and non-payment of existing obligations. Management has reviewed the circumstances and estimated that the amount of probable outflow related to these claims should not exceed USD3 million (31 December 2017: USD3 million). The amount of claims, where management assesses outflow as possible approximates USD31 million (31 December 2017: USD36 million).

At each reporting date the Directors have assessed the provisions for litigation and claims and concluded that the provisions and disclosures are adequate.

(d) Tax provisions

The Group's accounting policy for taxation requires management's judgement in assessing whether deferred tax assets and certain deferred tax liabilities are recognised in the statement of financial position. Deferred tax assets, including those arising from carried forward tax losses, capital losses and temporary differences, are recognised only where it is considered more likely than not that they will be recovered, which is dependent on the generation of sufficient future taxable profits. Deferred tax liabilities arising from temporary differences in investments, caused principally by retained earnings

(a) the risk free rate for the year 2017-2018 represents an effective rate, which comprises rates differentiated by years of obligation settlement and by currencies in which the provisions were calculated held in foreign tax jurisdictions, are recognised unless repatriation of retained earnings can be controlled and is not expected to occur in the foreseeable future.

Assumptions about the generation of future taxable profits and repatriation of retained earnings depend on management's estimates of future cash flows. These depend on estimates of future production and sales volumes, commodity prices, reserves, operating costs, restoration and rehabilitation costs, capital expenditure, dividends and other capital management transactions. Assumptions are also required about the application of income tax legislation. These estimates and assumptions are subject to risk and uncertainty, hence there is a possibility that changes in circumstances will alter expectations, which may impact the amount of deferred tax assets and deferred tax liabilities recognised on the statement of financial position and the amount of other tax losses and temporary differences not yet recognised. In such circumstances, some or all of the carrying amount of recognised deferred tax assets and liabilities may require adjustment, resulting in a corresponding credit or charge to the statement of income.

The Group generally provides for current tax based on positions taken (or expected to be taken) in its tax returns. Where it is more likely than not that upon examination by the tax authorities of the positions taken by the Group additional tax will be payable, the Group provides for its best estimate of the amount expected to be paid (including any interest and/or penalties) as part of the tax charge.

At each reporting date the Directors have assessed the provisions for taxation and concluded that the provisions and disclosures are adequate.

21 Derivative financial assets/liabilities

Accounting policies

The Group enters, from time to time, into various derivative financial instruments to manage its exposure to commodity price risk, foreign currency risk and interest rate risk.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative and the combined instrument is not measured at fair value through profit or loss.

On initial designation of the derivative as a hedging instrument, the Group formally documents the relationship between the hedging instrument and hedged item, including the risk management objectives and strategy in undertaking the hedge transaction and the hedged risk, together with the methods that will be used to assess the effectiveness of the hedging relationship. The Group makes an assessment, both at the inception of the hedge relationship as well as on an ongoing basis, of whether the hedging instruments are expected to be highly effective in offsetting the changes in the fair value or cash flows of the respective hedged items attributable to the hedged risk, and whether the actual results of each hedge are within a range of 80% - 125%. For a cash flow hedge of a forecast transaction, the transaction should be highly probable to occur and should present an exposure to variation in cash flows that ultimately could affect reported profit or loss.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in the statement of income when incurred. Subsequent to initial recognition, derivatives are measured at fair value.

The measurement of fair value of derivative financial instruments, including embedded derivatives, is based on quoted market prices. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. Changes in the fair value therein are accounted for as described below.

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognised asset or liability or a highly probable forecast transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognised in the statement of comprehensive income and presented in the hedging reserve in equity. Any ineffective portion of changes in the fair value of a derivative is recognised in the statement of income.

When the hedged item is a non-financial asset, the amount accumulated in equity is included in the carrying amount of the asset when the asset is recognised. In other cases, the amount accumulated in equity is reclassified to the statement of income in the same period that the hedged item affects profit or loss. If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated or exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. If the forecast transaction is no longer expected to occur, then the balance in equity is reclassified to the statement of income.

Changes in the fair value of separated embedded derivatives and derivative financial instruments not designated for hedge accounting are recognised immediately in the statement of income.

Disclosures

	31 December 2018 USD million		31 December 2017 USD million	
	Derivative assets	Derivative liabilities	Derivative assets	Derivative liabilities
Petroleum coke supply contracts and other raw materials	42	31	36	82
Forward contracts for aluminium and other instruments	–	–	27	31
Total	**42**	**31**	**63**	**113**

Derivative financial instruments are recorded at their fair value at each reporting date. Fair value is estimated in accordance with Level 3 of the fair value hierarchy based on management estimates and consensus economic forecasts of relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. The Group's policy is to recognise transfers between levels of fair value hierarchy as at the date of the event or change in circumstances that caused the transfer. The following significant assumptions were used in estimating derivative instruments:

	2019	2020	2021	2022	2023	2024	2025
LME Al Cash, USD per tonne	1,871	1,954	2,024	2,093	2,149	2,196	2,244
Platt's FOB Brent, USD per barrel	54	56	57	58	–	–	–

The movement in the balance of Level 3 fair value measurements of derivatives is as follows:

	31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Balance at the beginning of the year	(50)	32
Unrealised changes in fair value recognised in statement of income (finance expense) during the period	171	(287)
Realised portion during the year	(110)	205
Balance at the end of the year	**11**	**(50)**

During the year 2018 there have been no changes in valuation techniques used to calculate the derivative financial instruments compared to prior year.

Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results for the derivative instruments are not particularly sensitive to any factors other than the assumptions disclosed above.

Petroleum coke supply contracts and other raw materials

In May and September 2011, the Group entered into long-term petroleum coke supply contracts where the price of coke is determined with reference to the LME aluminium price and the Brent oil price. The strike price for aluminium is set at USD2,403.45 per tonne and USD1,735.03 per tonne, respectively, while the strike price for oil is set at USD61.10 per barrel and USD47.7 per barrel, respectively.

In May 2014, the Group entered into long-term petroleum coke supply contract where the price of coke is determined with reference to the LME aluminium price and average monthly aluminium quotations, namely of Aluminum MW US Transaction premium, MB Aluminium Premium Rotterdam Low - High and Aluminum CIF Japan premium. The strike price for aluminium is set at USD1,809.65 per tonne while the strike aluminium premium quotations for US, Europe and Japan are set at USD403.96 per tonne, USD313.30 per tonne and USD366.00 per tonne, respectively.

In November 2015, the Group entered into long-term pitch supply contract where the price of pitch is determined with reference to the LME aluminium price. The strike price for aluminium is set at USD1,508 per tonne.

22 Financial risk management and fair values

(a) Fair values

Management believes that the fair values of short-term financial assets and liabilities approximate their carrying amounts.

The methods used to estimate the fair values of the financial instruments are as follows:

Trade and other receivables, cash and cash equivalents, current loans and borrowings and trade and other payables: the carrying amounts approximate fair value because of the short maturity period of the instruments.

Long-term loans and borrowings, other non-current liabilities: the fair values of other non-current liabilities are based on the present value of the anticipated cash flows and approximate carrying value, other than Eurobonds and RUSAL Bratsk bonds issued.

Derivatives: the fair value of derivative financial instruments, including embedded derivatives, is based on quoted market prices. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. Option-based derivatives are valued using Black-Scholes models and Monte-Carlo simulations. The derivative financial instruments are recorded at their fair value at each reporting date.

The following table presents the fair value of Group's financial instruments measured at the end of the reporting period on a recurring basis, categorised into the three-level fair value hierarchy as defined by IFRS 13, *Fair value measurement*. The level into which a fair value measurement is classified is determined with reference to the observability and significance of the inputs used in the valuation technique as follows:

- Level 1 valuations: Fair value measured using only Level 1 inputs i.e. unadjusted quoted prices in active markets for identical assets or liabilities at the measurement date
- Level 2 valuations: Fair value measured using Level 2 inputs i.e. observable inputs which fail to meet Level 1, and not using significant unobservable inputs. Unobservable inputs are inputs for which market data are not available
- Level 3 valuations: Fair value measured using significant unobservable inputs.

The Group as at 31 December 2018

		Note	Carrying amount		
			Derivatives USD Million	Fair value - hedging instrument USD Million	Loans and receivables USD Million
Financial assets measured at fair value	Petroleum coke supply contracts and other raw materials	21	42	–	–
	Forward contracts for aluminium and other instruments	21	–	–	–
			42	–	–
Financial assets not measured at fair value*	Trade and other receivables	17	–	–	819
	Short-term investments		–	–	105
	Cash and cash equivalents	17	–	–	844
			–	**–**	**1,768**
Financial liabilities measured at fair value	Petroleum coke supply contracts and other raw materials	21	(31)	–	–
	Forward contracts for aluminium and other instruments	21	–	–	–
			(31)	**–**	**–**
Financial liabilities not measured at fair value*	Secured bank loans and company loans	19	–	–	–
	Unsecured bank loans	19	–	–	–
	Unsecured bond issue	19	–	–	–
	Trade and other payables	17	–	–	–
			–	–	–

* The Group considers that the carrying amounts of short-term trade receivables and payables are a reasonable approximation of fair values.

		Fair value			
Other financial liabilities USD Million	Total USD Million	Level 1 USD Million	Level 2 USD Million	Level 3 USD Million	Total USD Million
–	**42**	–	–	42	**42**
–	–	–	–	–	–
–	**42**	–	–	**42**	**42**
–	**819**	–	819	–	**819**
	105		105		**105**
–	**844**	–	844	–	**844**
–	**1,768**	**–**	**1,768**	**–**	**1,768**
–	**(31)**	–	–	(31)	**(31)**
–	**–**	–	–	–	**–**
–	**(31)**	**–**	**–**	**(31)**	**(31)**
(6,091)	**(6,091)**	–	(6,164)	–	**(6,164)**
(238)	**(238)**	–	(236)	–	**(236)**
(1,957)	**(1,957)**	(161)	(1,813)	–	**(1,974)**
(983)	**(983)**	–	**(983)**	–	**(983)**
(9,269)	**(9,269)**	**(161)**	**(9,196)**	–	**(9,357)**

The Group as at 31 December 2017

		Note	Carrying amount		
			Derivatives USD Million	Fair value - hedging instrument USD Million	Loans and receivables USD Million
Financial assets measured at fair value	Petroleum coke supply contracts and other raw materials	21	36	–	–
	Forward contracts for aluminium and other instruments	21	27	–	–
			63	**–**	**–**
Financial assets not measured at fair value*	Trade and other receivables	17	–	–	778
	Short-term investments		–	–	21
	Cash and cash equivalents	17	–	–	831
			–	**–**	**1,630**
Financial liabilities measured at fair value	Petroleum coke supply contracts and other raw materials	21	(82)	–	–
	Forward contracts for aluminium and other instruments	21	(31)	–	–
			(113)	**–**	**–**
Financial liabilities not measured at fair value*	Secured bank loans and company loans	19	–	–	–
	Unsecured bank loans	19	–	–	–
	Unsecured bond issue	19	–	–	–
	Trade and other payables	17	–	–	–
			–	**–**	**–**

* The Group considers that the carrying amounts of short-term trade receivables and payables are a reasonable approximation of fair values.

		Fair value			
Other financial liabilities USD Million	Total USD Million	Level 1 USD Million	Level 2 USD Million	Level 3 USD Million	Total USD Million
–	**36**	–	–	36	**36**
–	**27**	–	–	27	**27**
–	**63**	**–**	**–**	**63**	**63**
–	**778**	–	778	–	**778**
–	**21**	–	21	–	**21**
–	**831**	–	831	–	**831**
–	**1,630**	**–**	**1,630**	**–**	**1,630**
–	**(82)**	–	–	(82)	**(82)**
–	**(31)**	–	–	(31)	**(31)**
–	**(113)**	**–**	**–**	**(113)**	**(113)**
(6,910)	**(6,910)**	–	(7,038)	–	**(7,038)**
(148)	**(148)**	–	(150)	–	**(150)**
(1,421)	**(1,421)**	(1,231)	(233)	–	**(1,464)**
(944)	**(944)**	–	(944)	–	**(944)**
(9,423)	**(9,423)**	**(1,231)**	**(8,365)**	**–**	**(9,596)**

(b) Financial risk management objectives and policies

The Group's principal financial instruments comprise bank loans and trade payables. The main purpose of these financial instruments is to raise finance for the Group's operations. The Group has various financial assets such as trade receivables and cash and short-term deposits, which arise directly from its operations.

The main risks arising from the Group's financial instruments are cash flow interest rate risk, liquidity risk, foreign currency risk and credit risk. Management reviews and agrees policies for managing each of these risks which are summarised below.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The Board has established a risk management group within its Department of Internal Control, which is responsible for developing and monitoring the Group's risk management policies. The Department reports regularly to the Board of Directors on its activities.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Group's Audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group's Audit Committee is assisted in its oversight role by the Group's Internal Audit function which undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit Committee.

(c) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising returns.

(i) Commodity price risk

During the years ended 31 December 2018 and 2017, the Group has entered into certain long-term electricity contracts and other commodity derivatives contracts in order to manage its exposure of commodity price risks. Details of the contracts are disclosed in notes 21 and 25(c).

(ii) Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates (refer to note 19). The Group's policy is to manage its interest costs by monitoring changes in interest rates with respect to its borrowings.

The following table details the interest rate profile of the Group's borrowings at the 2 date.

	31 December 2018 Effective interest rate %	USD million	31 December 2017 Effective interest rate %	USD million
Fixed rate loans and borrowings				
Loans and borrowings	4.85%-12.85%	3,026	2.60%-12.85%	1,629
		3,026		**1,629**
Variable rate loans and borrowings				
Loans and borrowings	4.91%-6.72%	5,211	1.55%-7.04%	6,802
		5,211		**6,802**
		8,237		**8,431**

The following table demonstrates the sensitivity to cash flows from interest rate risk arising from floating rate non-derivative instruments held by the Group at the reporting date in respect of a reasonably possible change in interest rates, with all other variables held constant. The impact on the Group's profit before taxation and equity and retained profits/accumulated losses is estimated as an annualised input on interest expense or income of such a change in interest rates. The analysis has been performed on the same basis for all years presented.

	Increase/decrease in basis points	Effect on profit before taxation for the year USD MILLION	Effect on equity for the year, excluding tax effect USD MILLION
As at 31 December 2018			
Basis percentage points	+100	(52)	(52)
Basis percentage points	-100	52	52
As at 31 December 2017			
Basis percentage points	+100	(68)	(68)
Basis percentage points	-100	68	68

(iii) Foreign currency risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in a currency other than the respective functional currencies of group entities, primarily USD but also the Russian Rouble, Ukrainian Hryvna and Euros. The currencies in which these transactions primarily are denominated are RUB, USD and EUR.

Borrowings are primarily denominated in currencies that match the cash flows generated by the underlying operations of the Group, primarily USD but also RUB and EUR. This provides an economic hedge.

In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by

As at 31 December	USD-denominated vs. RUB functional currency		RUB-denominated vs.
	2018 USD MILLION	2017 USD MILLION	2018 USD MILLION
Non-current assets	–	–	3
Trade and other receivables	1	1	640
Cash and cash equivalents	–	1	415
Derivative financial assets	–	–	42
Loans and borrowings	–	–	(1,030)
Provisions	–	–	(102)
Derivative financial liabilities	–	–	(11)
Non-current liabilities	–	–	–
Income taxation	–	–	(15)
Short-term bonds	–	–	(161)
Trade and other payables	–	(3)	(393)
Net exposure arising from recognised assets and liabilities	**1**	**(1)**	**(612)**

buying or selling foreign currencies at spot rates when necessary to address short-term imbalances or entering into currency swap arrangements.

The Group's exposure at the reporting date to foreign currency risk arising from recognised assets and liabilities denominated in a currency other than the functional currency of the entity to which they relate is set out in the table below. Differences resulting from the translation of the financial statements of foreign operations into the Group's presentation currency are ignored.

	USD functional currency	EUR-denominated vs. USD functional currency		Denominated in other currencies vs. USD functional currency	
	2017 USD MILLION	2018 USD MILLION	2017 USD MILLION	2018 USD MILLION	2017 USD MILLION
	3	1	1	–	–
	429	91	91	28	26
	68	305	106	42	19
	36	–	–	–	–
	(57)	–	(251)	–	–
	(100)	(26)	(41)	(10)	(11)
	(33)	–	–	–	–
	(9)	(6)	(8)	–	–
	(2)	–	–	(11)	(7)
	(22)	–	–	(216)	–
	(381)	(61)	(63)	(54)	(50)
	(68)	**304**	**(165)**	**(221)**	**(23)**

Foreign currency sensitivity analysis

The following tables indicate the instantaneous change in the Group's profit before taxation (and accumulated losses) and other comprehensive income that could arise if foreign exchange rates to which the Group has significant exposure at the reporting date had changed at that date, assuming all other risk variables remained constant.

	YEAR ENDED 31 DECEMBER 2018		
	Change in exchange rates	USD MILLION Effect on profit before taxation for the year	USD MILLION Effect on equity for the year
Depreciation of USD vs. RUB	15%	(92)	(92)
Depreciation of USD vs. EUR	10%	30	30
Depreciation of USD vs. other currencies	5%	(11)	(11)

	YEAR ENDED 31 DECEMBER 2017		
	Change in exchange rates	USD MILLION Effect on profit before taxation for the year	USD MILLION Effect on equity for the year
Depreciation of USD vs. RUB	15%	(10)	(10)
Depreciation of USD vs. EUR	5%	(8)	(8)
Depreciation of USD vs. other currencies	5%	(1)	(1)

Results of the analysis as presented in the above tables represent an aggregation of the instantaneous effects on the Group entities' profit before taxation and other comprehensive income measured in the respective functional currencies, translated into USD at the exchange rates ruling at the reporting date for presentation purposes.

The sensitivity analysis assumes that the change in foreign exchange rates had been applied to re-measure those financial instruments held by the Group which expose the Group to foreign currency risk at the reporting date. The analysis excludes differences that would result from the translation of other financial statements of foreign operations into the Group's presentation currency. The analysis has been performed on the same basis for all years presented.

(d) Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The group policy is to maintain sufficient cash and cash equivalents or have available funding through an adequate amount of committed credit facilities to meet its operating and financial commitments.

The following tables show the remaining contractual maturities at the reporting date of the Group's non-derivative financial liabilities, which are based on contractual undiscounted cash flows (including interest payment computed using contractual rates, or if floating, based on rates current at the reporting date) and the earliest the Group can be required to pay.

	31 December 2018 Contractual undiscounted cash outflow					
	Within 1 year or on demand USD MILLION	More than 1 year but less than 2 years USD MILLION	More than 2 years but less than 5 years USD MILLION	More than 5 years USD MILLION	TOTAL USD MILLION	Carrying amount USD MILLION
Trade and other payables to third parties	919	–	–	–	919	919
Trade and other payables to related parties	64	–	–	–	64	64
Bonds, including interest payable	480	82	1,773	–	2,335	1,957
Loans and borrowings, incl. interest payable	897	948	4,364	1,681	7,890	6,329
Guarantees	62	59	–	–	121	–
	2,422	**1,089**	**6,137**	**1,681**	**11,329**	**9,269**

	31 December 2017 Contractual undiscounted cash outflow					
	Within 1 year or on demand USD MILLION	More than 1 year but less than 2 years USD MILLION	More than 2 years but less than 5 years USD MILLION	More than 5 years USD MILLION	TOTAL USD MILLION	Carrying amount USD MILLION
Trade and other payables to third parties	848	–	–	–	848	848
Trade and other payables to related parties	96	–	–	–	96	96
Bonds, including interest payable	101	379	757	513	1,750	1,421
Loans and borrowings, including interest payable	997	813	3,909	2,916	8,635	7,058
Guarantees	75	71	–	–	146	–
	2,117	**1,263**	**4,666**	**3,429**	**11,475**	**9,423**

At 31 December 2018 and 31 December 2017 the Group's guarantee in respect of credit arrangement between BoAZ and VEB (note 24(e)) is presented as contingent liability and included at maximum exposure for the Group in the liquidity risk disclosure above.

(e) Credit risk

The Group trades only with recognised, creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. The majority of the Group's third party trade receivables represent balances with the world's leading international corporations operating in the metals industry. In addition, receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. Goods are normally sold subject to retention of title clauses, so that in the event of non-payment the Group may have a secured claim. The Group does not require collateral in respect of trade and other receivables. The details of impairment of trade and other receivables are disclosed in note 17. The extent of the Group's credit exposure is represented by the aggregate balance of financial assets and financial guarantees given.

At 31 December 2018 and 2017, the Group has certain concentrations of credit risk as 0% and 1.9% of the total trade receivables were due from the Group's largest customer and 6.7% and 9.5% of the total trade receivables were due from the Group's five largest customers, respectively (refer to note 5 for the disclosure on revenue from largest customer).

With respect to credit risk arising from guarantees, the Group's policy is to provide financial guarantees only to wholly-owned subsidiaries, associates and joint ventures.

(f) Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The Board's policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Group defines as net operating income divided by total shareholders' equity, excluding non-controlling interests. The Board of Directors also monitors the level of dividends to ordinary shareholders.

The Board seeks to maintain a balance between higher returns that might be possible with higher levels of borrowings and the advantages and security afforded by a sound capital position.

There were no changes in the Group's approach to capital management during the year.

The Company and its subsidiaries were subject to externally imposed capital requirements in the both years presented in these consolidated financial statements.

(g) Master netting or similar agreements

The Group may enter into sales and purchase agreements with the same counterparty in the normal course of business. The related amount receivable and payable do not always meet the criteria for offsetting in the statement of financial position. This is because the Group may not have any currently legally enforceable right to offset recognised amounts, because the right to offset may be enforceable only on the occurrence of future events.

There are no financial instruments that meet the offsetting criteria in the statement of financial position for the year ended 31 December 2018 and 31 December 2017.

23 Commitments

(a) Capital commitments

The Group has entered into contracts that result in contractual obligations primarily relating to various construction and capital repair works. The commitments at 31 December 2018 and 31 December 2017 approximated USD255 million and USD213 million, respectively. These commitments are due over a number of years.

(b) Purchase commitments

Commitments with third parties for purchases of alumina, bauxite, other raw materials and other purchases in 2019-2034 under supply agreements are estimated from USD2,932 million to USD3,527 million at 31 December 2018 (31 December 2017: USD3,593 million to USD4,381 million) depending on the actual purchase volumes and applicable prices.

Commitments with a related party - joint venture for purchases of primary aluminium and alloys in 2019-2030 under supply agreements are estimated from USD6,375 million to USD10,019 million (31 December 2017: USD6,837 million to USD9,351 million) depending on the actual purchase volumes and applicable prices. Electricity purchase commitments are disclosed in note 25.

(c) Sale commitments

Commitments with third parties for sales of alumina and other raw materials in 2019-2034 are estimated from USD509 million to USD2,344 million at 31 December 2018 (31 December 2017: from USD815 million to USD1,041 million) and will be settled at market prices at the date of delivery. Commitments with related parties for sales of alumina in 2019-2020 approximated from USD227 million to USD363 million at 31 December 2018 (31 December 2017: from USD414 million to USD516 million).

Commitments with related parties for sales of primary aluminium and alloys in 2019-2021 are estimated from USD889 million to USD1,223 million at 31 December 2018 (31 December 2017: from USD4,358 million to USD4,770 million). Commitments with third parties for sales of primary aluminium and alloys in 2019-2021 are estimated to range from USD832 million to USD1,155 million at 31 December 2018 (31 December 2017: from USD1,266 million to USD1,654 million).

(d) Operating lease commitments

Non-cancellable operating lease rentals are payable as follows:

	31 December 2018 USD MILLION	31 December 2017 USD MILLION
Less than one year	16	18
Between one and five years	7	64
	23	82

(e) Social commitments

The Group contributes to the maintenance and upkeep of the local infrastructure and the welfare of its employees, including contributions toward the development and maintenance of housing, hospitals, transport services, recreation and other social needs of the regions of the Russian Federation where the Group's production entities are located. The funding of such assistance is periodically determined by management and is appropriately capitalised or expensed as incurred.

24 Contingencies

(a) Taxation

Russian tax, currency and customs legislation is subject to varying interpretations, and changes, which can occur frequently. Management's interpretation of such legislation as applied to the transactions and activities of the Group may be challenged by the relevant local, regional and federal authorities. Notably recent developments in the Russian environment suggest that the authorities in this country are becoming more active in seeking to enforce, through the Russian court system, interpretations of the tax legislation, in particular in relation to the use of certain commercial trading structures, which may be selective for particular tax payers and different to the authorities' previous interpretations or practices. Different and selective interpretations of tax regulations by various government authorities and inconsistent enforcement create further uncertainties in the taxation environment in the Russian Federation.

In addition to the amounts of income tax the Group has provided, there are certain tax positions taken by the Group where it is reasonably possible (though less than 50% likely) that additional tax may be payable upon examination by the tax authorities or in connection with ongoing disputes with tax authorities. The Group's best estimate of the aggregate maximum of additional amounts that it is reasonably possible may become payable if these tax positions were not sustained at 31

December 2018 is USD nil million (31 December 2017: USD30 million).

(b) Environmental contingencies

The Group and its predecessor entities have operated in the Russian Federation, Ukraine, Jamaica, Guyana, the Republic of Guinea and the European Union for many years and certain environmental problems have developed. Governmental authorities are continually considering environmental regulations and their enforcement and the Group periodically evaluates its obligations related thereto. As obligations are determined, they are recognised immediately. The outcome of environmental liabilities under proposed or any future legislation, or as a result of stricter enforcement of existing legislation, cannot reasonably be estimated. Under current levels of enforcement of existing legislation, management believes there are no possible liabilities, which will have a material adverse effect on the financial position or the operating results of the Group. However, the Group anticipates undertaking significant capital projects to improve its future environmental performance and to bring it into full compliance with current legislation.

(c) Legal contingencies

The Group's business activities expose it to a variety of lawsuits and claims which are monitored, assessed and contested on the ongoing basis. Where management believes that a lawsuit or another claim would result in the outflow of the economic benefits for the Group, a best estimate of such outflow is included in provisions in the consolidated financial statements (refer to note 20). As at 31 December 2018 the amount of claims, where management assesses outflow as possible approximates USD31 million (31 December 2017: USD36 million).

In January 2013, the Company received a writ of summons and statement of claim filed in the High Court of Justice of the Federal Capital Territory of Nigeria (Abuja) by plaintiff BFIG Group Divino Corporation ("BFIG") against certain subsidiaries of the Company. It is a claim for damages arising out of the defendants' alleged tortious interference in the bid process for the sale of the Nigerian government's majority stake in the Aluminium Smelter Company of Nigeria Plc ("ALSCON") and alleged loss of BFIG's earnings resulting from its failed bid for the said stake in ALSCON. BFIG sought compensatory damages in the amount of USD2.8 billion plus interest.

In January 2014 the court granted the Company's motion to join the Federal Republic of Nigeria and Attorney General of Nigeria to the case as co-defendants. The last hearing took place on 8 November 2017. The claim was struck out. BFIG may appeal.

Based on a preliminary assessment of the claim, the Company does not expect the case to have any material adverse effect on the Group's financial position or its operation as a whole.

In January 2018 one of the Company's subsidiaries, ALSCON and the Bureau of Public Enterprises of Nigeria entered into an addendum to the original sale and purchase contract regarding ALSCON on the key terms and conditions as it was disclosed in the announcement of the Company dated 19 January 2018.

(d) Insurance and provision for guarantees

Where the Group enters into financial guarantee contracts to guarantee the indebtedness of other companies, controlled by the shareholder which is a beneficial owner of the Group at the reporting date, the Group considers these to be insurance arrangements and accounts for them as such. In this respect, the Group treats the guarantee contract as a contingent liability until such time as it becomes probable that the Group will be required to make a payment under the guarantee.

In September 2013 the Group entered into an agreement with PJSC RusHydro to provide funds to BoAZ, if the latter is unable to fulfil its obligations under its credit facility with GK Vnesheconombank ("VEB"). This agreement represents a surety for the increased credit limit obtained for the financing of BoAZ. The aggregate exposure under the agreement is limited to RUB16.8 billion (31 December 2018 and 2017 USD242 million and USD292 million, respectively) and is split between the Group and PJSC RusHydro in equal proportion.

25 Related party transactions

(a) Transactions with management and close family members

Management remuneration

Key management received the following remuneration, which is included in personnel costs (refer to note 6(c)):

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Salaries and bonuses	67	61
	67	**61**

(b) Transactions with associates and joint ventures

Sales to associates and joint ventures are disclosed in note 5, purchases from associates and joint ventures are disclosed in note 6, accounts receivable from associates and joint ventures as well as accounts payable to associates and joint ventures are disclosed in note 17.

(c) Transactions with other related parties

The Group transacts with other related parties, the majority of which are entities under common control with the Group or under the control of SUAL Partners Limited or its controlling shareholders or Glencore International Plc or entities under its control or Onexim Holdings Limited or its controlling shareholders.

Sales to related parties for the year are disclosed in note 5, purchases from related parties are disclosed in note 6, accounts receivable from related parties as well as accounts payable to related parties are disclosed in note 17, commitments with related parties are disclosed in note 23, directors remuneration in notes 9 and 10 and other transactions with shareholders are disclosed in note 11.

Other purchases of assets and other non-operating expenses from related parties are the following:

	YEAR ENDED 31 DECEMBER	
	2018 USD MILLION	2017 USD MILLION
Related parties – companies capable of exerting significant influence	4	4
Related parties – companies under common control	18	17
Related parties – associates and joint ventures	1	0
	23	**21**

Electricity contracts

In November 2016, the Group entered into the new long-term electricity contracts to supply several Group's smelters from En+ subsidiaries over the years 2016-2026. Purchases will be made under a price formula close to market prices. The volumes committed under the long-term electricity contracts are as follows:

Year	2019	2020	2021	2022	2023	2024	2025	2026
Mln kWh	37,598	37,700	37,598	37,598	37,598	37,700	37,598	25,194
Mln USD	444	446	444	444	444	446	444	297

(d) Related parties balances

At 31 December 2018, included in non-current assets are balances of related parties –– companies under common control of USD46 million and balances of related parties – associates and joint ventures of USD2 million (31 December 2017: USD43 million and USD11 million, respectively). At 31 December 2018, included in non-current liabilities are balances of related parties – associates and joint ventures of USD10 million (31 December 2017: USD9 million).

(e) Pricing policies

Prices for transactions with related parties are determined on a case by case basis but are not necessarily at arm's length.

The Group has entered into three categories of related-party transactions: (i) those entered into on an arm's length basis, (ii) those entered into on non-arm's length terms but as part of a wider deal resulting from arms' length negotiations with unrelated third parties, and (iii) transactions unique to the Group and the counterparty.

(f) Connected transactions

Not all the related party transactions and balances disclosed above meet the definition of connected transactions as per Chapter 14 of the Listing Rules of Hong Kong Stock Exchange. For particulars of the continuing connected transactions please refer to the Directors' Report section of the Annual Report of the Company for the year ended 31 December 2018.

26 Particulars of subsidiaries

As at 31 December 2018 and 2017, the Company has direct and indirect interests in the following subsidiaries, which principally affected the results, assets and liabilities of the Group:

Name	Place of incorporation and operation	Date of incorporation	Particulars of issued and paid-up capital	Attributable equity interest	Principal activities
Compagnie Des Bauxites De Kindia S.A.	Guinea	29 November 2000	2,000 shares of GNF 25,000 each	100.0%	Bauxite mining
Friguia	Guinea	9 February 1957	758,966,200,000 GNF	100.0%	Alumina
JSC RUSAL Achinsk	Russian Federation	20 April 1994	4,188,531 shares of RUB1 each	100.0%	Alumina
RUSAL Mykolaev Ltd	Ukraine	16 September 2004	1,524,126,720 UAH	100.0%	Alumina
JSC RUSAL Boxitogorsk Alumina	Russian Federation	27 October 1992	1,012,350 shares of RUB1 each	100.0%	Alumina
Eurallumina SpA	Italy	21 March 2002	10,000,000 shares of EUR1.55 each	100.0%	Alumina
PJSC RUSAL Bratsk	Russian Federation	26 November 1992	5,505,305 shares of RUB0.2 each	100.0%	Smelting
JSC RUSAL Krasnoyarsk	Russian Federation	16 November 1992	85,478,536 shares of RUB20 each	100.0%	Smelting
JSC RUSAL Novokuznetsk	Russian Federation	26 June 1996	53,997,170 shares of RUB0.1 each	100.0%	Smelting
JSC RUSAL Sayanogorsk	Russian Federation	29 July 1999	208,102,580,438 shares of RUB0.068 each	100.0%	Smelting
RUSAL Resal Ltd	Russian Federation	15 November 1994	charter fund of RUB67,706,217.29	100.0%	Processing
JSC RUSAL SAYANAL	Russian Federation	29 December 2001	59,902,661,099 shares of RUB0.006 each	100.0%	Foil

Name	Place of incorporation and operation	Date of incorporation	Particulars of issued and paid-up capital	Attributable equity interest	Principal activities
CJSC RUSAL ARMENAL	Armenia	17 May 2000	36,699,295 shares of AMD 1,000 each	100.0%	Foil
RUS-Engineering Ltd	Russian Federation	18 August 2005	charter fund of RUB 1,751,832,184	100.0%	Repairs and maintenance
JSC Russian Aluminium	Russian Federation	25 December 2000	23,124,000,000 shares of RUB1 each	100.0%	Holding company
Rusal Global Management B.V.	Netherlands	8 March 2001	charter fund of EUR25,000	100.0%	Management company
JSC United Company RUSAL Trading House	Russian Federation	15 March 2000	163,660 shares of RUB100 each	100.0%	Trading
Rusal America Corp.	USA	29 March 1999	1,000 shares of USD0.01 each	100.0%	Trading
RS International GmbH	Switzerland	22 May 2007	1 share with nominal value of CHF 20,000	100.0%	Trading
Rusal Marketing GmbH	Switzerland	22 May 2007	Capital quota of CHF2,000,000	100.0%	Trading
RTI Limited	Jersey	27 October 2006	764,959,894 shares of USD1 each	100.0%	Trading
Alumina & Bauxite Company Limited	British Virgin Islands	3 March 2004	231,179,727 shares of USD1 each	100.0%	Trading
JSC Komi Aluminii	Russian Federation	13 February 2003	4,303,000,000 shares of RUB1 each	100.0%	Alumina

Name	Place of incorporation and operation	Date of incorporation	Particulars of issued and paid-up capital	Attributable equity interest	Principal activities
JSC Bauxite-Timana	Russian Federation	29 December 1992	44,500,000 shares of RUB10 each	100.0%	Bauxite mining
JSC Severo-Uralsky Bauxite Mine	Russian Federation	24 October 1996	10,506,609 shares of RUB275.85 each	100.0%	Bauxite mining
JSC RUSAL Ural	Russian Federation	26 September 1996	2,542,941,932 shares of RUB1 each	100.0%	Primary aluminum and alumina production
SUAL-PM LLC	Russian Federation	20 October 1998	charter fund of RUB56,300,959	100.0%	Aluminum powders production
JSC Kremniy	Russian Federation	3 August 1998	320,644 shares of RUB1,000 each	100.0%	Silicon production
RUSAL Ural-Kremniy-Ural LLC	Russian Federation	1 March 1999	charter fund of RUB8,763,098	100.0%	Silicon production
UC RUSAL Alumina Jamaica Limited	Jamaica	26 April 2001	1,000,000 shares of JMD1 each	100.0%	Alumina
Kubikenborg Aluminium AB	Sweden	26 January 1934	25,000 shares of SEK 1,000 each	100.0%	Smelting
RFCL Sarl	Luxembourg	13 March 2013	90,000,000 RUB	100.0%	Finance services
Aktivium B.V.	Netherlands	28 December 2010	215,458,134,321 shares of RUB1 each	100.0%	Holding and investment company
Aughinish Alumina Ltd	Ireland	22 September 1977	1,000 shares of EUR2 each	100.0%	Alumina
LLC RUSAL Energo	Russian Federation	26 December 2005	715,000,000 RUB	100.0%	Electric power

Trading entities are engaged in the sale of products to and from the production entities.

27 Statement of Financial Position of the Company as at 31 December 2018

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
ASSETS		
Non-current assets		
Investments in subsidiaries	20,468	18,965
Loans to related parties	1,845	2,223
Total non-current assets	**22,313**	**21,188**
Current assets		
Loans to related parties	1,416	1,166
Other receivables	911	381
Cash and cash equivalents	186	12
Total current assets	**2,513**	**1,559**
Total assets	**24,826**	**22,747**

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
EQUITY AND LIABILITIES		
Equity		
Share capital	152	152
Reserves	14,152	13,017
Total equity	**14,304**	**13,169**
Non-current liabilities		
Loans and borrowings	6,816	7,065
Total non-current liabilities	**6,816**	7,065

	31 DECEMBER 2018 USD MILLION	31 DECEMBER 2017 USD MILLION
Current liabilities		
Loans and borrowings	2,355	1,694
Trade and other payables	1,322	748
Other current liabilities	29	71
Total current liabilities	**3,706**	**2,513**
Total liabilities	**10,522**	**9,578**
Total equity and liabilities	**24,826**	**22,747**
Net current liabilities	**(1,193)**	**(954)**
Total assets less current liabilities	**21,120**	**20,234**

28 Events subsequent to the reporting date

There were no significant events subsequent to the reporting date except for sanctions removal in January 2019 disclosed in note 1(d).

STATEMENT OF RESPONSIBILITY FOR THIS ANNUAL REPORT

I, Evgenii Nikitin, declare, to the best of my knowledge, that the financial statements contained in this Annual Report have been prepared in accordance with applicable accounting principles and give a true and fair view of the business, results of operations and financial condition of the Company and the other entities to which the financial statements apply, and that the management report (comprising the Business Overview, Management Discussion and Analysis, Directors' Report and Corporate Governance Report sections) of this Annual Report presents a fair review of developments in the business, results of operations and financial conditions of the Company and the other entities to which the financial statements apply, as well as a description of the main risks and uncertainties that they are facing.

Evgenii Nikitin
Chief Executive Officer
29 April 2019

FORWARD LOOKING STATEMENTS

This Annual Report contains certain statements that are, or may be deemed to be, "forward-looking statements". These forward-looking statements may be identified by the use of forward-looking terminology, including the terms "believes", "estimates", "plans", "projects", "anticipates", "seeks", "expects", "intends", "forecasts", "targets", "may", "will", "should", "could" and "potential" or, in each case, their negative or other variations, or comparable terminology, or by discussions of strategy, plans, objectives, goals, future events or intentions. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this Annual Report and include, but are not limited to, statements regarding the Group's intentions, beliefs or current expectations concerning, among other things, the Group's business, results of operations, financial position, liquidity, prospects, growth, strategies and the bauxite, alumina and aluminium industries.

By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances. Forward-looking statements are not guarantees of future performance and of the actual results of the Group's operations, financial position and liquidity, and the development of the markets and the industries in which the Group operates may differ materially from the development of those same industries as described in, or suggested by, the forward-looking statements contained in this Annual Report. In addition, even if the Group's results of operations, financial position and liquidity, and the development of the markets and the industries in which the Group operates, are consistent with the forward-looking statements contained in this Annual Report, those results or developments may not be indicative of results or developments in subsequent periods. A number of risks, uncertainties and other factors could cause results and developments to differ materially from those expressed or implied by the forward-looking statements including, without limitation:

- materially adverse changes in economic or industry conditions generally or in the markets served by the Group;
- changes in the supply and demand for and the price of aluminium, alumina, aluminium products and other products;
- fluctuations in inflation, interest rates and exchange rates;
- the Group's ability to repay pursuant to or comply with the terms of its credit facility agreements, or obtain further financing, refinancing or otherwise waiver of forbearance in respect of the Group's payment obligations under its facility of financing;
- changes in the costs of the materials required for the Group's production of aluminium and alumina;
- changes in the Group's operating costs, including the costs of energy and transportation;
- changes in the Group's capital expenditure requirements, including those relating to the Group's potential environmental liabilities or the ability of the Group to fund its capital expenditure requirements through borrowing or otherwise;
- the Group's ability to successfully and timely implement any of its business strategies;
- the Group's ability to obtain or extend the terms of the licences necessary for the operation of the Group's business;
- developments in, or changes to, laws, regulations, governmental policies, taxation or accounting standards or practices affecting the Group's operations;
- the Group's ability to recover its reserves or develop new resources and reserves;
- the Group's success in accurately identifying future risks to its business and managing the risks of the aforementioned factors; and
- other future events, risks, uncertainties, factors and assumptions discussed in the consolidated financial statements and other sections of this Annual Report.

Forward-looking statements may and often do differ materially from actual results. Any forward-looking statements in this Annual Report reflect the Group management's current view with respect to future events and are subject to risks relating to future events and other risks, uncertainties and assumptions relating to the Group's business, results of operations, financial position, liquidity, prospects, growth, strategies and the bauxite, alumina and aluminium industries. Investors should specifically consider the factors identified in this Annual Report, which could cause actual results to differ, before making any investment decision. Subject to the requirements of the Listing Rules and except as may be required by applicable law, the Company undertakes no obligation to revise any forward-looking statements that appear in this Annual Report to reflect any change in the Company's expectations, or any events or circumstances, that may occur or arise after the date of this Annual Report.

All forward-looking statements in this Annual Report are qualified by reference to this cautionary statement.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OBSTACLES
Dimensional
stability

09 GLOSSARY

GLOSSARY

"Achinsk Alumina Refinery", "RUSAL Achinsk", "JSC RUSAL Achinsk" or "AGK" means JSC "RUSAL Achinsk", a company incorporated under the laws of the Russian Federation, which is a wholly-owned subsidiary of the Company.

"Achinsk Cement" means Achinsk Cement Limited Liability Company, a company incorporated in the Russian Federation, more than 30% of which is indirectly controlled by Mr. Deripaska.

"Adjusted EBITDA" for any period means the results from operating activities adjusted for amortization and depreciation, impairment charges and loss on disposal of property, plant and equipment.

"Adjusted EBITDA margin" is calculated as Adjusted EBITDA to revenue for the relevant period.

"Adjusted Net Profit" for any period is defined as the net profit adjusted for the net effect from share in the results of Norilsk Nickel, the net effect of embedded derivative financial instruments, the difference between effective and nominal interest rate charge on restructured debt and net effect of non-current assets impairment.

"Adjusted Profit/(Loss)" for any period is defined as Profit/(Loss) adjusted for the net effect of the Company's investment in Norilsk Nickel, the net effect of derivative financial instruments, gains and losses recycled from other reserves and the net effect of non-current assets impairment and restructuring costs.

"Adjusted profit/(loss) margin" is calculated as Adjusted Profit/(Loss) to revenue for the relevant period.

"Agreed Subsidiaries" means an agreed list of subsidiaries of the Company, as defined in the Shareholders' Agreement among Major Shareholders only.

"Alpart" means Alumina Partners of Jamaica.

"ALSCON" means Aluminium Smelter Company of Nigeria, a company incorporated in Nigeria and in which the Company indirectly holds a 85% interest.

"Aluminium Division" means the Company's division comprising the smelters located in Russia and Sweden.

"Alumina price per tonne" represents the average alumina price per tonne which is based on the daily closing spot prices of alumina according to Non-ferrous Metal Alumina Index FOB Australia USD per tonne.

"Aluminium price per tonne quoted on the LME" or **"LME aluminium price"** represents the average daily closing official LME spot prices for each period.

"Aluminium segment cost per tonne" means aluminium segment revenue, less aluminium segment results, less amortization and depreciation, divided by sales volume of aluminium segment.

"Amokenga Holdings" means Amokenga Holdings Limited, a company incorporated in Bermuda and which is an indirect wholly-owned subsidiary of Glencore.

"Annual Report" means this annual report dated 29 April 2019.

"Articles of Association" means the articles of association of the Company, conditionally adopted on 24 November 2009, and effective on the Listing Date, and subsequently amended on 22 November 2017.

"Associate(s)" has the meaning ascribed to such expression in the Listing Rules.

"Audit Committee" means the audit committee established by the Board in accordance with the requirements of the CG Code.

"Aughinish Alumina Refinery" means Aughinish Alumina Limited, a company incorporated in Ireland, which is a wholly-owned subsidiary of the Company.

"Basic Element" means Basic Element Limited, a company incorporated in Jersey, of which Mr. Oleg Deripaska is the ultimate beneficial owner.

"BAZ" or **"Bogoslovsk Alumina Refinery"** means Bogoslovsky aluminium smelter, a branch of RUSAL Ural JSC.

"BEMO" means the companies comprising the Boguchanskoye Energy and Metals Complex.

"BEMO HPP" or **"BOGES"** means the Boguchanskaya hydro power plant.

"BEMO Project" means the Boguchanskoye Energy & Metals project involving the construction of the BEMO HPP and the Boguchansky aluminium smelter as described at pages 18 and 21 of this Annual Report.

"Board" means the Board of Directors of the Company.

"Boguchansky aluminium smelter" or **"BEMO aluminium smelter"** or **"BoAZ"** means the aluminium smelter project involving the construction of a 600 thousand tpa greenfield aluminium smelter on a 230 hectare site, located approximately 8 km to the south-east of the settlement of Tayozhny in the Krasnoyarsk region, and approximately 160 km (212 km by road) from the BEMO HPP, as described at pages 18 and 21 of this Annual Report.

"Bratsk aluminium smelter" or **"RUSAL Bratsk"** or **"BrAZ"** means PJSC "RUSAL Bratsk", a company incorporated under the laws of the Russian Federation, which is a wholly-owned subsidiary of the Company.

"Boksitogorsk Alumina Refinery" means JSC RUSAL Boksitogorsk, a company incorporated under the laws of the Russian Federation, which is a wholly-owned subsidiary of the Group.

"CEAC" means the Central European Aluminium Company.

"C.B.K" or **"Kindia"** means Compagnie des Beauxites de Kindia, located in Guinea.

"CG Code" means the Code setting out, among others, the principles of good corporate governance practices as set out in Appendix 14 to the Listing Rules (as amended from time to time).

"Century Aluminium Company" means Century Aluminium Company, a company incorporated under the laws of Delaware and the common stock of which is traded on the NASDAQ, in which Glencore has a 47.2% interest.

"CEO" or **"Chief Executive Officer"** means the chief executive officer of the Company.

"Acting CEO" or **"acting Chief Executive Officer"** means the acting chief executive officer of the Company.

"Chairman" or **"Chairman of the Board"** means the chairman of the Board.

"Chief Financial Officer" means the chief financial officer of the Company.

"CIS" means the Commonwealth of Independent States.

"CJSC Kremniy" or **"ZAO Kremniy"** means a company incorporated under the laws of the Russian Federation and a subsidiary of the Company.

"Code for Securities Transactions" means the Code for Securities Transactions by Directors of the Company adopted by the Board on 9 April 2010 and based on Appendix 10 to the Listing Rules.

"Company" or "UC RUSAL" or **"RUSAL"** means United Company RUSAL Plc. 俄鋁, a company incorporated under the laws of Jersey with limited liability.

"Connected person(s)" has the meaning ascribed to such expression in the Listing Rules.

"Connected transaction(s)" has the meaning ascribed to such expression in the Listing Rules.

"Controlling Shareholder" has the meaning ascribed to such expression in the Listing Rules.

"Corporate Governance and Nomination Committee" means the corporate governance and nomination committee established by the Board in accordance with the requirements of the CG Code.

"Covenant EBITDA" has the meaning given to it in the PXF Facility.

"Crispian" means Crispian Investment Limited, a company incorporated in Cyprus, to the best knowledge information and belief of the Directors is affiliated with Mr. Roman Abramovich.

"Directors" means the directors of the Company.

"EBITDA" means earnings before interest, taxes, depreciation, and amortization.

"ECD" means the Engineering and Construction Division of the Company.

"En+" means En+ Group Plc, formerly En+ Group Limited, a company incorporated in Jersey and which is a shareholder of the Company.

"EPCM" means Engineering, Procurement, Construction and Management.

"EUR" means Euros, the lawful currency of the relevant member states of the European Union that have adopted the Euro as their currency.

"Euronext Paris" means the Professional Segment of Euronext Paris.

"Eurallumina" means the alumina refinery located in Portoscuso, on the southwest coast of Sardinia, Italy. During the year ended 31 December 2006, the Group entered into an agreement with Rio Tinto Aluminium Ltd and acquired a 56.2% interest in Eurallumina, the remaining 43.8% interest in Eurallumina was owned by Glencore and was acquired by the Group as part of the acquisition of SUAL and Glencore Businesses during the year ended 31 December 2007.

"financial year" means the financial year ended 31 December 2018.

"Friguia Alumina Refinery" means Friguia S.A., a company incorporated in Guinea, which is a wholly-owned subsidiary of the Company.

"Gazprombank" means "Gazprombank" (Joint – stock Company).

"GBP" means Pounds Sterling, the lawful currency of the United Kingdom.

"Glencore" means Glencore Plc, a public company incorporated in Jersey and listed on the London Stock Exchange, with a secondary listing on the Johannesburg Stock Exchange, which is an indirect shareholder of the Company. Pursuant to the press release issued by En+ on 28 Jan 2019, En+ announced that it had entered into a securities exchange agreement and certain other related agreements with certain subsidiaries of Glencore, pursuant to which Glencore shall transfer the 8.75% of the Company's shares to En+ in consideration for En+ issuing new GDRs to Glencore representing approximately 10.55% of the enlarged share capital of En+. After the aforementioned share swap is completed, the indirect shareholding of Glencore in the Shares will reduce to 0%.

"Glencore Businesses" means the alumina and aluminium businesses of Glencore.

"Global Depositary Shares" or **"GDS"** means global depositary shares evidenced by global depositary receipts, each of which represents 20 Shares.

"GWh" means gigawatts hours.

"Group" or **"UC RUSAL Group"** means UC RUSAL and its subsidiaries from time to time, including a number of production, trading and other entities controlled by the Company directly or through its wholly-owned subsidiaries.

"Hawesville aluminium smelter" means the Hawesville Aluminium Smelter, which is owned and operated by Century Kentucky, Inc., a company incorporated under the laws of Delaware, which is a wholly-owned subsidiary of Century Aluminium Company, an entity in which Glencore holds a 47.2% interest.

"Hong Kong" means the Hong Kong Special Administrative Region of the PRC.

"HKD" means Hong Kong dollars, the lawful currency of Hong Kong.

"Hong Kong Companies Ordinance" means the Hong Kong Companies Ordinance (Chapter 622 of the Laws of Hong Kong) (as amended from time to time).

"Hong Kong Stock Exchange" means the Main Board of The Stock Exchange of Hong Kong Limited.

"IFRS" means the International Financial Reporting Standards.

"Indicated Mineral Resource" or **"Indicated"** means the part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

"Inferred" means a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

"Interros" means Interros International Investments Limited.

"Irkutsk aluminium smelter" or **"IrkAZ"** means a branch of RUSAL Bratsk in Shelekhov.

"IPO" means the initial public offering of UC RUSAL on the Hong Kong Stock Exchange and Euronext Paris.

"Jersey Companies Law" means the Companies (Jersey) Law 1991, as amended.

"JORC" means Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists & the Minerals Council of Australia.

"Joint Stock Company 'Boksit Timana' ", "JSC 'Boksit Timana'", "Boksit Timana" or **"Timan Bauxite"** means Joint Stock Company "Boksit Timana", a company incorporated under the laws of the Russian Federation, which is a non-wholly-owned subsidiary of the Company.

"JSC Irkutskenergo" means Irkutsk Joint Stock Company of Energetics and Electrification, a power generating company controlled by En+ as to more than 30% of its issued share capital.

JSC "RUSAL SAYANAL" or **"SAYANAL"** or **"Sayanal"** means Joint-Stock Company RUSAL SAYANAL, an indirect wholly-owned subsidiary of the Company.

JSC 'UC RUSAL TH', "RUSAL TH" or **"UC RUSAL TH"** means Joint-stock company 'United Company RUSAL Trading House', an indirect wholly-owned subsidiary of the Company.

"kA" means kilo-amperes.

"Kandalaksha aluminium smelter" means Kandalaksha Aluminium Smelter, a branch of RUSAL Ural JSC.

"Khakas aluminium smelter" or **"KhAZ"** means Khakas Aluminium Smelter.

"KPIs" means key performance indicators.

"KraMZ" or **"'KraMZ' Ltd."** means Limited liability company "Krasnoyarsk metallurgical plant" ("KraMZ" Ltd.), a company incorporated in the Russian Federation.

"KraMZ-Auto" means KraMZ-Auto LLC, a company incorporated in the Russian Federation.

"Krasnoyarsk aluminium smelter", "RUSAL Krasnoyarsk" or **"KrAZ"** means JSC "RUSAL Krasnoyarsk", a company incorporated under the laws of the Russian Federation, which is a wholly-owned subsidiary of the Company.

"Krasnoyarskaya HPP" means JSC Krasnoyarsk Hydro-Power Plant, a hydroelectric power station controlled by En+ as to more than 30% of its issued share capital.

"kt" means kilotonnes.

"KUBAL" means Kubikenborg Aluminium AB, a company incorporated in Sweden, which is a wholly-owned subsidiary of the Company.

"KUMZ JSC" or **"OAO KUMZ"** means Kamensk-Uralsky Metallurgical Works Joint Stock Company, a company incorporated under the laws of the Russian Federation.

"kWh" means kilowatt hour.

"Latest Practicable Date" means 17 April 2019, being the latest practicable date prior to the printing of this Annual Report for ascertaining certain information in this Annual Report.

"LIBOR" means in relation to any loan:

(a) the applicable screen rate (being the British Bankers' Association Interest Settlement Rate for dollars for the relevant period, displayed on the appropriate page of the Reuters screen); or

(b) (if no screen rate is available for dollars for the interest period of a particular loan) the arithmetic mean of the rates (rounded upwards to four decimal places) as supplied to the agent at its request quoted by the reference banks to leading banks in the London interbank market, as of the specified time (11:00 a.m. in most cases) on the quotation day (generally two business days before the first day of that period unless market practice differs in the Relevant Interbank Market, in which case the quotation day will be determined by the agent in accordance with market practice in the Relevant Interbank Market) for the offering of deposits in dollars and for a period comparable to the interest period for that loan.

"Listing" means the listing of the Shares on the Hong-Kong Stock Exchange.

"Listing Date" means the date on which the Shares were listed on the Hong Kong Stock Exchange, being 27 January 2010.

"Listing Rules" means the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange (as amended from time to time).

"LLC GAZ" means LLC Torgovo-Zakupochnaya Kompaniya GAZ, being a member of the group of companies which also include "GAZ Group Autocomponents" LLC, J-S.C. AVTODIZEL (YaMZ) and others, collectively, the "GAZ Group", of which PJSC "GAZ" being the holding company, is controlled by Mr. Deripaska as to more than 30%.

"LLP Bogatyr Komir" or **"Bogatyr Coal" Limited Liability Partnership** means the joint venture described at page 22 of this Annual Report.

"LME" means the London Metal Exchange.

"LTIFR" means the Lost Time Injury Frequency Rate which was calculated by the Group as a sum of fatalities and lost time injuries per 200,000 man-hours.

"Major Shareholders" means En+, SUAL Partners, Glencore and Onexim.

"Major Shareholders' Shares" mean the Shares held by the Major Shareholders and their respective wholly-owned subsidiaries.

"Management Company" or **"RUSAL Management Company"** means a subsidiary of the Group retained for accounting, general management, administration and secretarial functions.

"Market Council" means the non-commercial organisation formed as a result of a non-commercial partnership, which is intended to unite energy market participants and major consumers of electrical energy through membership of that body. The council is intended to ensure the proper functioning of commercial market infrastructure and effective exchanges between the wholesale and retail electrical energy markets. Additionally, it is intended to promote investment in the electrical energy industry by creating a healthy market and even playing field for participants of both the wholesale and retail electrical energy markets, when drafting new rules and regulations concerning the electrical energy industry, and facilitate self-regulation of the wholesale and retail trade in electrical energy, power and other products and services which is permissible in the wholesale and retail electrical energy markets. The council's aim is to ensure the security of energy supply in the Russian Federation, unity within the economic space, economic freedom and competition in the wholesale and retail electrical energy markets, by striking a balance between the interests of suppliers and buyers and the needs of society in general in terms of having a reliable and stable source of electrical energy.

"Measured Mineral Resource" or **"Measured"** means a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

"Memorandum" means the memorandum of association of the Company conditionally adopted on 26 December 2009, and effective on the Listing Date, and subsequently amended on 22 November 2017.

"Moscow Exchange" means Public Joint-Stock Company "Moscow Exchange MICEX-RTS" (short name "Moscow Exchange").

"MOEX" means the Moscow Exchange.

"Mineral Resource" means a concentration or occurrence of material of intrinsic economic interest in or on the earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

"Model Code" means the Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix 10 of the Listing Rules.

"mt" means million tonnes.

"MW" means megawatt.

"Net Debt" is calculated as Total Debt less cash and cash equivalents as at 31 December 2018.

"Nadvoitsy aluminium smelter" or **"NAZ"** means Nadvoitsy Aluminium Smelter, a branch of RUSAL Ural JSC.

"Nikolaev Alumina Refinery" or **"NGZ"** means Nikolaev Alumina Refinery Company Limited, a company incorporated under the laws of the Ukraine, which is a wholly-owned subsidiary of the Company.

"Norilsk Nickel" means PJSC "MMC 'NORILSK NICKEL'", a company incorporated under the laws of the Russian Federation.

"Novokuznetsk aluminium smelter" or **"NkAZ"** or **"RUSAL Novokuznetsk"** means JSC "RUSAL Novokuznetsk", a company incorporated under the laws of the Russian Federation, which is a wholly-owned subsidiary of the Company.

"OFAC" means the Office of Foreign Assets Control of the Department of the U.S. Treasury.

"OFAC Sanctions" means the designation by OFAC of certain persons and certain companies into the SDN List.

"OHSAS 18001" means Occupational Health and Safety Specification (OHSAS) 18001.

"Onexim" means Onexim Holdings Limited, a company incorporated in Cyprus. According to disclosure of interests notices filed with the Company on 21 February 2018 pursuant to Part XV of the SFO, Onexim sold its entire shareholding in the Company (which represented approximately 6% shareholding in the issued share capital of the Company) and ceased to be a shareholder of the Company on 16 February 2018.

"Ore Reserves" means the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

"PM Krasnoturyinsk" means SUAL-PM-Krasnoturyinsk, a branch of LLC 'SUAL-PM'.

"Possible Share Transfer" means a securities exchange agreement entered into by En+ and certain subsidiaries of Glencore pursuant to which Glencore shall transfer 8.75% of the Company's shares to En+ in consideration for En+ issuing new GDRs to Glencore representing approximately 10.55% of the enlarged share capital of En+. After the aforementioned share swap is completed, the indirect shareholding of Glencore in the Shares will reduce to 0%.

"PRC" means The People's Republic of China.

"Probable Ore Reserve" means the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

"Production System" means the system developed and implemented at all of the Company's production facilities by the Company's Production Development Directorate business unit, for the purposes of introducing best practices to increase efficiency and the standardizing of production processes.

"Proved Ore Reserve" means the economically mineable part of a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

"Prospectus" means the Company's prospectus for the Listing dated 31 December 2009. The Prospectus is available on the Company's website under the link https://rusal.ru/upload/iblock/236/PROSPECTUS.pdf.

"PXF Facility" means up to USD2,000,000,000 Aluminium Pre-Export Finance Term Facility Agreement (dated 24 May 2017), as amended and restated from time to time, among inter alias, UC RUSAL as Borrower and ING Bank N.V. as Facility Agent and Security Agents and Natixis as Offtake Agent.

"QAL" means Queensland Alumina Limited, a company incorporated in Queensland, Australia, in which the Company indirectly holds a 20% equity interest.

"RA" means JSC Russian Aluminium.

"related party" of an entity means a party who is:

(a) directly, or indirectly through one or more intermediates, a party which:

  i. controls, is controlled by, or is under common control with, the entity (this includes parents, subsidiaries and fellow subsidiaries);

  ii. has an interest in the entity that gives it significant influence over the entity; or

  iii. has joint control over the entity;

(b) an associate of the entity;

(c) a joint venture in which the entity is a venturer;

(d) a member of the key management personnel of the entity or its parent;

(e) a close member of the family of any individual referred to in (a) or (b) above;

(f) an entity that is controlled, jointly controlled or significantly influenced by, or for which significant voting power in such entity resides with, directly or indirectly, any individual referred to in (d) or (e) above;

(g) a post-employment benefit plan for the benefit of employees of the entity, or of any entity that is a related party of the entity.

"related party transaction" means a transfer of resources, services or obligations between related parties, regardless of whether the price is charged.

"Recurring Net Profit" for any period means Adjusted Net Profit plus the Company's effective share of Norilsk Nickel's profits, net of tax.

"Relevant Officer" means any employee of the Company or a director or employee of a subsidiary of the Company.

"Relevant Officers Code" means the code for Securities Transactions by Relevant Officers of the Company.

"Remuneration Committee" means the remuneration committee established by the Board in accordance with the requirements of the CG Code.

"Review Period" means the period commencing from 1 January 2018 and ending on 31 December 2018.

"Risk Map" means a systematic list of all risks of the Company with a description of the each risk, probability of its occurrence, financial assessment of the risk, consequences of its occurrence, responsible persons and risk control procedures.

"RSPP" means the Russian Union of Industrialists and Entrepreneurs.

"RUB" or **"Ruble"** means Rubles, the lawful currency of the Russian Federation.

"RUSAL ARMENAL" CJSC or **"RUSAL ARMENAL"** or **"ARMENAL"** means Closed Joint Stock Company "RUSAL ARMENAL", an indirect wholly-owned subsidiary of the Company.

"RUSAL Global" means "RUSAL Global Management B.V.", a company incorporated under the laws of the Netherlands.

"RUSAL RESAL" means Limited Liability Company "RUSAL RESAL", an indirect wholly-owned subsidiary of the Company.

"RUSAL-Sayana Foil" LLC or **"Sayana Foil"** means Limited Liability Company "RUSAL-Sayana Foil", an indirect wholly-owned subsidiary of the Company.

"RUSAL Ural JSC" means Joint Stock Company 'United Company RUSAL Ural Aluminium', formerly JSC "Siberian-Urals Aluminium Company" (official short name JSC "SUAL"), a company incorporated under the laws of the Russian Federation, an indirect wholly-owned subsidiary of the Company.

"RUS-Engineering" means RUS-Engineering LLC, an indirect wholly-owned subsidiary of the Company.

"RusHydro" means PJSC "RusHydro" ("Public Joint-Stock Company Federal Hydro-Generating Company – RusHydro"), a company organized under the laws of the Russian Federation, which is an independent third party.

"R&D" means research and development or the Research and Development Centers operated by the Company, as the context requires.

"Samruk-Energo" means Samruk-Energo, a company incorporated in Kazakhstan, which is an independent third party.

"Samruk-Kazyna" means the Kazakhstan state controlled national welfare fund.

"Sayanogorsk aluminium smelter", **"RUSAL Sayanogorsk"** or **"SAZ"** means JSC "RUSAL Sayanogorsk", a company incorporated under the laws of the Russian Federation, which is a wholly-owned subsidiary of the Company.

"Sberbank" means Sberbank of Russia.

"SFO" means the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong).

"Share(s)" means the ordinary share(s) with nominal value of USD0.01 each in the share capital of the Company.

"Shareholder(s)" means the holders of Shares.

"Shareholders' Agreement among Major Shareholders only" means the shareholders' agreement dated 22 January 2010 among the Major Shareholders.

"Shareholders' Agreement with the Company" means the shareholders' agreement dated 22 January 2010 between the Major Shareholders and the Company.

"Shareholding Changes during the Year" means the following changes to the shareholding in the Company which has been notified to the Company:

(a) En+ announced in its press release dated 28 January 2019 that it had entered into a securities exchange agreement and certain other related agreements with certain subsidiaries of Glencore pursuant to which Glencore shall transfer 8.75% of Shares to En+ (of which approximately 2% was to be transferred on the date upon En+'s removal from from the SDN List, and the remaining 6.75% shall be transferred 12 months thereafter) in consideration for En+ issuing new global depositary receipts to Glencore representing approximately 10.55% of the enlarged share capital of En+.

    Based on the disclosure of interests notice filed with the Company, the interests of Glencore decreased to approximately 6.78% in the issued share capital of the Company on 31 January 2019. The Company understands that this was due to the transfer of approximately 2% Shares pursuant to the aforementioned securities exchange agreement following the removal of En+ from the SDN List on 27 January 2019.

(b) according to disclosure of interests notices filed with the Company on 21 February 2018 pursuant to Part XV of the SFO, Onexim sold its entire shareholding in the Company (which represented approximately 6% shareholding in the issued share capital of the Company) and ceased to be a shareholder of the Company on 16 February 2018.

"SKAD" means Limited Liability Company "Casting and mechanical plant 'SKAD'" (the short official name is "Casting and mechanical plant 'SKAD' Ltd."), a company incorporated under the laws of the Russian Federation.

"South Ural Cryolite Plant" or **"Cryolite"** means Joint-Stock Company "South Ural Cryolite Plant", an indirect non wholly-owned subsidiary of the Company.

"Standing Committee" means the standing committee of the Company.

"STIP" means the Company's Short-Term Incentive Program.

"Limited Liability Company 'United Company RUSAL Ural Silicon'" or **"RUSAL Silicon Ural LLC"** means RUSAL Silicon Ural LLC (formerly SU-Silicon LLC), an indirect non wholly-owned subsidiary of the Company.

"SUAL Partners" means SUAL Partners Limited, a company incorporated under the laws of the Bahamas, which is a shareholder of the Company.

"Substantial shareholder(s)" has the meaning ascribed to such expression under the Listing Rules.

"LLC 'SUAL-PM'" or **"SUAL – PM"** means SUAL-PM LLC, an indirect wholly-owned subsidiary of the Company.

"SDN List" means the Specially Designated Nationals List published by OFAC. U.S. persons are generally prohibited from dealing with assets of persons designated in the SDN List which are subject to the U.S. jurisdiction, subject to certain exemptions and exclusions set out in licenses issued by OFAC.

"SUBR" or **"North Urals"** means JSC Sevuralboksitruda, a company incorporated in Russia, which is a wholly-owned subsidiary of the Company.

Limited Liability Company "RUSAL Taishet Aluminium Smelter", "RUSAL Taishet" LLC, "Taishet", "Taishet aluminium smelter" or **"TAZ"** means Limited Liability Company "RUSAL Taishet Aluminium Smelter", a wholly-owned subsidiary of the Company.

"Taishet Anode plant" or **"Taishet Anode shop"** means the new anode shop which is a project currently being implemented not far from the town of Taishet in the Irkutsk region of the Russian Federation.

"total attributable alumina output" is calculated based on pro rata share of the Group's ownership in corresponding alumina refineries.

"total attributable bauxite output" is calculated based on pro rata shares of the Group's ownership in corresponding bauxite mines and mining complexes, including the total production of Timan and Bauxite Co. De Guyana., notwithstanding that minority interests in these subsidiaries are held by third parties.

"Total Debt" means the Company's loans and borrowing at the end of the period.

"Total Net Debt" has the meaning given to it in the PXF Facility.

"tpa" means tonnes per annum.

"TSA" means Trading System Administrator of Wholesale Electricity Market Transactions.

JSC "Ural Foil" or **"Ural Foil"** means Joint Stock Company "Ural Foil", an indirect non wholly-owned subsidiary of the Company.

"Urals aluminium smelter", "Urals Alumina Refinery", "UAZ" means Urals Aluminium Smelter, a branch of RUSAL Ural JSC.

"US" means the United States of America.

"USD" or **"US dollar"** means United States dollars, the lawful currency of the United States of America.

"U.S. Treasury" means the Treasury of the United States of America.

"VAP" means value-added products. VAP include wire rod, foundry alloys, billets, slabs, high purity and other VAP.

"VAT" means value-added tax.

"VEB" means State Corporation "Bank for Development and Foreign Economic Affairs (Vnesheconombank)".

"Volgograd aluminium smelter" or **"VgAZ"** means Volgograd Aluminium Smelter, a branch of RUSAL Ural JSC.

"Volkhov aluminium smelter" or **"VAZ"** means Volkhov Aluminium Smelter, a branch of RUSAL Ural JSC.

"Wholesale Electricity Market" means the wholesale market for the sale of electrical energy and power within the confines of the "Russian United Energy System" in the unified economic space of the Russian Federation. Large suppliers and purchasers of electrical energy and power participate in this market, as well as other participants which have obtained the status of wholesale market participants and act in accordance with the Wholesale Electricity Market Rules.

"Wholesale Electricity Market Rules" means the regulatory act (passed by the government of the Russian Federation as specified in the law "On the Electric Energy Industry"), which regulates the sale of electrical energy and power in the Wholesale Electricity Market.

"Windalco" means West Indies Alumina Company, a company incorporated in Jamaica, in which the Company indirectly holds a 100% interest.

"Working Capital" means trade and other receivables and inventories less trade and other payables.

APPENDIX A – Principal Terms of the Shareholders' Agreement with The Company

APPENDIX A –

PRINCIPAL TERMS OF THE SHAREHOLDERS' AGREEMENT WITH THE COMPANY

The principal terms of the Shareholders' Agreement with the Company are described below. Unless otherwise stated, references to En+, SUAL Partners, Glencore and Onexim are deemed to include reference to other entities controlled by these Major Shareholders (other than any member of the Group).

Right of first refusal — bauxite, alumina, aluminium

The Major Shareholders must offer the Company a right of first refusal in respect of any assets or development opportunities related to the production of bauxite, alumina or aluminium ("Industrial Assets") that they wish to acquire where such Industrial Asset or a group of related Industrial Assets has a value in excess of an amount determined by reference to the prevailing LME (high grade premium aluminium three month offer side) price of aluminium at the time of the proposed acquisition. If that LME price is USD1,500 per tonne or less then the trigger value is USD500 million, if it is USD4,500 or more than the trigger price is USD1 billion and if it is between these two prices then the trigger price is pro-rated on a straight line basis.

Each Major Shareholder must disclose to the Company any opportunity which has come to their (or their associates') respective attentions to acquire Industrial Assets of whatever value.

Relationship between the Company and the Major Shareholders

Each Major Shareholder must ensure that any contract between it or any of its associates and any member of the Group is entered into on an arms' length commercial basis and on terms that are not unfairly prejudicial to the interests of any Major Shareholder or the Group.

If there is a dispute between a Major Shareholder or any of its associates and the Company, that Shareholder will not, and will procure that any Directors appointed by it will not, do anything to prevent or hinder the Company's handling of the dispute.

The Major Shareholders agree to act in good faith in relation to the Group and in a manner that is not unfairly prejudicial to the interests of the Shareholders generally, and that the Group will be operated in accordance with the corporate governance standards set out in the CG Code.

Termination for particular Shareholders

The Shareholders' Agreement with the Company shall terminate in respect of the relevant Major Shareholder in the following circumstances:

- Upon Onexim ceasing to hold a minimum shareholding of 5% of the total Shares in issue, other than as a result of dilution on a further share issue, it shall lose all of its rights and obligations under the Shareholders' Agreement with the Company.
- If Onexim holds less than 5% of the total Shares in issue, but still has any rights under the Shareholders' Agreement with the Company, it shall lose all of its rights and obligations under the Shareholders' Agreement with the Company upon any subsequent disposal by it of Shares or entry into derivative contracts or arrangements in relation to Shares.
- Upon any Major Shareholder ceasing to hold at least 3% of the total Shares in issue, for whatever reason, it shall lose all of its rights and obligations under the Shareholders' Agreement with the Company.
- Subject to certain exceptions, if there is a change of control of Glencore or a third party acquires all or substantially all of Glencore's assets, it shall lose its rights and obligations of first refusal outlined above.
- If there is a change of control of Onexim or a third party acquires all or substantially all of Onexim's assets, it shall lose all rights and its obligations under the Shareholders' Agreement with the Company.

Effect of Shareholding Changes during the Year

As a result of the Shareholding Changes during the Year, the Shareholders' Agreement with the Company has terminated in respect of Onexim from the date it ceased to be a Shareholder on 16 January 2018 and Onexim ceased to have any rights or obligations under the Shareholders' Agreement with the Company.

The Shareholders' Agreement with the Company remains valid and enforceable against Glencore as Glencore continues to hold more than 3% of the total Shares in issue following the Shareholding Changes during the Year. It is expected however that the Shareholders' Agreement with the Company shall terminate in respect of Glencore upon completion of the share swap contemplated by the securities exchange agreement entered into between En+ and Glencore on 28 January 2019, expected to be on or about 31 January 2020.

APPENDIX B –

Principal Terms of the Shareholders' Agreement among Major Shareholders only

APPENDIX B –

PRINCIPAL TERMS OF THE SHAREHOLDERS' AGREEMENT AMONG MAJOR SHAREHOLDERS ONLY

The principal terms of the Shareholders' Agreement among Major Shareholders only are described below. Unless otherwise stated, references to En+, SUAL Partners, Glencore and Onexim are deemed to include reference to other entities controlled by those Major Shareholders (other than any member of the Group).

Board of the Company

For as long as En+ holds at least 30% of the Major Shareholders' Shares, the Major Shareholders have agreed to use their respective voting and other rights to procure, so far as they are able, that the Board shall consist of a minimum of 16 and a maximum of 18 Directors and that Directors proposed for nomination or removal under the Articles of Association or otherwise by the Shareholders of the Company will be appointed to or removed from the Board to achieve the following:

- For as long as En+ holds at least 40% of the Major Shareholders' Shares, Directors representing at least 50% of the Board shall be Directors proposed by En+ (excluding independent Directors), one of whom shall be the Vice Chairman of the Board. For as long as En+ holds at least 30% of the Major Shareholders' Shares, En+ shall have the right to nominate for appointment and removal the CEO. The appointment of the CEO will be subject to approval by a majority of the Board and the Board will retain the ability to remove the CEO. The number of Directors (other than independent Directors) that En+ is entitled to propose for nomination to and removal from the Board shall reduce by one for as long as its shareholding, as a percentage of the Major Shareholders' Shares, is between 35% and 40%, and by two for as long as such percentage is between 30% and 35%. In addition, En+ shall be entitled to propose for nomination and removal two independent Directors for as long as it holds at least 40% of the Major Shareholders' Shares and one independent Director for as long as that percentage remains between 10% and 40%. En+ shall have the right to veto the appointment of any independent Director nominated by SUAL Partners or Onexim on the grounds set out in the Shareholders' Agreement among Major Shareholders only.
- For as long as Glencore holds at least 8.6% of the total Shares in issue (or such lesser percentage as results from dilution on a further share issue), Glencore shall have the right to propose for nomination and removal of the chief executive officer of Glencore and to veto the appointment of any independent Director nominated by En+, SUAL Partners or Onexim on the grounds set out in the Shareholders' Agreement among Major Shareholders only.
- For as long as SUAL Partners holds at least 8.6% of the total Shares in issue (or such lesser percentage as results from dilution on a further share issue), SUAL Partners shall have the right to propose for nomination and removal three Directors, one of whom shall be independent, and to veto the appointment of any independent Director nominated by En+ or Onexim on the grounds set out in the Shareholders' Agreement among Major Shareholders only.
- For as long as Onexim holds at least 5% of the total Shares in issue, Onexim shall have the right to propose for nomination and removal one Director and to veto the appointment of any independent Director nominated by En+ or SUAL Partners on the grounds set out in the Shareholders' Agreement among Major Shareholders only.
- For as long as En+ holds less than 30% of the Major Shareholders' Shares, the Major Shareholders have agreed to use their respective voting and other rights to procure, so far as they are able, that the Board shall consist of between 15 and 19 directors comprising:
  - four independent Directors, to be nominated in accordance with the rights of proposal of En+, SUAL Partners and Onexim described above (if relevant) and, to the extent required, by the Corporate Governance and Nomination Committee;

  - one Director proposed by VEB, if required; and
  - Directors (other than independent Directors) who shall be proposed for nomination and removal by the Major Shareholders in proportion to their respective holdings of Shares from time to time.
- The Major Shareholders have agreed to exercise their respective voting and other rights to procure that, for as long as the Company is able to appoint between two and five Directors to the board of Norilsk Nickel, Onexim is entitled to propose one Director for appointment to that board, and for as long as the Company is able to appoint six or more directors, Onexim is entitled to propose two Directors for appointment to that board.

Boards of Subsidiaries

The Major Shareholders have agreed to use their respective voting and other rights to procure, so far as they are able, that the Directors proposed for nomination or dismissal by the Shareholders of the Company will be appointed to or removed from the boards of the Agreed Subsidiaries to achieve the following:

- The board of each of RUSAL Global and RUSAL America Corp. shall comprise:
  - four Directors proposed by En+, for as long as the shareholding of En+ as a percentage of the Major Shareholders' Shares is at least 40%, provided that the number of Directors to be proposed by En+ shall be three where such percentage is between 30% and 40%, shall be two where it is between 20% and 30% and shall be one where it is less than 20%; and
  - one Director proposed by each of Glencore, SUAL Partners and Onexim, for as long as in each case the relevant Major Shareholder holds at least 8.6% of the total Shares in issue (or such lesser percentage as results from dilution on a further share issue), in the case of each of Glencore and SUAL Partners, and 5% of the total Shares in issue, in the case of Onexim.
- The board of each other Agreed Subsidiary shall comprise:
  - three Directors proposed by En+ for as long as the shareholding of En+ as a percentage of the Major Shareholders' Shares is at least 40%, provided that the number of directors to be proposed by En+ shall be two where such percentage is between 20% and 40% and shall be one where it is less than 20%; and
  - one Director proposed by each of Glencore and SUAL Partners, for as long as in each case the relevant Major Shareholder holds at least 8.6% of the total Shares in issue (or such lesser percentage as results from dilution on a further share issue).

Committees of the Board

The Major Shareholders have agreed to procure, so far as they are able, that certain committees of the Board are to be established, as follows:

- An audit committee, remuneration committee and corporate governance and nomination committee, each to be established in accordance with the requirements of the CG Code. The audit committee shall consist of five members, of whom three shall be independent Directors (as approved by the Board), one shall be appointed by En+ and one by Onexim. The remuneration committee shall consist of five members, of whom three shall be independent Directors (as approved by the Board), one shall be appointed by En+ and one by SUAL Partners. The Corporate Governance and Nomination Committee shall consist of five members, of whom three shall be independent Directors (as approved by the Board), one shall be appointed by En+ and one by Glencore. Summaries of the functions of these committees are set out in "Directors and Senior Management — Committees".

- A health, safety and environmental committee, whose composition, functions and terms of reference are to be determined from time to time by the Board.
- A standing committee consisting of five members who may or may not be Directors, one proposed for appointment by each of En+, SUAL Partners, Glencore and Onexim and one independent Director. The standing committee shall have authority to take certain decisions in relation to the Group without further approval of the Board or the shareholders of the Company.

Exercise of voting rights by Onexim

At general meetings of the Company, with respect to certain agreed matters customarily reserved to shareholders, Onexim has undertaken to exercise its voting rights in the same manner as En+ exercises its voting rights, provided that in no event shall Onexim be required to vote its holding of Shares: (A) in a manner that would contravene applicable law; (B) in a manner that would be directly and materially adverse to the interests of Onexim in its capacity as a direct or indirect holder of Shares; (C) if Onexim shall have exercised a right of "veto" (as described below) in respect of the relevant matter; or (D) if and for so long as En+ is in material breach of the Shareholders' Agreement among Major Shareholders only or the Shareholders' Agreement with the Company.

Veto rights

- The Major Shareholders have agreed to exercise their voting rights with a view to giving the Major Shareholders effective veto rights as set out below, by procuring that Directors proposed by them for appointment vote against any resolution in respect of which a Major Shareholder has exercised its "veto":
  - Each of En+, Glencore, SUAL Partners and Onexim is given an effective right of veto in relation to any related party transaction (or amendment to or renewal of an existing related party transaction).
  - Each of En+, Glencore and SUAL Partners and Onexim is given an effective right of veto in respect of any matter proposed to be undertaken by the Company or any of its subsidiaries which would require a special resolution were the Company or the relevant subsidiary incorporated in England and Wales (e.g., alteration of Articles of Association; change of name; re-registration of a private company as a public company; re-registration of an unlimited company as limited; re-registration of a public company as a private company; offer to issue shares or rights to subscribe for shares other than pro rata to existing shareholders by disapplying statutory pre-emption rights; reduction of share capital; to give, revoke, renew or vary the authority for the Company to purchase (off market) shares in itself; and to redeem or purchase own shares out of capital).
- The Company does not believe that these veto rights will have any material impact on the operation of the Company.

Matters inconsistent with the Shareholders' Agreement among Major Shareholders only

The Major Shareholders have agreed that they shall use their voting and other rights available to them to procure that no resolutions are passed or actions taken or refrained from being taken by the Company or any other member of the Group to the extent that they would be inconsistent with the terms of the Shareholders' Agreement among Major Shareholders only.

KraMZ/OAO KUMZ supply agreements and agreements with Glencore

- The Major Shareholders have agreed to use their voting and other rights available to them to procure that all Board and shareholder approvals and resolutions which are required under the Listing Rules in respect of the supply agreement entered into between the Group and OAO KUMZ, and the supply agreement entered into between the Group and KraMZ group companies are passed in accordance with those laws and rules.
- If the entry into, amendment of or exercise of any rights under any agreements between the Group and Glencore approved by the Board require shareholder approval under the Listing Rules, the Major Shareholders have agreed to use their voting and other rights available to them to procure that such approvals and resolutions are passed in accordance with those laws and rules.

Dividend policy

The Major Shareholders have agreed to procure compliance by the Group with a dividend policy, to the extent permissible under the terms of the credit facility agreements, under which not less than 50% of the annual consolidated net profits of the Group in each financial year are distributed to Shareholders within four months after the end of the relevant financial year, subject to any applicable legislation.

Rights of first refusal — SUAL Partners Shares

- Subject to certain exceptions, if SUAL Partners wishes to sell any of its holding of Shares in an on-market transaction, it must serve notice on En+, offering it a right of first refusal. The price at which En+ will be entitled to acquire the Shares offered by SUAL Partners is the volume weighted average price per Share for the three trading days prior to the date on which the relevant notice is sent by SUAL Partners.
- SUAL Partners will not be obliged to offer En+ a right of first refusal in respect of Shares sold by it to the extent that:
  - the aggregate number of Shares sold in any one trading day by SUAL Partners does not exceed 20% of the daily average trading volume for the 30 trading days immediately preceding that trading day; and
  - the aggregate number of Shares sold within the above limits does not in any period of four months exceed 0.5% of the total Shares in issue at the time of the relevant sale.

Rights of first refusal — Glencore's Shares

Glencore must offer En+ and SUAL Partners a right of first refusal in respect of any proposed sale of Shares by Glencore in an on-market transaction, on substantially the same terms as the right of first refusal to be offered in respect of Shares held by SUAL Partners (as described above), subject to the same carve outs as described above in relation to SUAL Partners.

Onexim tag along rights

Upon any sale of Shares by En+, SUAL Partners or Onexim, such that the aggregate number of Shares sold by those three Major Shareholders in any rolling four month period exceeds 25% of the Shares then in issue, the sale shall not proceed unless the purchaser has also offered, on the same terms, to acquire the Shares then held by Onexim which were received by Onexim as part consideration for the acquisition by the Company of a stake of 25% plus one share in Norilsk Nickel.

Share placing

To the extent that the Company proposes to undertake a bookbuild placing or underwritten offering of Shares of in excess of 1% of the issued share capital of the Company, the Major Shareholders have agreed to use their voting and other rights to procure that the Major Shareholders are also entitled to sell a pro rata proportion of their Shares as part of such placing or offering.

No mandatory offer

The Major Shareholders have agreed not to acquire or dispose of any voting rights which would be exercisable at a general meeting of the Company, if such acquisition or disposal would trigger a mandatory obligation under the Hong Kong Codes on Takeovers and Mergers and Share Repurchases to make an offer for Shares and have undertaken to indemnify each other in the event of a breach of such undertaking.

Licenses

For as long as Onexim is a shareholder, En+, SUAL Partners and Glencore have agreed not to, and to use their respective voting and other rights to procure that neither the Company nor any of its subsidiaries will, bid for or acquire, and that the Company will take reasonable steps to procure that Norilsk Nickel will not bid for or acquire, certain specified geological licenses relating to nickel, copper, platinum and cobalt without the prior written consent of Onexim.

Termination for particular shareholders

The Shareholders' Agreement among Major Shareholders only shall terminate in respect of the relevant Major Shareholder in the following circumstances:

- Upon either Glencore or SUAL Partners ceasing to hold at least 8.6% of the total Shares in issue (or such lesser percentage as results from dilution on a further share issue) Glencore or SUAL Partners (as the case may be) shall lose their rights to propose Directors for nomination to the Board, and upon such shareholdings falling below 50% of the relevant minimum shareholding stated above they shall lose their respective veto rights as described above.
- Upon En+ ceasing to hold at least 8.6% of the total Shares in issue (or such lesser percentage as results from dilution on a further share issue), it shall lose any rights to propose Directors for nomination to the Board, and upon such shareholding falling below 50% of the relevant minimum shareholding stated above, it shall lose its veto rights as described above.
- Upon Onexim ceasing to hold at least 5% of the total Shares in issue, other than as a result of dilution on a further share issue, it shall lose all of its rights and obligations under the Shareholders' Agreement among Major Shareholders only.
- If Onexim holds less than 5% of the total Shares in issue, but still has any rights under the Shareholders' Agreement among Major Shareholders only, it shall lose all of its rights and obligations under the Shareholders' Agreement among Major Shareholders only upon any subsequent disposal by it of Shares or entry into derivative contracts or arrangements in relation to Shares.
- Upon any Major Shareholder ceasing to hold at least 3% of the total Shares in issue, for whatever reason, it shall lose all of its rights and obligations under the Shareholders' Agreement among Major Shareholders only.
- Subject to certain exceptions, if there is a change of control of Glencore or a third party acquires all or substantially all of Glencore's assets, it shall lose its rights to propose Directors for nomination to the Board and the veto rights described above.
- If there is a change of control of Onexim or a third party acquires all or substantially all of Onexim's assets, it shall lose all rights and its obligations under the Shareholders' Agreement among Major Shareholders only.

Effect of Shareholding Changes during the Year

As a result of the Shareholding Changes during the Year, the Shareholders' Agreement among Major Shareholders has terminated in respect of Onexim from the date it ceased to be a Shareholder on 16 January 2018 and Onexim ceased to have any rights or obligations under the Shareholders' Agreement among Major Shareholders only. In particular, following its cessation as a Shareholder from 16 January 2018:

- Onexim ceased to have the right to propose for nomination and removal any Director to the Board, the board of RUSAL Global and RUSAL America Corp and the board of Norilsk Nickel, or to have the right to veto the appointment of any independent Director;
- Onexim ceased to have the right to nominate any persons for appointment to the standing committee of the Board;
- Onexim ceased to be bound by undertakings in respect of exercise of voting rights as it ceased to hold any voting rights in the Company;
- Onexim ceased to have any right to veto any related party transactions or matters which would require approval of special resolution were the Company or its relevant subsidiary incorporated in England and Wales;
- Onexim ceased to have any tag along rights in respect of any sale of Shares by other Major Shareholders; and
- other Major Shareholders are no longer obliged to seek the prior written consent of Onexim in respect of procuring the Company or any of its subsidiaries to bid for or acquire, or to procure that Norilsk Nickel will not bid for or acquire, certain specified geological licenses relating to nickel, copper, platinum and cobalt.

The Shareholders' Agreement with the Company remains valid and enforceable against Glencore as Glencore continues to hold more than 3% of the total Shares in issue following the Shareholding Changes during the Year. It is expected however that the Shareholders' Agreement with the Company shall terminate in respect of Glencore upon completion of the share swap contemplated by the securities exchange agreement entered into between En+ and Glencore on 28 January 2019, expected to be on or about 31 January 2020. However, as Glencore ceased to hold at least 8.6% of the total Shares in issue on 31 January 2019, from that date:

- Glencore ceased to have any right for the nomination and removal of the chief executive officer of Glencore as a Director, or the right to veto the appointment of any independent Director; and
- Glencore ceased to have the right to nominate a director to the boards of RUSAL Global and RUSAL America Corp.

CORPORATE INFORMATION

UNITED COMPANY RUSAL PLC

俄鋁

(Incorporated under the laws of Jersey with limited liability)

Hong Kong Stock Exchange stock code: 486

Moscow Exchange symbol: RUAL

BOARD OF DIRECTORS

Executive Directors

Mr. Evgenii Nikitin (Chief Executive Officer)

Mr. Evgenii Vavilov

Mr. Evgeny Kuryanov

Non-executive Directors

Mr. Marco Musetti

Mr. Vyacheslav Solomin

Mr. Timur Valiev

Independent non-executive Directors

Dr. Elsie Leung Oi-sie

Mr. Dmitry Vasiliev

Mr. Bernard Zonneveld (Chairman)

Mr. Maxim Poletaev

Mr. Randolph N. Reynolds

Mr. Kevin Parker

Mr. Christopher Burnham

Mr. Nick Jordan

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Ms. Aby Wong Po Ying

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Dr. Elsie Leung Oi-sie

Mr. Dmitry Vasiliev

Mr. Kevin Parker

CORPORATE GOVERNANCE AND NOMINATION COMMITTEE MEMBERS

Mr. Dmitry Vasiliev (Chairman)

Mr. Bernard Zonneveld

Mr. Randolph N. Reynolds

Mr. Christopher Burnham

REMUNERATION COMMITTEE MEMBERS

Dr. Elsie Leung Oi-sie (Chairman)

Mr. Dmitry Vasiliev

Mr. Nick Jordan

Mr. Randolph N. Reynolds

PRINCIPAL BANKERS

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