CRAFTING A GREEN FUTURE

ANNUAL REPORT
2019

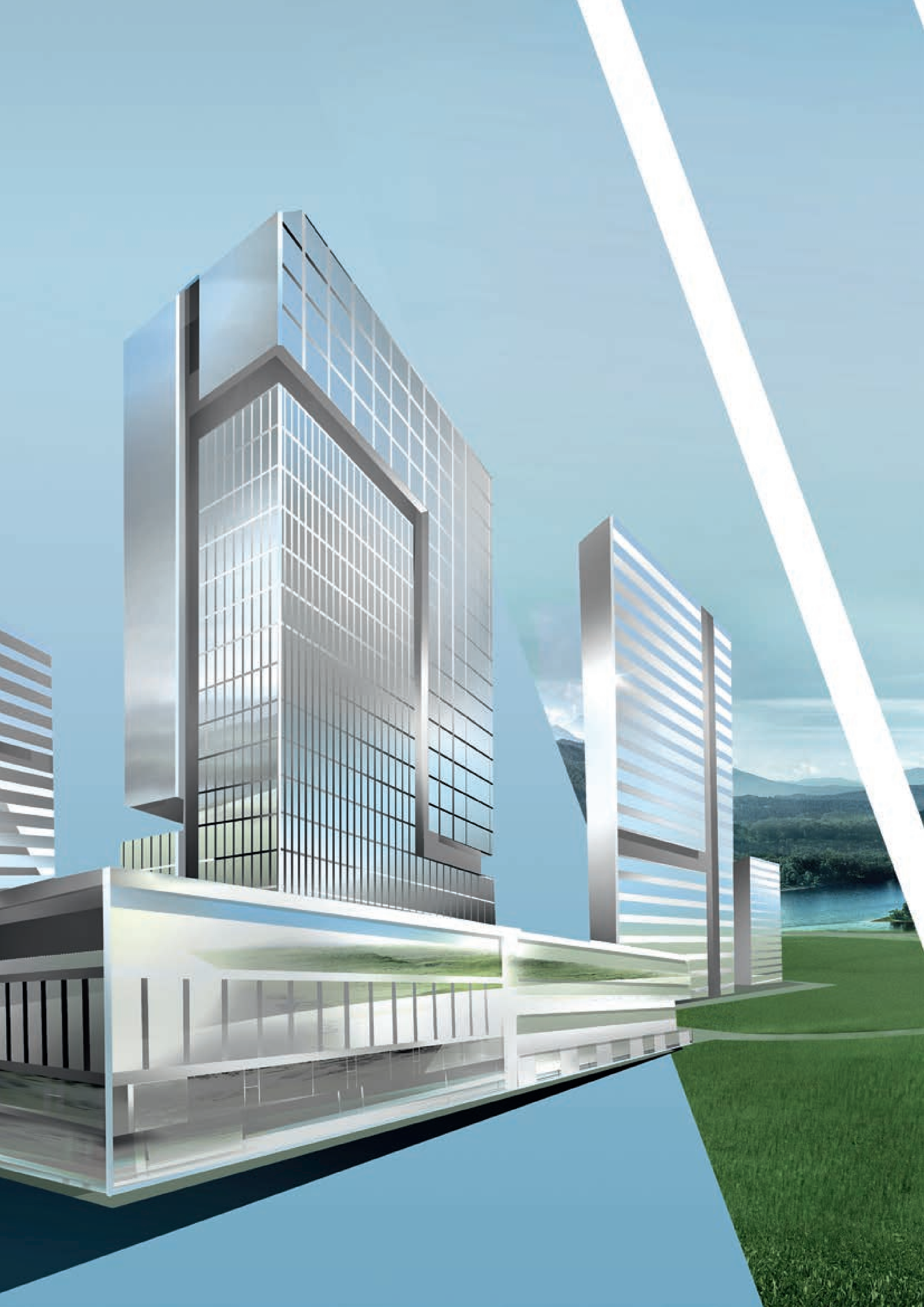
RUSAL

CONTENTS

01
FINANCIAL AND OPERATIONAL HIGHLIGHTS

FINANCIAL AND OPERATIONAL HIGHLIGHTS

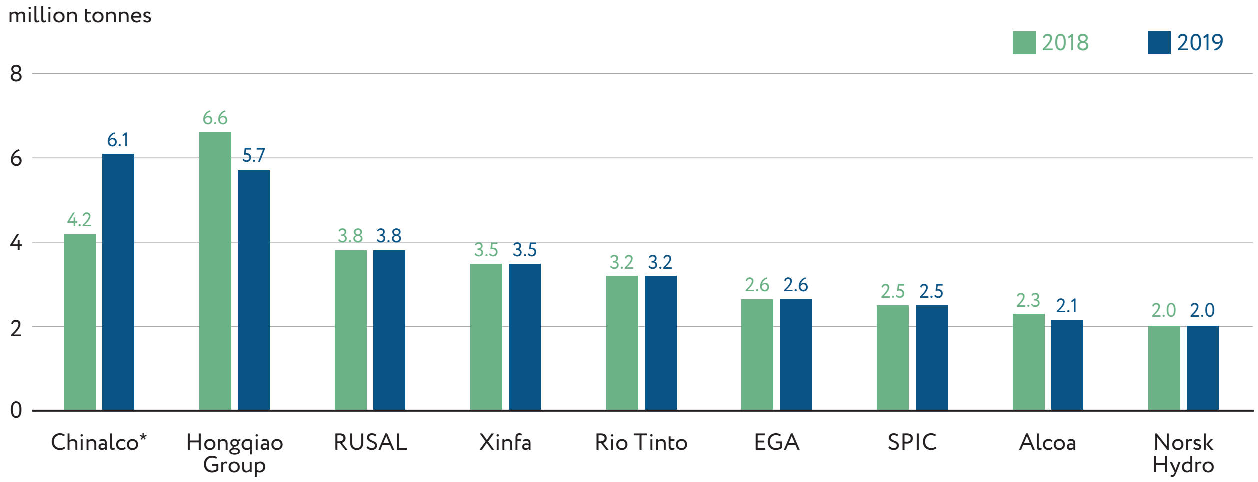
USD million (unless otherwise specified)	2019	2018	2017	2016	2015
Revenue	9,711	10,280	9,969	7,983	8,680
Adjusted EBITDA	966	2,163	2,120	1,489	2,015
Adjusted EBITDA Margin	9.9%	21.0%	21.3%	18.7%	23.2%
EBIT	87	1,481	1,523	1,068	1,409
Share of Profits from Associates and joint ventures	1,669	955	620	848	368
Pre Tax Profit	1,054	1,953	1,288	1,354	763
Profit	960	1,698	1,222	1,179	558
Profit Margin	9.9%	16.5%	12.3%	14.8%	6.4%
Adjusted Net(Loss)/ Profit	(270)	856	1,077	292	671
Adjusted Net Profit (Loss)/Margin	(2.8%)	8.3%	10.8%	3.7%	7.7%
Recurring Net Profit	1,273	1,695	1,573	959	1,097
Basic Earnings Per Share (in USD)	0.063	0.112	0.080	0.078	0.037
Total Assets	17,814	15,777	15,774	14,452	12,809
Equity Attributable to Shareholders of the Company	6,747	5,209	4,444	3,299	1,391
Net Debt	6,466	7,442	7,648	8,421	8,372



02
CORPORATE PROFILE

CORPORATE PROFILE

RUSAL is a low-cost, vertically integrated aluminium producer with core smelting operations located in Siberia, Russia. In 2019, RUSAL remained among the largest producers of primary aluminium and alloys globally.



* Up to 2018, Chinalco was consolidating production of Chalco.

Since 2019, Chinalco is consolidating production of Chalco and Yunnan Aluminum Co., Ltd

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 aluminium production process. RUSAL's core smelting operations are favorably located close to the Siberian hydropower plants sourcing approximately 93% of the Group's total electricity needs. The Company has long-term agreements with the region's hydropower 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. They cover 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 aluminium 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 and 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 secure 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 (1.55 million tonnes per annum out of 4.16 million tonnes of total sales).

DIVERSIFIED SALES GEOGRAPHY

RUSAL's 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 and 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 Taishet aluminium smelter in the Irkutsk region. The production capacity of the first line is 428.5 thousand tonnes. During 2019, the Company continued to finance this smelter's construction using its own funds.

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.

DIVERSIFICATION OPPORTUNITIES THROUGH INVESTMENTS

- As at the Latest Practicable Date, RUSAL owns an effective 27.82% interest in Norilsk Nickel, the world's largest palladium producer, the largest high-grade nickel producer and one of the leading producers of platinum, copper and cobalt[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.

1 Source: www.nornickel.ru

KEY FACTS IN 2019

RUSAL ACCOUNTED FOR

ABOUT

6.3%

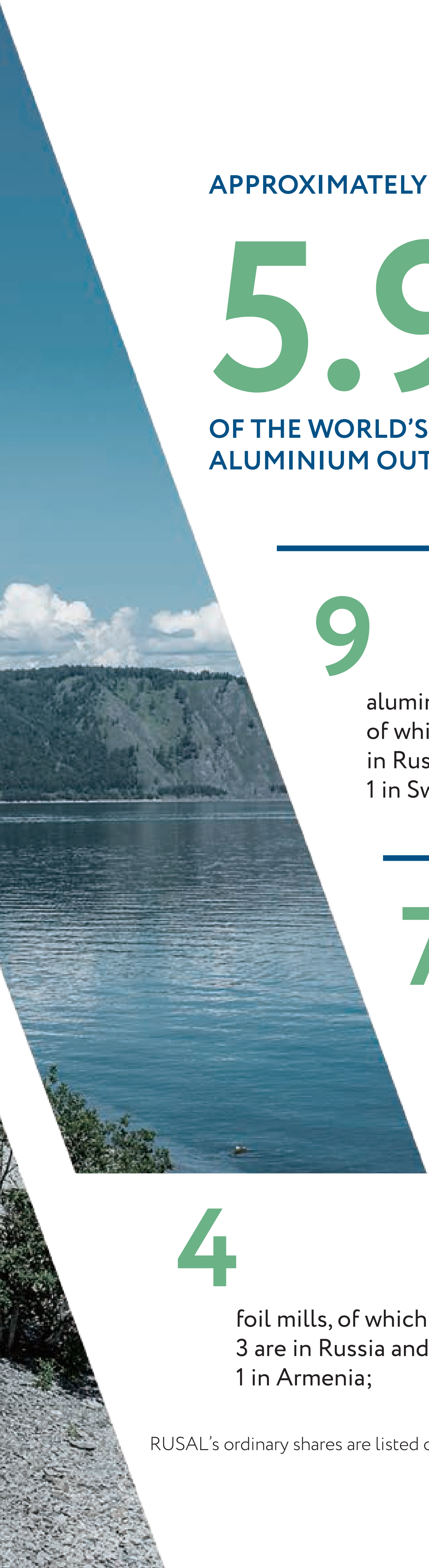
OF THE WORLD'S ALUMINA PRODUCTION

3.8

MLN TONNES OF ALUMINIUM

7.9

MLN TONNES OF ALUMINA



APPROXIMATELY

5.9%

OF THE WORLD'S ALUMINIUM OUTPUT

9

aluminium smelters of which 8 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;

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.

MAP OF OPERATIONS

ARMENIA
01 Armenal

AUSTRALIA
02 QAL

GUINEA
03 Compagnie des Bauxites de Kindia

BAUXITES DE KINDIA (CBK)
04 Dian Dian Project
05 Friguia Bauxite & Alumina Complex

GUYANA
06 Bauxite Company of Guyana (BCGI)

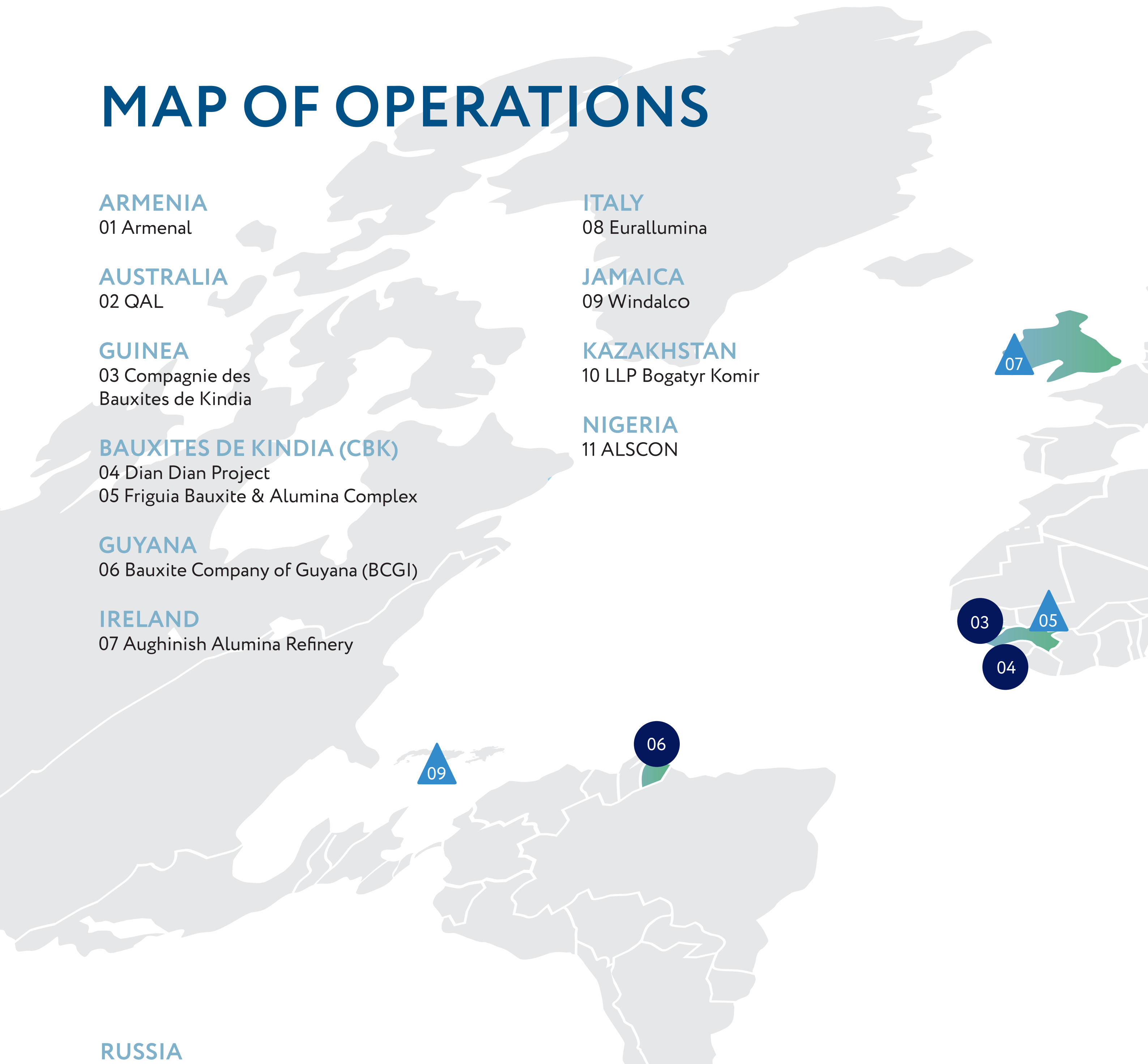
IRELAND
07 Aughinish Alumina Refinery

ITALY
08 Eurallumina

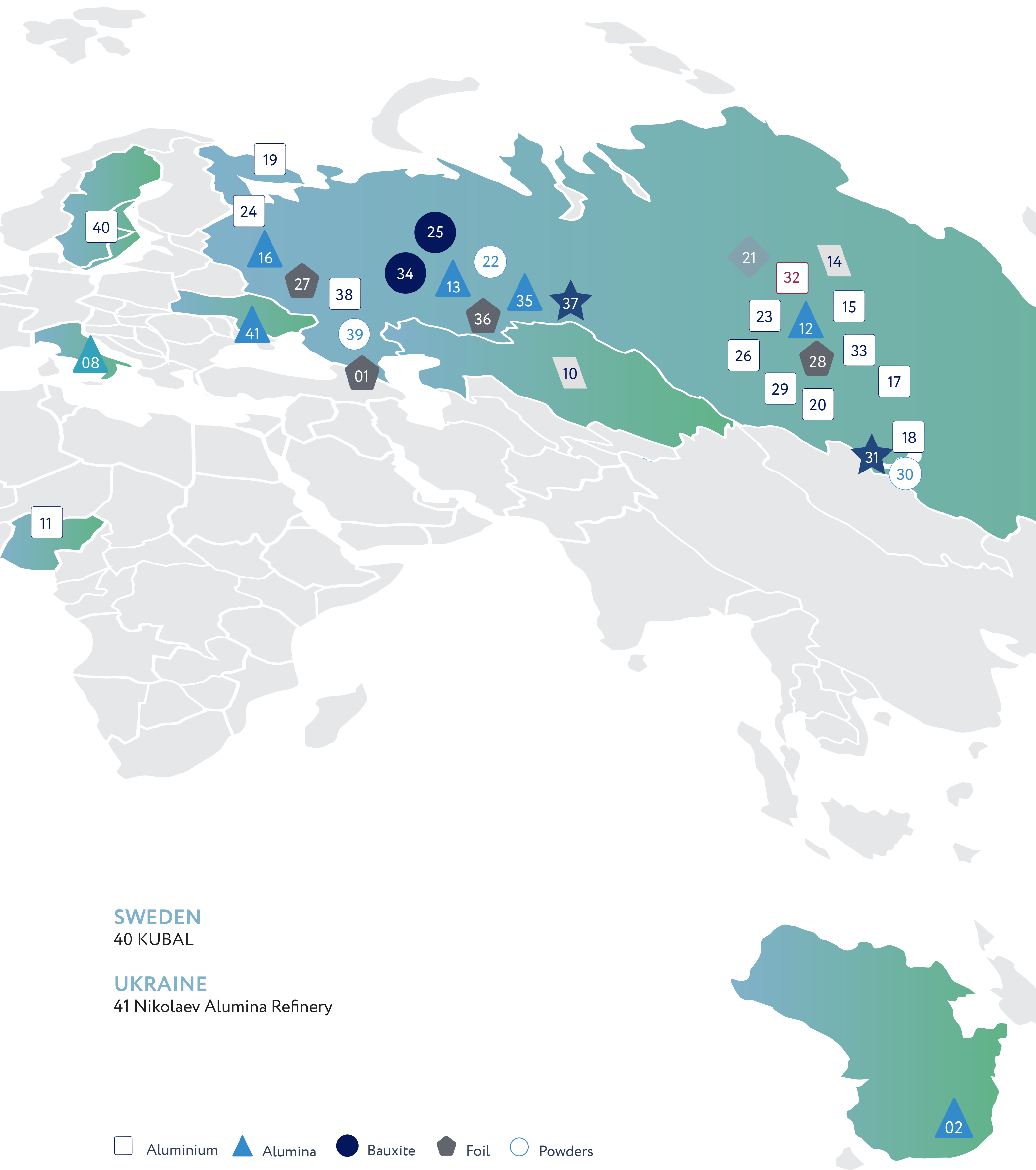
JAMAICA
09 Windalco

KAZAKHSTAN
10 LLP Bogatyr Komir

NIGERIA
11 ALSCON



RUSSIA
12 Aughinish 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

03 CHAIRMAN’S STATEMENT

CHAIRMAN'S STATEMENT

Bernard Zonneveld
Chairman of the Board

Dear Shareholders,

It is my pleasure to welcome you to our 2019 Annual Report. Despite the high level of uncertainty we have witnessed following the OFAC sanctions, RUSAL has maintained its position as a market leader. Not only have we become the first company in corporate history to get the sanctions lifted, but we have also remained committed to maintaining the high level for best ESG practices.

RUSAL's compliance with the highest level of ESG standards has reinforced its listing among the top 100 Best Emerging Markets performers by Vigeo Eiris. Its compliance with diligent and scrupulous requirements by an independent authoritative organization recognizes the Company as one of the leaders among metal companies in this field.

This year, RUSAL's headquarters and three production sites obtained a certification by ASI (the Aluminium Stewardship Initiative). Meeting various criteria ranging from business ethics and governance, environmental performance, human rights and social practices is an important milestone for RUSAL and reinforces its commitment to being a responsible aluminium producer.

RUSAL continues to implement large-scale environmental projects, raising the bar for the sector. In 2019, RUSAL launched the first voluntary initiative for greenhouse gas absorption called "Green Million", planting 1 million trees as part of a reforestation project. 500 thousand pine trees were planted in the Irkutsk and Krasnoyarsk krai regions.

Building on this, **RUSAL's consistent efforts to reduce emissions, manage climate risks and ensure transparent communications in this area were duly recognized by the CDP rating, which the Company entered as the sole representative for the aluminium industry.**

RUSAL made a significant contribution to sustainability in its support for volunteer projects. In 2019, "Yenisei Day" grew to be a nationwide-scale project that included 12 Russian cities where RUSAL operates. The activities include collecting garbage and waste from the shores of one of Russia's largest rivers, the Yenisei. Last year, several thousands of volunteers took part in the project and collected over 30 tonnes of waste.

The past year showed a significant involvement of the stakeholders in the business operations of the Company. In October, the members of the Board visited some of the key industrial sites in Siberia: RUSAL's aluminium smelters in Irkursk, Krasnoyarsk and Sayanogorsk, as well as the wheel factories. The Board members were impressed with the quality of the workforce and their commitment to the Company, and also with the innovations that were presented to the Board. Such visits prove that the feedback, openness and continuous dialogue between the stakeholders and Company's workforce are highly valued.

In turbulent times for the market, investors are seeking safe investments rather than making riskier choices. Increasingly, investment is turning towards the companies who comply with ESG regulations and I am pleased to say that the investment and financial community respects and trusts RUSAL. This couldn't be more evident during last year's events when investors remained supportive.

In 2019 RUSAL signed the sustainability linked syndicated facility for a record USD1,085,000,000. The signed facility was the first ever sustainability-linked syndicated facility arranged by international and Russian commercial banks in Russia. The interest rate is subject to a sustainability discount or premium depending on the Company's fulfilment of the sustainability key performance indicators (KPIs) all of which are related to the Company's environmental impact and sustainable development and include the sales growth targets of our low carbon aluminium, ALLOW.

Another proof of confidence from the market comes with the fact that RUSAL has successfully completed four ruble bond placements with the total value of RUB60 billion (approximately USD930 million). On the back of favorable market conditions coupled with good performance of existing bonds coupon rates reduced for every issuance from 9.0% p.a. to 7.45% p.a. (and 4.69% p.a. – 3.65% p.a. in USD after swaps, respectively).

To conclude, **I would like to thank all shareholders, employees and management of the Company for your lasting support and hard work.**

2019 was indeed a challenging year where we saw the aluminium market take a hit. However, I am honoured to say that despite all difficulties we have not lost the trust and confidence of the financial community, customers and other parties who constitute the business environment. RUSAL remains an attractive investment prospect that has proven its ability to withstand any hurdles that come its way and we remain proud to be amongst the pioneers in this market and a leader in the sector.

Bernard Zonneveld
Chairman of the Board
31 March 2020

CEO'S REVIEW

Evgenii Nikitin
Chief Executive Officer

The past year is evident that despite all the challenges and market turbulence, RUSAL has remained committed to its strategic goals.

Whilst the Company witnessed a weakening in trading financially, the support by investors did not diminish and the removal of the OFAC sanctions were welcomed by both the financial community and clientele. The Company maintained its ability to continue to implement the strategy and fulfil the obligations, proving the skillful management of the Company which cannot be undermined by macro factors.

In the last year, both RUSAL and the whole industry witnessed a variety of challenging conditions and this resulted in weaker trading for the Company. The prices for aluminium remained low for the majority of the year with the average LME aluminium price slumping by almost 15%. Demand for metal fell on all the key markets except China and the uncertainty in trade relations between the United States and China alongside the long-running Brexit negotiations undermined the hopes for a quick market recovery.

Adding to the price decrease, a missed mating season in 2018 due to the OFAC sanctions contributed to the current financial outcomes where revenue fell by 5.5% as compared with 2018 to USD9,711. The Company's EBITDA fell from USD2,163 million in 2018 to USD966 million in 2019. Despite sales increasing by 13.8% to 4,176 thousand tonnes following the ramp-up of the

Boguchansky aluminium smelter and partial sell-down of extra stock accumulated by the end of 2018, the continuing decrease of the LME price led to softer financial results.

Despite the difficult market situation, the management of RUSAL maintained an effective cost management policy: the cash cost per tonne of aluminium decreased and amounted to USD1,627 compared to USD1,646 in 2018.

At the end of 2019, the aluminium production volume amounted to 3,757 thousand tonnes, which is roughly equivalent to the production volume in 2018. The overall dynamics of production remained stable, and the capacity rate reached 97%.

The sales of value-added products (VAP) amounted to 1,547 thousand tonnes while the share of VAP in the total sales structure dropped to 37%, due to the sanctions that had impeded the conclusion of long-term contracts. We have successfully completed the contracting period with key customers in the autumn of 2019 and the VAP share is expected to return to normal levels in the 1H 2020 sales structure.

VAP sales are also expected to grow on the back of the launch of new capacities: last March RUSAL and RusHydro launched the second 150 thousand tonnes of the first line of the Boguchansky aluminium smelter (BoAZ) bringing the total production capacity to 300 thousand tonnes. BoAZ is one of the Russia's most computerized industrial sites; and its ability to meet all international environmental standards makes it one of the most environmentally friendly aluminium production plants in Russia.

RUSAL also remains committed to the construction of the Taishet aluminium smelter in the Irkutsk region, where the production capacity of the first line will be 428.5 thousand tonnes. During 2019, the Company continued to finance this smelter's construction using its own funds. VAP in the form of slabs will account for at least 80% of its production at the first line (the total capacity of the first line is about 430 thousand tonnes).

Sustainable development and environmental compliance remains at the heart of RUSAL. Its green production strategy is aimed at, inter alia, production modernization and the introduction of the best available technologies.

In 2019, the Company allocated over USD86 million on maintenance and investment in ecological projects. About 400 cells were converted to Green Soderberg technology and RUSAL also continues to modernise the existing gas treatment plants and installing new highly efficient dry gas scrubbers.

For RUSAL, 2019 was a year of recovery and the strengthening of its global positions. After the sanctions were lifted in January 2019, we managed to fully return to the VAP market and renew a number of long-term contracts with large customers. We now are looking ahead with confidence and continue to invest in long-term projects for the construction of new modern eco-friendly aluminium capacities.

Evgenii Nikitin
Chief Executive Officer
31 March 2020

04 BUSINESS OVERVIEW

BUSINESS OVERVIEW

BUSINESS UNIT

Aluminium

RUSAL owns 9[2] aluminium smelters that are located in two countries: Russia (eight 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 2019. 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 2019, RUSAL continued to implement a comprehensive program designed to control costs and optimize the production process to strengthen the Company's position as one of the world's most cost-efficient aluminium producers.

The table below[3] provides an overview of RUSAL's aluminium smelters (including capacity) as of 31 December 2019.

Asset	Location	Ownership, %	Nameplate capacity (approved casting capacity for 2019), 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	99%
Irkutsk aluminium smelter	Russia	100	422	100%
Russia (excluding Siberia)				
Kandalaksha aluminium smelter	Russia	100	76	95%
Volgograd aluminium smelter	Russia	100	69	100%
Urals aluminium smelter	Russia	100	75	0%
Nadvoitsy aluminium smelter[4]	Russia	100	24	0%
Other countries				
KUBAL	Sweden	100	128	94%
ALSCON	Nigeria	85	24	0%
Total			**3,900**	**96%**

2 9 aluminium smelters in operation. (Alscon, NAZ, and UAZ aluminium productions are mothballed).

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

4 Nadvoitsy aluminium smelter has been completely mothballed.
In August 2018, it was decided to completely shut down the plant (until that time, 1/2 of potroom 4 was in operation) with subsequent mothballing of the plant.

BEMO

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

The construction of the BEMO aluminium smelter is divided into two stages (each stage with a 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. In May 2019, the first stage of the smelter reached its design capacity. In 2019, 257,713 tonnes of aluminium was produced, which is 111,025 tonnes more than in 2018. A total of 727,095 tonnes of aluminium has been produced since the start of the commissioning.

The second stage of BEMO smelter is to be considered with strategic partner RusHydro subject to market situation and availability of project financing.

Taishet aluminium smelter

Construction of Taishet Aluminium 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 the start of preparatory work. Actual construction of the Taishet Smelter resumed in 2017.

The project includes construction of an aluminium smelter in Taishet in the Irkutsk Region (Eastern Siberia), with a design production capacity of the LC-1 (first series) of 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 2019, RUSAL invested USD998 million (excluding VAT) in the LC-1 (first series) construction project.

Alumina

The Group owns 8 alumina refineries as of the end of 2019. RUSAL's alumina refineries are located in six countries: Ireland (one plant), Jamaica (one industrial complex), 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. In 2019, two assets, Urals Alumina Refinery and JSC Boksit Timana, were certified under ASI standards: ASI Performance Standard and ASI Chain of Custody certificates were obtained.

The Company's long position in alumina capacity helps 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.

The table below[5] provides an overview of RUSAL's alumina refineries (including capacity) as of 31 December 2019:

Asset	Location	Ownership, %	Nameplate capacity, kt	Capacity utilization rate, %
Achinsk Alumina Refinery	Russia	100%	1,069	77%
Bogoslovsk Alumina Refinery	Russia	100%	1,030	99%
Urals Alumina Refinery	Russia	100%	900	102%
Friguia Alumina Refinery	Guinea	100%	650	57%
QAL	Australia	20%	3,950	87%
Eurallumina	Italy	100%	1,085	0%
Aughinish Alumina Refinery	Ireland	100%	1,990	95%
Windalco	Jamaica	100%	1,210	38%
Nikolaev Alumina Refinery	Ukraine	100%	1,700	99%
Total nameplate capacity			**13,584**	**78%**
RUSAL attributable capacity			**10,424**	**75%**

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

- **Achinsk Alumina Refinery.** Numerous programs on equipment effectiveness and reliability improvement are in progress. Energy equipment overhaul program is being implemented on schedule. Numerous gas purification units of "wet scrubber" type were deployed for sintering furnaces. A new system of automatic fire suppression, alarm, and notification was installed and launched. New mine development plan is being assessed (to be required starting from around 2030).
- **Bogoslovsk Alumina Refinery.** Modernization of mud circuit process is being finished, modernization of 65% was completed and allowed increasing reliability of facility process and alumina production volume as compared to 2018 and reducing caustic consumption. A program to replace former piston pumps by new type pumps was fully accomplished. Productive capacity of sintering heaters increased through decrease of sulphur in operating cycle.
- **Urals Alumina Refinery.** Timan bauxite quality improvement (by Al_2O_3 content), allowing overall production output increase even above the plant's capacity. Implementation of evaporators capacity increase project.
- **Nikolaev Alumina Refinery.** Successful run of industrial tests of Dian-Dian bauxite use instead of bauxite of Guyana in sweetening process. A project of agitation digestion capacity escalation is being realized that will lead to alumina production increase thereafter.
- **Aughinish Alumina Refinery.** Successful refinery crossover to Company bauxite of Dian-Dian with a view of cost reduction and commodity safety growth.
- **Friguia Alumina Refinery.** Refinery successfully restarted production after long-term conservation (since 2012). Boiler No. 4 overhaul was completed at CHP, and the second digester was launched. Alumina production was steadily increased during 2H 2019 and by the end of the year reached the planned level of capacity utilization.
- **Windalco.** Low level of capacity utilization rate caused by bauxite low quality, energy incidents, unscheduled maintenance, and instable process of mud circuit. Technology had been stabilized by the end of 2019. A new desanding system unit was constructed and installed, thus allowing reducing caustic consumption.

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 secure sufficient supply for the prospective expansion of its alumina production capacity and allows the Company to take advantage of favorable market conditions through third-party bauxite sales.

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

The table below provides an overview of RUSAL's bauxite mines (including capacity) as of 31 December 2019.

Asset	Location	Ownership, %	Annual capacity, mt	Capacity utilization rate, %
Timan Bauxite	Russia	100%	3,300	98%
North Urals Bauxite Mine	Russia	100%	3,000	78%
Compagnie des Bauxites de Kindia	Guinea	100%	3,500	89%
Friguia Bauxite and Alumina Complex	Guinea	100%	2,100	62%
Bauxite Company of Guyana Inc.	Guyana	90%	1,700	83%
Windalco	Jamaica	100%	4,000	46%
Dian-Dian	Guinea	100%	3,000	93%
Total nameplate capacity			**20,600**	**78%**

In 2019, mining at the first ore body at Vezhayu-Vorykvinskoye deposit of Timan Bauxite continued. Stripping of the fourth ore body of Vezhayu-Vorykvinskoye deposit and the second ore body of Verkhne-Schugorskoye deposit is ongoing. Commissioning works of pit water residuals at Vezhayu-Vorykvinskoye deposit were undertaken. Construction of commodities and materials warehouse, residential modules of 88 and 36 accommodations, canteen of 80 places at Timan was completed.

The third stage of surface objects construction of Cheremoukhovskaya-Gloubokaya mine was finished at North Urals Bauxite Mine (installation and commissioning works under cage winding plant).

Windalco mine ramped supply volume to the plant as compared to 2018 to replenish standard warehouse inventories.

Dian-Dian mine reached its capacity 3 million tonnes per annum in 2019, the second phase of the project was launched: all sections of assembly line, dryer, indoor dry bauxite warehouse, fuel handling facilities, railway depot, etc. were constructed.

Friguia mine nearly doubled capacity, increased bauxite production up to 1.3 million tonnes per annum.

Total production was 16 million tonnes in 2019, which is 2.2 million tonnes more than in 2018.

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. In April 2019, a license for subsoil use was obtained: nepheline exploration and mining at Goryachegorskiy nepheline mine.

As of 31 December 2019, the Group had JORC attributable bauxite mineral resources of 1,827.1 million tonnes, of which 500.5 million tonnes was measured, 688.3 million tonnes was indicated, and 638.3 million tonnes was inferred. Windalco resources increased as compared to 2018 due to additional exploration under the license SEPL524.

Asset	Measured, mt	Indicated mineral resources[1], mt	Inferred, mt	Total, mt
Timan Bauxite	9.6	163.2	13.0	185.8
North Urals Bauxite Mine	15.8	205.4	142.5	363.7
Compagnie des Bauxites de Kindia	0.0	10.7	61.6	72.3
Friguia Bauxite and Alumina Complex	28.7	142.4	152.6	323.7
Bauxite Company of Guyana, Inc.	0.0	38.0	44.2	82.2
Windalco[2]	48.1	58.4	7.8	114.3
Dian-Dian	398.3	70.2	216.6	685.1
Total	**500.5**	**688.3**	**638.3**	**1,827.1**

Energy assets

BEMO project

BEMO HPP is the fourth step of the Angara hydroelectric power chain, the biggest major hydropower 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 m high and 2,587 m 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 to 2014. A total installed capacity of all nine hydrounits in operation amounts to 2,997 MW.

The hydropower plant started commercial supplies to the wholesale electricity and capacity market on 1 December 2012. Since its launch, the BEMO HPP has generated 83.726 TWh of electricity. During 2019, the hydropower plant produced and delivered 16.104 TWh to the wholesale electricity and capacity market for the first time in the entire period of operation, which exceeds the 2018 electricity output by 18.5%, or 2.492 TWh.

Notes:

(1) Mineral resources:

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

Mineral resources tonnages include ore reserve tonnages.

(2) Windalco resources include those under the license Kirkwine SML 161 of 38.1 million tonnes that was revoked by the Ministry of Transport and Mining of Jamaica in 2019. RUSAL considered these actions unlawful and challenged the legitimacy of the revoke of license in court. The hearing is scheduled for 4–5 May 2020.

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

Bogatyr Coal LLP, which produced approximately 44.85 million tonnes of coal in 2019, has approximately 1.70 billion tonnes of JORC Proved and Probable Ore Reserves and has Measured Mineral Resources and Indicated Mineral Resources in aggregate of approximately 2.05 billion tonnes as of 31 December 2019. Bogatyr Coal LLP generated sales of approximately USD265 million in 2018 and USD248 million in 2019. Russian and Kazakh customers contributed approximately 30% and 70%, respectively, of our sales.

INVESTMENT IN NORILSK NICKEL

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

The cost of acquisition was USD13,230 million (https://rusal.ru/upload/iblock/236/PROSPECTUS.pdf page I-70). The carrying value of investment in Norilsk Nickel comprises 19.4% of total consolidated assets of RUSAL as at 31 December 2019.

RUSAL's shareholding in Norilsk Nickel allows for significant diversification of earnings through Norilsk Nickel's exposure to PGMs[6] and base metals (nickel, copper, cobalt) and broadens RUSAL's strategic opportunities. The Company's objective is to maximize the value of this investment for all Shareholders.

6 PGMs means platinum group metals.

Company Profile and Financial Results[7]

Norilsk Nickel's resource base in Taimyr and Kola Peninsula as of 31 December 2018 consisted of 785 million tonnes of Proved and Probable Ore Reserves and 2,036 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 2019, Norilsk Nickel produced 229 thousand tonnes of nickel, 499 thousand tonnes of copper, 2,922 thousand troy ounces of palladium and 702 thousand troy ounces of platinum. Compared to 2018, the following is to be noted:

1) Growth in production of nickel (+5%) was attributed to gradual ramp-up of nickel refinery operating new chlorine-leaching technology, the expansion of carbonyl nickel production, and the launch of low-grade nickel concentrate production for the sale to third parties at Kola MMC and more third party feed processed at Norilsk Nickel Harjavalta (production of nickel from own Russian feed increased by 4%).

2) Growth in production of copper (+5%) was driven by the ramp-up of the Bystrinsky (Chita) project, increased mined ore volumes and higher copper grades at Talnakh mines as well as increased copper concentrate and copper cathodes production at Kola MMC from the matte received from Polar Division (production of copper from own Russian feed increased by 5%).

3) An increase in PGM production (+7% palladium, +8% platinum) was attributed to the release of work-in-progress inventory at Krasnoyarsk Precious Refinery and processing of the feed purchased from third parties at Norilsk Nickel Harjavalta (production of PGM from own Russian feed increased by 7%).

Norilsk Nickel's metal sales are highly diversified:

(i) By the region: Europe, Asia, North and South America, Russia, and the CIS

(ii) By the products: nickel, copper, palladium, platinum, semiproducts, and other metals:

	Revenue from metal sales	
USD million	Year ended 31 December 2019	Year ended 31 December 2018
Europe	6,680	5,868
Asia	3,243	2,929
North and South America	2,289	1,619
Russia and the CIS	639	546
	12,851	**10,962**

	Revenue from metal sales	
USD million	Year ended 31 December 2019	Year ended 31 December 2018
Nickel	3,388	3,013
Copper	2,877	2,977
Palladium	5,043	3,674
Platinum	628	596
Other metals and semiproducts	915	702
	12,851	**10,962**

7 Production and operational data in this section are derived from http://www.nornik.ru/en/

The market value of RUSAL investment in Norilsk Nickel amounted to USD13,586 million as of 31 December 2019, which significantly increased in comparison with the market value as of 31 December 2018 (USD8,286 million) due to positive trend of metal prices. According to IFRS for the year ended 31 December 2019, Norilsk Nickel has the following key financial indicators:

USD million (unless otherwise specified)	12M 2019	12M 2018	Change (2019/2018)
Revenue	13,563	11,670	+16%
EBITDA	7,923	6,231	+27%
EBITDA margin (%)	58%	53%	+5 p.p.
Net profit	5,966	3,059	+95%
Capital expenditures	1,324	1,553	-15%
Net debt	7,060[8]	7,051[8]	0%
Net debt/EBITDA (1x)	0.9x	1.1x	-0.2x

In 2019, Norilsk Nickel's net working capital increased from USD0.9 billion to USD1.0 billion (+11%) due to increase in inventories and account receivables that were partly offset by increase in account payables.

Company's strategy and key investment projects

On 18 November 2019, Norilsk Nickel introduced an update of its new strategy in London and presented its *Vision 2030: Expanding the Horizons of Sustainable Growth*.

(1) **Focus on Health, Safety and Environment:** annual LTIFR reduction by 15%, zero tolerance toward workplace fatalities; launching Sulphur Program 2.0 (staged sulphur dioxide emissions reduction in Polar Division: -45% in 2023, -90% in 2025, -95% in 2030+); maintaining the lowest carbon dioxide footprint among peers

(2) **Sustainable path to unlock Norilsk Nickel's resource base potential:** Talnakh brownfield projects, South Cluster development (Zapolyarnyy mine, Medvezhiy Ruchey open-pit), reconstruction and upgrade of Norilsk Concentrator, third stage of Talnakh concentrator upgrade, expansion of Nadezhda Smelter (third furnace), reconstruction and upgrade of Copper refining operations at Kola

(3) **Option for further growth: confirmed Tier-1 asset Arctic Palladium (prefeasibility study):** potentially the world's largest greenfield PGM cluster, first production in 2024 (capacity of the first stage 7 mtpa of ore, open pit mine), reaching its project capacity in 2030 (second stage: +7 mtpa of ore, underground mine in 2029; third stage: +7 mtpa of ore, underground mine in 2030), estimated CAPEX until first production USD2.8-3.2 billion (of which the first stage: USD1.4 billion), over 50 years of mine life, EBITDA margin to be more than 40%

8 The calculation of net debt includes lease obligations: USD22 million in 2018 and USD224 million in 2019

Settlement with Interros in relation to Norilsk Nickel

On 10 December 2012, Interros (which holds approximately 34.6%[9] of Norilsk Nickel shares), RUSAL (which holds approximately 27.82%[9] of Norilsk Nickel shares), Crispian (which holds approximately 4.2%[9] 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, maximize profitability and shareholder value, and 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 to 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

3)If the ratio falls between 1.8 and 2.2, the percentage of EBITDA to be paid as dividends to be calculated as follows:

$X\% = 60\% - (\text{Net Debt/EBITDA} - 1.8)/0.4 \cdot 30\%$

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 (the "**Framework Agreement**") with Interros and Millhouse, LLC and their respective 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 creating 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 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 the right of first refusal to acquire the Offered Shares on the terms of a nonnegotiable purchase agreement derived from the terms and conditions of the offer ("**ROFR**"). The Company understood at the time that Whiteleave had 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 the 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. Subsequently, the appeal proceedings were initiated by Whiteleave and Crispian.

9 According to Norilsk Nickel Annual Report 2018.

On 26 and 27 November 2019, Whiteleave and Crispian withdrew the initiated appeal proceedings in relation to the Framework Agreement interpretation.

CORPORATE STRATEGY

As of 31 December 2019, 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 the 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 Scientific Projects

New high-capacity and resource-saving reduction cells

The Company successfully develops the area of resource-saving reduction cells. Super high-capacity cells RA-550 are successfully operated in the pilot potroom of the Sayanogorsk aluminium smelter, with high indicators of energy efficiency (the power consumption is less than 12,800 kW h/t), performance (the current efficiency is 96%), and environment-friendliness (the level of fluoride emissions is less than 0.15 kg/t). Solutions of RA-550 projects are successfully converted for existing devices of the Company to achieve high indicators. At the same time, the program continued to expand to switch existing cell designs to energy-efficient ones with eco-friendly lining with bulk materials. Super high-capacity RA-300 and OA-300 cells achieved the world's highest indicators among analogs—12,600 kWh/t and 12,800 kWh/t of Al, while for other types of cells the electricity consumption was reduced by 200–400 kWh/t of Al. Currently, the Company has already switched more than 2,600 cells to an energy-efficient design and more than 800 cells to an eco-friendly lining. In addition to the environmental effect of such lining, which reduces waste from the aluminosilicate lining part by 60% to 80%, the use of bulk carbon materials and their recycling allow decreasing the cost of cell cathode relining by 20% to 30%.

Environmental Approach

The Green Soederberg process included on the list of the best available technologies in Russia is being successfully developed and improved upon in all key areas. As part of the Green Soderberg development, the Company created the improved gas collection sections with better characteristics to reduce emissions and a robotic tightness monitoring system, thus further increasing the efficiency of covers. For better design of the cell degassing system to reduce costs, a centralized production was organized at RUSAL's iron casting facilities.

The automatic raw materials feeding systems that RUSAL has developed for its reduction cells, production process control systems, reduction cell tending equipment (new machines for loading alumina into reduction cells MZGV and systems for removing dust in MPU pot rooms), 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.

The Company continued installing five state-of-the-art fume treatment centers designed by RUSAL at its aluminium smelters. RUSAL developed and implemented in the aluminium reduction process an advanced and innovative fume treatment system of its own design based on absorption of fluorides with alumina applying a unique absorber reactor while providing the possibility to return caught fluoride into the aluminium reduction process. The new technology has high efficiency in terms of capital expenditures (reduction of CAPEX on equipment by more than 30%) and better efficiency of fluoride caught, over 99%: SO_2, over 96.5%. In terms of its environmental indicators, such a fume treatment center has no equal in the world because pot gases are treated at two stages "dry + wet," which is the most efficient scheme in the world practice. The scheme allows catching not only fluorides but also sulphur (SO_2).

To ensure that the Company always has access to raw materials and strengthens 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 hybrid and compound pitches with petroleum ingredients and low content of the products of the chemical coke production process (less than 30% to 40%). Together with partners, pilot batches were produced (more than 200 thousand tonnes), and field tests were successfully carried out. There are no analogs of this technology in the world that significantly (several times) reduces the content of benzopyrene by replacing coke and coal pitch with petroleum ingredients. The pilot production of pitch and tests confirmed the quality of produced pitch and high economic efficiency of the environmentally friendly pitch production.

The Company is making efforts to achieve the minimal carbon footprint.

To that end, mathematical and physics models have been selected to determine the optimal design of an industrial cell with inert anodes, 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 was put into 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.

Product Engineering

New powders of RUSAL under the RS brand (Rusal spherical) for additive technologies were successfully certified in European and Russian 3D centers. Due to this, sales of new powders in 2019 exceeded sales of the previous year 3.3-fold.

The R-1407 alloy developed by RUSAL received confirmation from customers that it is twice better in its mechanical properties compared to the standard AD0 alloy. The alloy is intended to manufacture tank railcars for operation at the Russian Railways.

A line of commercial 6XXX series alloys has been developed and allows for a higher speed pressing process: 10% to 30% higher compared to traditional alloys. The line of alloys is commercially supplied to Asian and European markets under the Maxi Flow brand.

RUSAL Krasnoyarsk commissioned a pilot casting system (OPLK). The system is able both to perform full-scale physical modeling of casting, heat treatment and rolling processes and to produce small batches of slabs and billets from innovative alloys of RUSAL.

Using the system made it possible to reduce the time to launch new products into production at the Company's aluminium smelters more than threefold.

In 2019, over 78 units of casting furnishing for slabs were designed and manufactured in-house and then used in the casthouses at KrAZ, SAZ, and BrAZ.

Innovations and Research Projects in the Alumina Production

Engineering solutions to optimize the technology of scandium oxide production from red mud were developed and confirmed in the laboratory and at the pilot industrial unit, which made it possible to achieve further cost reduction for scandium oxide from USD480 per kg to USD254 per kg and to produce a by-product – RZM, medium weight group concentrate. Technological regulations to design an industrial module for scandium oxide production from red mud were prepared for the volume of confirmed consumption to produce own Al-Sc alloys; FEM of the project was developed. Efforts are taken to further reduce operating costs for production of aluminium-scandium alloys by optimizing and eliminating a number of process areas.

For the Alumochloride Technology of Alumina Production from Nonbauxite Raw Materials project, design documentation was prepared for a pilot site with a capacity of 2,000 tonnes per year at AGK. The pilot site is an intermediate stage in implementing the innovative technology intended to provide RUSAL with high-quality alumina produced from Russian raw materials. The project successfully passed public discussions in Achinsk. At the moment, the documentation is passing expert examinations in accordance with the regulations of Russia.

Technological regulations were prepared for designing production of commercial products from waste (Si-stoff).

In the field of adapting the alumochloride technology to produce VAP–pseudoboehmite, a raw material for oil refining catalyst carriers, batches of pseudoboehmite were produced and successfully tested at Rosneft.

Confirmation of achieving the quality of Euro-5 diesel fuel using RUSAL pseudoboehmite was received. Implementing this technology is aimed at import substitution since a significant share (sometimes up to 100%) of necessary raw materials for catalysts is supplied from abroad.

The Company implemented a number of projects to boost the efficiency of its existing alumina refineries. Prototypes were implemented within projects to reduce steam consumption at the alumina refineries by 0.03087 Gcal/t alumina:

- A heat exchanger of own design was created and put into operation at RUSAL Krasnoturyinsk, which would increase the intensity of heating the liquor after evaporation.
- A flash tank for liquor and barocondenser of own design with better heat exchange properties were implemented at evaporator No. 2 in RUSAL Kamensk-Uralsky.
- Autoclave train No. 10 at RUSAL Kamensk-Uralsky was switched to three-time separation of leached (boiled) slurry steam.

It is planned to increase the effect when replicating at the Company's alumina refineries.

In digestion areas 2 and 3, at RUSAL Krasnoturyinsk, retrofitting of thickener No. 1 and washers Nos. 1, 5, 1/1, 1/2, 2/2, 5/2 was completed. During the implementation of the project, the caustic content in the liquid portion of the waste mud was reduced by 33%.

After retrofitting washers Nos. 1/3, 6 and thickener No. 1 in areas Nos. 2 and 8-cs of the digestion and thickening shop at RUSAL Kamensk-Uralsky, optimal operation modes for the units are being selected, which will allow reducing losses of caustic and alumina with the liquid phase of waste mud. Besides, retrofitting of the system of forced red mud pumping from the units of area No. 2 in the digestion and thickening shop was completed, which reduced losses of caustic by 6% in this area.

As part of the Improving Stage 3 of Hydrate Slurry Intermediate Cooling in the Precipitation Area Using the Tube-in-Tube Type project at LC NGZ, retrofitting of tube heat exchangers TTO Nos. 107, 207, 307, 408 was completed at precipitator trains Nos. 1–4. As a result of such upgrading, the extent of cooling at this stage increased by 2 ℃, the precipitation process kinetics improved at each of the four trains, which, in turn, expanded the ability to control the fractional composition of aluminium hydroxide, especially in the warm season.

Industrial tests were carried out, and a technology was implemented to use spent tricalcium aluminate at RUSAL Kamensk-Uralsky as a lime additive in the digestion area, which allowed reducing the consumption of purchased lime by 4,500 tonnes per year.

For RUSAL Kamensk-Uralsky, a dynamic model of the precipitation area was developed based on the previously created population balance model. The developed automated system, which would provide data collection, forecast calculations, and analysis of their results for the production facility's precipitation areas, was transferred to RUSAL Kamensk-Uralsky for trial use. The system is intended to reduce the number of deviations in the content of -45 μm fraction in alumina.

LLC RUSAL ETC developed a software part of the improved management system, an artificial neural network that provides operational forecasts of the sintering charge quality at JSC RUSAL Achinsk. Software was created with an optical search algorithm to control the charge quality. Its implementation is scheduled for 2020 with the following target indicators: increase in alumina extraction by 0.5%; increase in productivity by 6,000 tonnes per year.

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. Developing new product types demanded by the market

Raw material self-sufficiency

- The production of baked anodes at VgAZ reached the designed indicators (104 ktpa of baked anodes).
- The Taishet Anode Factory is completing the first construction stage that provides for construction and further operation of one anode baking furnace and related infrastructure facilities.

Main construction and installation operations at facilities of the first construction stage were completed in accordance with the schedule at the Taishet Anode Factory. In accordance with the project schedule, baking furnace No. 1 was dried in October to December 2019. To start pilot operation of the production facility, operational personnel are being recruited and trained.

Design works are being performed, custom-made equipment and priority construction and installation operations are being contracted for Stage Two of the Taishet Anode Factory (a total productivity of the production facility after completion of Stage Two will be 420 ktpa of calcined coke and 400 ktpa of baked anodes).

- The Sayanogorsk aluminium smelter implements the first stage of the baked anode production retrofitting, which includes sequential retrofitting of three baking furnaces with a capacity of 160 ktpa of baked anodes each. Major process equipment for anode baking furnace No. 3 is contracted, construction and installation operations are being prepared. The start of works is scheduled for April 2020.

Cutting costs and boosting production efficiency

- The implementation of a comprehensive program to deploy the Green Soederberg production process across the aluminium smelters of the Company continues:
  - 94% of Krasnoyarsk aluminium smelter's capacity was switched (224 cells were upgraded in 2019).
  - Upgrading continues in 6 potrooms of the Bratsk aluminium smelter (102 cells were upgraded in 2019).
  - Irkutsk and Novokuznetsk aluminium smelters switched from pilot sites to implementing the advanced technology on the scale of potrooms. In 2019, 34 cells were upgraded at IrkAZ and 32 cells at NkAZ.

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 March 2019, SAZ completed implementing an investment activity for separate dosing of spent anodes. Applying high-precision dispensers in the project stabilized the quality of produced green anodes.
- To reduce energy costs at the alumina refineries, a number of measures were taken in 2019:

UAZ: Implementation of a steam cooling system at three evaporators of the alumina shop, the project was completed in August 2019.

Efforts are taken to upgrade the process steam usage system at two autoclave trains of the alumina shop, completion is scheduled for March 2020.

AGK: Installation of a spent liquor cooling system at the agitation digestion unit. The equipment is mounted, the launch is scheduled for March 2020. In addition to saving energy resources, it is planned to produce at least 5 ktpa of additional alumina.

As part of the project to upgrade the calcination kiln, IrkAZ implemented heat generation to produce steam and hot water to cover needs of the smelter.

To optimize the process modes, reduce the consumption of electricity and raw materials (alumina, anode paste, fluorides), a long-term program is being implemented to upgrade automated control systems at the aluminium smelters. In 2019, outdated automated process control systems were replaced with advanced systems in potrooms Nos. 8 and 20 at BrAZ, potroom No. 5 at KrAZ and potrooms Nos. 1 and 2 at SAZ. In 2020, similar projects will be implemented in five more potrooms of the said smelters.

Developing new product types demanded by the market

In the face of ever-increasing competition and tightening of consumer demand regarding the quality of metal, to increase the competitive advantages of our products and preserve the sales market:

In 2019, KrAZ completed the construction of a new casting system for making homogenized billets in diameters from 8” to 18” cast using the Airslip technology, which should give an extra competitive edge to our company and ensure that we can keep our customers. For example, selecting cutting tools and optimizing parameters of saw equipment made it possible to achieve strict requirements of customers in the Japanese market to the quality of butt cutting.

The casthouse of IrkAZ completed upgrading its Befesa-1 aluminium ingot casting line. Installing a new casting wheel and a launder system with an optimized temperature control system, applying a high-precision robot stacker made it possible to stabilize the quality and prevent claims from customers of aluminium products.

At IrkAZ, the Company started to implement two new projects to organize the production of special wire rod grades from aluminium alloys: waxed wire rod and wire rod produced by the ExtraFORM method (RUSAL’s know-how). The projects are planned to be completed in 2020.

The Achinsk Alumina Refinery continues constructing the first stage for production of a high-margin aluminium oxide product using RUSAL’s technology– fine precipitated aluminium hydroxide (FPAH) used as a flame retardant. The low production cost results from the fact that the product is made from the slurries of the Achinsk Alumina Refinery, using the one-of-a-kind process for making alumina from nepheline. The design documentation was drafted, and the construction site was prepared. Annual capacity is 5,000 tonnes. Applications:

Production of non-flammable halogen-free cable insulation for the nuclear, shipbuilding, aviation, and automotive industries

Fillers and flame retardants for polymer materials used in various industries

Flame retardant and pigment in the production of paint products, sealants, high-quality paper

Environment

In 2019, the Company received a DNV-GL certificate as confirmation that its environmental management system meets the requirements of ISO 14001-2015. In addition, in 2019, RUSAL ARMENAL was certified for compliance with international environmental management standard ISO14001.

Regulation of greenhouse gas emissions

Annual verification of the carbon footprint of the aluminium offered under the ALLOW brand:

The Company has verified the ALLOW aluminium. The verification was done by the international audit firm TÜV Austria. In 2018, ALLOW aluminium made up 78% 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 June 2019, RUSAL's management company and three production sites, including a bauxite mine, an alumina refinery, and an aluminium smelter, successfully passed certification according to the Aluminium Stewardship Initiative (ASI) standards: Performance Standard and Chain of Custody Standard. These standards were developed with the participation of RUSAL, which joined the ASI initiative in December 2015.

The project to implement the ASI standards at the Company's production facilities started in 2017 is actively supported and continued. In the future, the Company will seek to certify its other production facilities.

Implementation of forest projects

As part of the comprehensive program to reduce the carbon footprint, RUSAL implemented the Russia's largest forest restoration and protection projects in 2019. In the Krasnoyarsk Territory and Irkutsk Region, more than 1 million trees were planted, and aerial forest protection was organized across an area of over 500,000 ha within the Lower Yenisey Forestry of the Krasnoyarsk Territory, all using the Company's funds.

Absorptions achieved as a result of the implemented forest projects will compensate a part of emissions from the primary aluminium production.

Health and Safety

In 2019, the DNV-GL certificate confirmed compliance of the Company's management system with the requirements of OHSAS 18001.

In 2019, a pilot project of the automated information system Safety of Production Activities – RUSAL was implemented at two sites in Krasnoyarsk (KrAZ and ISO Krasnoyarsk) and Achinsk (AGK and ISO Achinsk).

In 2019, the Safe Potline project was implemented in potroom Nos. 5–6 of RUSAL Krasnoyarsk. As part of the project, overhead anchor lines and means of evacuation from cranes were installed at crane runways; hazardous places and floor equipment were visualized; potroom – middle passage crossings were rendered compliant with safety requirements.

In April 2019, RUSAL obtained a VISION ZERO certificate and joined the international initiative Zero Injuries.

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 environmental 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 possible, that they comply or continue to comply with the best international standards.

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 socioeconomic 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 to give employees 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 that has been negatively acted upon 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 constantly developing and improving its environmental management system and implementing its principles at all production facilities, including all those that are in operation and those that are still under construction.

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 complies with all applicable environmental laws and regulations.

Health and Safety: Main 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 to increase the level of safety
- 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 dialog 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 system 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 that qualitatively and quantitatively assess key elements of the system, identify deficiencies, and develop effective corrective measures to manage risks and prevent failures and injuries. In 2019, LTAFR (Lost Time Accident Frequency Rate) was 0.22, which is an increase as compared with the LTAFR of 0.16 in 2018, but still it does not exceed the global average for the aluminium industry in 2018 (according to the International Aluminium Institute).

In total, 50 internal audits of health and safety management systems were carried out at the Company's sites. Det Norske Veritas held recertification 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 Gases) 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 consumed. Indirect emissions can be much higher than direct emissions from aluminium smelting and can be up to 5 to 10 times more in the case of the power generation from coal. The current average global level of direct and indirect emissions from the reduction process of aluminium production is 12.3[10] tCO_2eq/tAl. In 2018, the level of such emissions in RUSAL was 2.3[11] 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.

To perform more accurate calculations, the Company has developed a number of methodologies for determining greenhouse gas emissions that 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 verified its ALLOW brand in 2019 with the help of the international auditor TÜV Austria. In 2018, 78% 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 developed a program to achieve the strategic goal of reducing specific direct greenhouse gas emissions at the existing aluminium smelters by 15% by 2025 as compared to 2014.

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

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

In December 2015, RUSAL joined the voluntary international initiative Aluminium Stewardship Initiative (ASI), which is a global non-governmental organization for developing standards and certification in the field of responsible management of aluminium production and use. ASI's main commitment is to maximize the contribution of aluminium to the sustainable development of society.

RUSAL's position is to be an active participant in international processes of sustainable development, implementation of international standards (to strive for production in accordance with the sustainable development principles), including implementation of the best world practices. Implementing ASI standards that cover the entire value chain — from ore mining to aluminium production, — is one of RUSAL's tools for adapting the best world practices of sustainable development.

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

11 Includes direct emissions from the reduction process and indirect emissions from the generation of purchased third-party electricity and heat.

In June 2019, the management company and three production sites of RUSAL—Boksit Timana, Ural Aluminium Smelter, and Irkutsk aluminium smelter—were successfully certified according to the ASI Standards: ASI Performance Standard and ASI Chain of Custody Standard.

As part of its interaction and work with ASI, a representative of RUSAL is a member of the ASI Standards Committee and regularly participates in meetings of the ASI Standards Committee that solves issues related to improvements to the ASI Standards, their adjustment, and approval as well as issues related to certification of organizations that have joined the ASI initiative.

Representatives of RUSAL are also members of ASI Working Groups in the following areas: Biodiversity and Ecosystem Services, Greenhouse Gases, Human Rights and Environmental Impact; they took an active part in their work in 2019.

RUSAL participated in the international conference COP25 held in Madrid from 1 to 15 December 2019.

Representatives of RUSAL participated as experts in the negotiation process on relevant topics (green financing, market and non-market mechanisms) and events on sites of the conference on issues of fundamental interest for the Company (EU, PRC, and US carbon regulation, carbon price, climate duties, climate and global competition, climate and international trade). They made a presentation at a parallel event of the Russian delegation, which reflected RUSAL's climate strategy, climate technologies, climate programs in the regions where RUSAL operates, and ALLOW, a low-carbon aluminium brand.

RUSAL submits regular GHG emission reports from its productions to Roshydromet to register emissions in the National Cadaster of Anthropogenic Emissions from Sources and Absorption by GHG.

As part of the comprehensive program to reduce the carbon footprint, RUSAL implemented the Russia's largest forest restoration and protection projects in 2019. In the Krasnoyarsk Territory and Irkutsk Region, more than 1 million trees were planted, and aerial forest protection was organized across an area of over 500,000 ha within the Lower Yenisey Forestry of the Krasnoyarsk Territory, all using the Company's funds. Absorptions achieved as a result of the implemented forest projects will compensate a part of emissions from the primary aluminium production. This initiative is one more step towards carbon-free aluminium.

In 2019, the Company won the first place at the third Russian national contest for the best work organization in the field of reducing greenhouse gas emissions Climate and Responsibility 2019 held with the support of the Ministry of Economic Development of the Russian Federation and the Ministry of Natural Resources and Environment of the Russian Federation.

SOCIAL INVESTMENTS AND CHARITY

RUSAL is committed to corporate social responsibility for the sake of well-being of the present society and benefit for generations to come, making every effort to create a new quality of life and promote social development in the regions where the Company operates. Social investment is an integral part of the Company's strategy.

The Company's social investments are based on the following principles:

- Long-term goals, programs, and projects
- Development and support for local social initiatives
- Transparency and accountability, competitive funding mechanism
- Targeting and local accounting, dialog with local communities
- Equal opportunities for all participants
- Partnership with stakeholders, resource synergies
- Efficiency and control, evaluation of the effectiveness of social investments
- Professional development and training of professionals and program participants

The Company implements social investments in a number of main areas:

- Social infrastructure and urban environment for comfortable living in the region
- Assistance to socially disadvantaged groups
- Sport and healthy lifestyle, recreation
- Volunteering, including corporate volunteering
- Social entrepreneurship
- Education as a basis for youth development and growth
- Health care

At the same time, the following areas of social investment are the Group's priority:

- Participation in creating a comfortable urban environment by supporting the construction and reconstruction of social infrastructure and modern public and recreational spaces
- Development of corporate volunteering, widespread involvement in volunteering activities of employees of the Company's enterprises and residents of the regions where the Company operates

The Company operates its social investments in the form of key programs and projects outlined below.

The **RUSAL Territory** program aims to improve the quality of life in the Company's regions of operation by modernizing the urban environment and social infrastructure, supporting territorial development projects, and forming modern standards of regional urban development.

The Company carries out regular activities within the framework of the RUSAL Territory program, which include:

- Areal socioeconomic research and analysis involving many stakeholders
- Development and management of the RUSAL Territory grant program
- Develop and implement educational and educational programs for NGOs, educational, cultural, and social institutions
- Promoting modern approaches to urban planning and development through forums, training events, networking, workshops

Since its launch in 2011, the program provided support to 640 social and infrastructure projects in 22 cities and towns, 271 built and upgraded social infrastructure facilities that have provided access to better social infrastructure for more than half a million members of the local community. The Company has invested RUB1,172 million in projects together with local partners. In 2017, RUSAL introduced an integrated approach to socioeconomic development of the regions of its presence, and in 2017 to 2019 the Company conducted comprehensive social study and developed strategies of social policy in 12 regions. In 2019, based on the developed policies, RUSAL relaunched the grant competition RUSAL Territory in a new format aimed to support large-scale public space projects, which involves increasing the amount of funding for the single successful project to RUB50 million compared to RUB5-7 million of maximally possible funding in competitions held before. The priorities and requirements of the new competition launched in 2019 are compatible with those of the federal and regional governmental programs for the development of a comfortable urban environment and investments in the socioeconomic development of the territories. The competition provided an opportunity to increase the competitiveness of the local city authorities in attracting additional funds from various governmental sources on the terms of public-private partnership with the purpose of improvement of the urban infrastructure. The competition, which started in November 2019, announced 26 projects claiming total funding of RUB1.6 billion, more than 19,000 residents took part in online voting for the best projects in their cities. In 2020, the Company plans to finalize the selection of the competition winners in 11 cities and support the best projects with funding in the total amount of up to RUB 500 million.

In 2019, RUSAL installed 23 sets of modern children's playgrounds in 6 cities, provided the arrangement and equipping of 10 sports, 5 cultural, and more than 30 educational infrastructure facilities, improved 9 public spaces, and completed a major project of creation of modern, comfortable, and safe public spaces for residents and tourists in the historic center of Krasnoyarsk.

The **School of Urban Change** program was introduced in 2017 as part of the RUSAL Territory program with the aim of forming and training initiative groups interested in solving the actual social problems of the region and creating communities of active citizens for the development of volunteerism and social entrepreneurship. In 2018, the School of Urban Change became a separate social and educational program that united all educational initiatives for all target groups, which are addressed by the Company's social programs.

During the three years of the program implementation, 296 educational events were held with the participation of 8,742 people, an open online school was developed, which provides regular online courses in social design, entrepreneurship, corporate volunteering, and creating public spaces. As a result of the courses, 71 persons received certificates of professional development.

The aim of the Helping Is Easy program is to promote social activity in local communities, involve the Company's personnel in social and environmental activities, and establish partnerships with NGOs, businesses, and local authorities.

Within the frameworks of the program, the Company carries out the following activities:

- Implementation of a comprehensive volunteer program aimed at different stakeholder groups: staff, local communities, NGOs
- Building a volunteer ecosystem in local communities to ensure the sustainability of volunteering
- Support for volunteer initiatives as part of the Helping Is Easy grant competition
- Development and implementation of educational events for volunteers

The Helping Is Easy program has been in operation since 2014, and more than 5,000 partner organizations joined the Company's volunteer projects. To share best practices, the Company together with partners created the National Council for Corporate Volunteering, which brings together more than 30 large Russian companies and has regional branches in 12 regions of Russia. Every year, three thousand RUSAL employees participate in the Company's volunteer projects. Over the years, tens of thousands of volunteers have taken part in RUSAL volunteer initiatives, such as Yenisey Day, Green Wave, and New Year's Charity Marathon, and 270,000 local residents have received help from volunteer teams.

The abovementioned Yenisey Day is a large-scale project of environmental volunteering implemented since 2011 in the Krasnoyarsk Territory and the republics of Khakasia and Tyva with the aim of cleaning the coastal zone of the Yenisey River. During the project implementation period, the Company carried out 326 environmental activities and attracted 78,000 volunteers who collected and removed 40 tonnes of garbage from the banks of the river and released 5,000 fry of sturgeon and peled into the river. Yenisey Day has become a universally recognized tradition of the region. In 2019, the Yenisey Day project was widespread to 12 Russian cities where urban environmental events were held under the unifying name River Day.

The key event of 2019 for all volunteers and CSR managers of the Siberian companies was the Siberian Conference on Corporate Volunteering initiated and implemented by RUSAL.

The conference brought together 100 volunteer leaders from companies RUSAL, Mobile Telesystems, KFC, Philip Morris, Deloitte, Dixie, Coca Cola, Komsomolskaya Pravda Publishing House, Russian Managers' Association, Danilovtsy Volunteer Movement, and others, implementing systemic programs of corporate volunteering, as well as corporate volunteers and representatives of city-wide and college volunteer movements from the Krasnoyarsk Territory, Irkutsk, Kemerovo, and Novosibirsk Regions. The event was attended by 30 employees of RUSAL who are activists of volunteer movements from Achinsk, Sayanogorsk, Tayozhnyy, and Krasnoyarsk. The conference program included the exchange of technologies and practices for the implementation of corporate volunteering programs among CSR managers and was implemented in the forms of project presentations, lectures, master classes on team building and social design. The conference continued with the environmental volunteering quest Yenisey and a tour of guests to the Krasnoyarsk aluminium smelter.

In the field of sports and healthy lifestyle, the Company in partnership with En+ Group and the Cross Country Skiing Federation of Russia has developed and implemented the "Get on Ski" project. The project serves to promote healthy lifestyles and involves employees and local residents in cross-country skiing in the regions and cities where the Company operates. As part of its support for the project, RUSAL has established partnerships with regional sports authorities fry of sturgeon and pelet into the river and cross-country skiing federations, improved the quality of ski infrastructure by means of reconstruction of skiing centers, stadiums, and other facilities. In particular, in 2019, RUSAL invested RUB28 million in Bratsk for the continued reconstruction of two stadiums and for the improvement of the recreation center where massive skiing events are held and also implemented the project in Kamensk-Uralsky to reconstruct and equip the ski and boat center Metallist at a cost of RUB16.4 million. In 2019, as part of the "Get on Ski" project, stadiums and training bases in Angarsk, Bratsk, Krasnoyarsk, Kemerovo, Abakan, and Syktyvkar received 6 domestic snowcats to service the ski slopes, developed and launched into experimental production in Russia in 2018.

The Company assisted the youth cross-country skiing teams by purchasing and transferring 1,131 units of ski equipment; supported the training and launch of training courses for ski coaches, which were attended by 402 ski coaches working with small children's and youth teams. In 2019, as part of the "Get on Ski" project, the annual competition for a scholarship of 90,000 rubles was launched among the skiing coaches. 5 coaches became the first scholarship winners.

The Company held massive ski holidays, in which more than 52,000 locals took part over the years of the project, including more than 10,000 in 2019. During the reporting period, cup competitions were held for more than 1,900 young athletes.

To promote skiing among a wide audience of local residents, the project's pages were created on social networks Instagram, VK.com, Facebook, YouTube, aimed at popularizing ski racing and promoting healthy lifestyles. The accounts of the "Get on Ski" project have more than 94.5 thousand subscribers. They publish unique content for skiers of all ages with the involvement of leading Russian skiers who are members of the Russian national team.

As part of the "Get on Ski" project, the Company provides annual support to the Cross Country Skiing Federation of Russia.

RUSAL continues to provide quality medical services to employees and local residents not only in Russia but also in remote countries, especially in the Republic of Guinea where the Company together with the local government continues to struggle with the severe infections. In the Kindia Region in Guinea, a Russian-Guinean Scientific Clinical and Diagnostic Center for Epidemiology and Microbiology (NCDCEM) has been built, which is used as a clinical base for field trials of the Ebola vaccine. In 2017, the program of vaccination and post-registration research of the Russian Ebola vaccine GamEvac-Combi was launched here. The launch of a volunteer vaccination program in Guinea is RUSAL's contribution to the vital task of finding the cure needed for people across West Africa to protect against the deadly Ebola virus. On 19 December 2019, the RUSAL Scientific Clinical and Diagnostic Center for Epidemiology and Microbiology held a ceremony to complete a two-year vaccine research program, during which 2,000 local residents were voluntarily vaccinated. Verification of the results of this work by the World Health Organization will allow the official use of the Russian vaccine for Ebola prevention worldwide.

In the field of culture and art, the Company initiated and implemented the RUSAL Festival program aimed at supporting local people's interest in culture and art, scientific and technical creativity, development of creative skills, promotion of healthy lifestyle through a wide range of socially important cultural and educational activities in local communities. The initiative was developed in 2016 in the form of an umbrella cultural program of the festival that included various forms of art and forms of activity: festivals of modern Russian cinema in small towns and villages, tours of leading theatrical groups and students of theatrical universities with the best modern plays, interactive nonfiction shows on city venues, unique night cycling tours at iconic historical and cultural sites. 2016 to 2019, the program had a significant impact on the cultural life of 18 cities in Russia and Armenia where the Company operates. As part of the RUSAL Festival project, the Company with the assistance of 1,500 local volunteers held 150 events attended by more than 300,000 local residents.

RUSAL continues to search for the most promising innovative ideas and projects and is working on their effective implementation in the social sphere and on the socioeconomic development of the regions the Company operates in.

In 2019, the Company allocated more than USD30.9 million for social investments and charitable projects.

05
MANAGEMENT DISCUSSION AND ANALYSIS

MANAGEMENT DISCUSSION AND ANALYSIS

OVERVIEW OF TRENDS IN THE ALUMINIUM INDUSTRY AND BUSINESS ENVIRONMENT

Highlights for the full year 2019

- In 2019, the whole aluminium industry continued to see challenging environment. RUSAL's revenue for the year ended 31 December 2019 decreased by 5.5% to USD9,711 million as compared to USD10,280 million for 2018 following a 15.1% decrease in the average London Metals Exchange ("**LME**") aluminium price from USD2,110 per tonne in 2018 to USD1,792 per tonne in 2019 and an 11.2% drop in the average realized premiums to the LME price.
- The decrease of the aluminium price in the last year was partially offset by the 13.8% increase in sales of primary aluminium and alloys in 2019 as compared with 2018. The 26.2% growth in aluminium sales volumes in the last quarter of 2019 as compared with the last quarter of 2018 resulted in the increase in revenue by 5.2% to USD2,489 million for the last quarter of 2019 as compared to USD2,365 million in the same quarter of 2018. The average premium increased by 32.4% to USD143 per tonne for the last quarter of 2019 as compared to USD108 per tonne in the fourth quarter of 2018.
- Despite the market volatility, the production cost per tonne in aluminium segment in 2019 went down by 1.2% to USD1,627 per tonne, compared to USD1,646 per tonne in 2018 as a result of efficient cost management.
- During the last quarter of 2019, the Company continued optimization of the cost and structure of its debt portfolio by entering into a 5-year new sustainability-linked pre-export finance facility (PXF2019) of USD1,085 million (the interest rate is subject to the Company's fulfilment of the sustainability KPIs) and successful placement of the 4th tranche of local bonds in the amount of RUB15 billion with the record low rate of 7.45%. The deal was subsequently hedged into USD, resulting in the USD interest rate of 3.65%.

Aluminium demand

Final manufacturing PMIs for January 2020 further prove that the sector's outlook has turned a corner in recent months. In January 2020, the global manufacturing PMI rose from 50.1 to 50.4 – the highest level since April last year has been driven mainly by increases in developed markets, as the aggregate PMI for emerging markets has been flat for the past five months. However, issues related to COVID-19 might seriously affect this recovery and lead to deterioration of aluminium market fundamentals in 1H 2020.

Global aluminium demand rose by 0.1% to 65.3 million tonnes in 2019.

In the world excluding China, demand dropped by 2.6% to 28.5 million tonnes, while Chinese demand increased by 2.4% to 36.8 million tonnes. While uncertainty remains in place, the transportation segment should contribute to aluminium demand growth in 2020 on the back of launching of new models, including EVs, and increasing the aluminium content in cars. Given the above, worldwide demand for primary aluminium is expected to show a 1.3% year-on-year growth to 66.1 million tonnes in 2020, driven by ex-China growth of 1.1% to 28.8 million tonnes and China growth of 1.5% to 37.3 million tonnes.

In 2019, the Russian economy continued to tick over: the GDP growth rate dropped to 1.2% (comparing to 1.8% last year), whereas industrial production index declined to 2.4% amid a slowdown in investment rates to 2.0%. In the second half of 2019, business activities have noticeably deteriorated, which contributed to a fall in manufacturing PMI below the level of 50 points.

Against the background of a slowdown in industrial growth and a decrease in purchasing power, negative dynamics were also observed in most aluminium-consuming industries, predominantly in automotive and energy segments. Construction was the only sector that demonstrated significant growth, where new housing building increased by 6.2% in 2019 year-on-year.

Primary aluminium demand in Russia and CIS countries grew by 1.1% to 1.13 million tonnes (including 0.9 million tonnes in Russia) in 2019 and is expected to rise to 1.15 to 1.2 million tonnes in 2020.

Europe's economy was facing a combination of shocks in 2019 that kept GDP growth subdued. The elevated uncertainty around trade policies and the risk of a no-deal Brexit continued to inflict uncertainty to business confidence until at least the end of the year.

After a moderate start in January 2020, the economies of the EU28 appeared to have lost significant momentum as the year progressed. Meanwhile, the headwinds that disrupted European industries have eased recently, proven by a broad-based uptick in industrial production, at a rate slightly higher than at the end of last year. Eurozone's manufacturing PMI clearly showed marginal improvements in the health of the business conditions for three consecutive of four of the last months (growth to 47.9 in January 2020), to suggesting that the downturn has slowed in September.

One may see the same recovery trend in the automotive sector, which plunged into a prolonged contraction period due to the implementation of the Worldwide Harmonised Light Vehicle Test Procedure ("**WLTP**") for emissions, leading to the car certification and registration bottlenecks. The changeover to the WLTP test cycle hit output, pushing production figures in the largest country-producers down by 6.5% in 2019. However, as the six month average demonstrated growth since the middle of the year, when German and Turkish automotive sectors showed first signs of recovery, the automotive production is set to recover and reach the level of 2018 in the next year.

Output in the construction industry increased throughout 2019 with Germany's construction PMI hitting a nine-month high (53.8) in December. This was mainly attributed to a positive development of the new build market.

The net effect of these changes is European primary aluminium demand (including Turkey but excluding Russia) fall by 2.1% to 9.2 million tonnes.

The North American economy slowed during 2019, with economic and industrial activity harmed by the escalation of a US-China trade war and the Section 232 rules restricting imports of aluminium and steel from the majority of producing countries. Year-on-year GDP growth is estimated at 2.3% in 2019, exceeding market expectations in the beginning of the year mainly on the back of strong domestic demand. Despite industrial production decreasing in September to November 2019 on a yearly basis, it is set to grow in the upcoming months amid the "phase one" deal signed between the USA and China in January 2020.

In 2019, North American automotive production declined by 4.1% resulting in weaker aluminium demand. Meanwhile, US construction indicators are performing very well, especially in November and December 2019, leading to 3.9% year-on-year increase in new housing starts.

Overall primary aluminium demand in North America contracted by 3.6% to 6.5 million tonnes in 2019.

In the first half of 2019, Japan's economy was supported by strong domestic demand, but this weakened as the year progressed amid an unfavorable external environment (US-China trade war escalation) and a hike in consumption tax. Thus, annual GDP growth is estimated at 0.8%, while industrial production declined by 1.8% in 2019. 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 grew by 1.3% year-on-year in the first ten months.

The ASEAN region saw a moderate slowdown in 2019, and primary aluminium demand could not resist this trend affected by trade conflicts in Asia. As a result, primary aluminium demand in Asia (ex China and India) plummeted by 5.5% to 6.0 million tonnes in 2019. Nevertheless, December manufacturing PMI highlighted only a fractional decline in overall business conditions, at its slowest pace since June 2019. Market expectations for 2020 are broadly positive, mainly driven by an increase in production and incoming new business first time in several months.

The Indian economy has been struggling with a prolonged slowdown and GDP growth dipped to 5.1% in 2019, from 7.4% in 2018, on the back of weak domestic demand, which used to drive the national economy. Output growth from the construction sector increased by 5.7% on a yearly basis, while automotive production plummeted by 12.7% due to weak sales and the shift to new emission standards. Those factors combined lead to primary aluminium demand fall of 1.4% in 2019 to 2.1 million tonnes.

The Chinese economy grew at 6.1% year-on-year in 2019 and the Caixin manufacturing PMI fell from 51.5 to 51.1 in January 2020 which was still far above 50 points. Despite this, as previously mentioned, the Chinese economy is expected to be heavily affected by coronavirus issues in 1Q 2020 resulting in the overall GDP growth to be around 5.8%.

Aluminium demand was up by 2.4% year-on-year to 36.8 million tonnes in 2019 and was significantly strengthened in the second half of 2019 on the back of Governmental support measures and final positive outcomes in trade negotiations between the US and China.

Aluminium supply

The rest of the world ("**RoW**") aluminium production grew during 2019 by 1.7% to 28.2 million tonnes.

Overall, the RoW aluminium market was in a deficit of around 0.3 million tonnes during 2019.

Looking at the cash cost curve in the RoW today, around 10% of smelters or 3 million tonnes operate at a loss despite the decline in cost of raw materials; more than half of RoW alumina producers suffer from losses.

In 2019, China's primary aluminium production fell by 1.8% year-on-year to 35.7 Mt and most of the producers generate slim margins. Some producers have decided to transfer closed capacity to other provinces based on environmental and bauxite feed issues. Operating capacity rose by 575 ktpy M-M to 36.6 Mtpy in December due to restarts of 420 ktpy and new commission of 185 ktpy, while 30 ktpy cuts trimmed the growth.

As highlighted, the coronavirus will negatively affect aluminium market in China in 1H 2020 with expectation of bigger supply surplus and weak demand. Looking at the cash cost curve in China today, around 27% of smelters or 10 million tonnes operate at a loss with declined SHFE price to RMB12,830/tonnes.

Alumina refining in a number of areas in particular is suffering from logistics issues for both bauxite arrivals and shipping out their alumina. Lower aluminium demand in China and excessive inventories may affect prices and ultimately delay new aluminium smelting capacity ramp up.

During 2019, China's exports of unwrought aluminium and aluminium semis declined 1.2% year-on-year to 5.733 Mt. Chinese exports have crashed by 25.3% year-on-year to 669,208 tonnes in January to February 2020, expected to decline in March 2020 amid coronavirus effects.

RUSAL'S ALUMINIUM PRODUCTION RESULTS

The Group's primary aluminium production for the year ended 31 December 2019 was stable as compared to the previous year and totaled 3,757 thousand tonnes.

Production of VAP was also in line with the previous year: 1,573 thousand tonnes in 2019.

Asset	% Ownership	Year ended 31 December		Changes as compared to the previous year
(kt)		2019	2018	(%)
Russia (Siberia)				
Bratsk aluminium smelter	100%	1,008	1,009	(0.1)
Krasnoyarsk aluminium smelter	100%	1,018	1,015	0.3
Sayanogorsk aluminium smelter	100%	539	536	0.6
Novokuznetsk aluminium smelter	100%	215	215	–
Irkutsk aluminium smelter	100%	422	419	0.7
Khakas aluminium smelter	100%	294	291	1.0
Russia (excluding Siberia)*				
Kandalaksha aluminium smelter	100%	72	72	–
Volgograd aluminium smelter	100%	69	64	7.8
Nadvoitsy aluminium smelter	100%	–	6	–
Other countries				
KUBAL (Sweden)	100%	120	125	(4.0)
Total RUSAL		**3,757**	**3,753**	**0.1**

Production:

- Pre-baked anodes production complex commissioned at VgAZ. The volume of production of pre-baked anodes in 2019 amounted to 100,556 tonnes.
- 394 pots underwent modernization in 2019 switching to EcoSoderberg process at KrAZ, BrAZ, NkAZ, IrkAZ.
- Completed the modernization of calcining furnace at VgAZ. Produced 74,203 tonnes of calcined coke in 2019.
- Completed the construction of green anodes baking furnace at Taishet Anode Plant with designed output of 225 thousand tonnes per year.
- The first potline of RA-300 pots commissioned at BoAZ (production output of 300,000 tonnes/year).
- Continued the construction of the first potline at Taishet Aluminium Smelter (planned production volume amounts to 430,000 tonnes of aluminium per year).

Energy efficiency:

- 660 energy efficient pots of various types commissioned at the plants of Aluminium Division in 2019.
- By implementing energy-saving actions at the plants of Aluminium Division the specific total energy consumption in 2019 reduced by 462 kWh/tonne as compared to 2013 (the year when the projects were initiated).

Expanding the alloy production:

- The volume of the value-added product orders is recovering.

Mechanization and automation:

- In 2019, the work was continued on designing and producing new domestically produced process vehicles to eliminate the need for heavy physical labour and to improve the working conditions for the operators. 45 vehicles were produced during the first year: 31 vehicles under the program “Reequipment with tending vehicles”, another 14 vehicles under the program “Conversion of RUSAL aluminium smelters to environmentally-acceptable Soderberg process”. In total, 218 vehicles have been produced since 2013, operations were mechanized, such as anode beam racking and anode replacement, all new vehicles are equipped with an ergonomic workplace for the driver and a climate control system.
- Completed the project of improving the working conditions for crane operators in the anode production area at RUSAL Krasnoyarsk – four additional cranes were converted to remote control, now all 12 cranes are controlled from the administrative office through video control; RUSAL Bratsk – continued the project to mechanize the job of the anode area worker – in 2019 after an overhaul another two multifunctional cranes entered into operation, the total number of such cranes now amounts to five.
- The Company is implementing the program “End-to-end automation” aimed at perfecting the production management system. In 2019, the local process information systems at RUSAL Sayanogorsk started to be replaced by a plant-wide uniform MES-system developed by HoneyWell. Continued the casting information system’s development at RUSAL Krasnoyarsk and RUSAL Sayanogorsk. A system for automated pot control based on machine learning is operated in pilot mode at RUSAL Bratsk. Continued the upgrading of the distributed control system (DCS) of the main production: upgraded DCS in 4 potrooms at RUSAL Bratsk and RUSAL Sayanogorsk in 2019, this work is being continued in another nine potrooms; finished upgrading DCS in the electrode production area at RUSAL Sayanogorsk, this work is continued in another three areas.

Health, safety, environment:

- **Environmental safety is one of the priorities of the sustainable development of the Company. The strategy of the environmental safety is aimed at upgrading the production and implementing the best available technologies.** For the purpose of achieving the strategic goals, in 2019 the conversion of the pots to EcoSoderberg process was continued at RUSAL Krasnoyarsk, RUSAL Bratsk, RUSAL Bratsk Branch in Shelekhov and RUSAL Novokuznetsk. RUSAL Novokuznetsk is expanding the pilot area and is installing the pots operating on baked anodes. Aluminium Division's plants (RUSAL Bratsk, RUSAL Bratsk Branch in Shelekhov, and RUSAL Novokuznetsk) are modernizing the existing off-gas treatment units and are installing new efficient dry scrubbers operating on an in-house technology. The testing of the automated emission control system is underway at RUSAL Krasnoyarsk; the system will be subsequently translated to other plants of the Aluminium Division. In 2019 RUSAL Krasnoyarsk, RUSAL Bratsk as well as RUSAL Bratsk Branch in Shelekhov were in the group of 15 Russian companies that have obtained the comprehensive environmental permits. In order to secure safe storage of the waste products, RUSAL Sayanogorsk has completed the construction and commissioning of the second phase of the solid domestic waste disposal area. In 2019, the investment into environmental projects amounted to more than USD54.7 million.
- In 2019, the certification organ DNV-GL conducted audits of PJSC RUSAL Bratsk, CJSC Boguchansky aluminium smelter and KUBAL, the results of the audits confirm the conformity of the environmental management system of the Aluminium Division's plants with the requirements of ISO 4001.
- In 2019, the certification organ DNV-GL conducted an audit of PJSC RUSAL Bratsk, the results of the audit confirm the conformity of the health and safety management system at the plant with the requirements of OHSAS 18001.

ALUMINA PRODUCTION RESULTS

RUSAL's total attributable alumina output was 7,858 thousand tonnes in 2019 and 7,774 thousand tonnes in 2018.

In spite of the fact that the production volumes of Achinsk Alumina Refinery, Windalco, Nikolaev Alumina Refinery and Queensland Alumina declined, steady production growth at Friguia and improvement of annual results at Aughinish, Bogoslovsk and Urals Alumina Refineries made it possible to increase the production volume by 1.1%, as compared to 2018.

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

Asset	Interest	Year ended 31 December		Change year-on- year
(kt)		2019	2018	
Ireland				
Aughinish Alumina Refinery	100%	1,893	1,874	1.0%
Jamaica				
Windalco (Ewarton Works)	100%	461	502	(8.2%)
Ukraine				
Nikolaev Alumina Refinery	100%	1,690	1,715	(1.5%)
Italy				
Eurallumina	100%	–	–	–
Russia				
Bogoslovsk Alumina Refinery	100%	1,017	1,002	1.5%
Achinsk Alumina Refinery	100%	823	851	(3.3)%
Urals Alumina Refinery	100%	915	910	0.5%
Boxitogorsk Alumina Refinery	100%	–	–	–
Guinea				
Friguia Alumina Refinery	100%	368	182	102.2%
Australia (JV)				
Queensland Alumina Ltd.[12]	20%	691	738	(6.4%)
Total production		**7,858**	**7,774**	**1.1%**

BAUXITE PRODUCTION RESULTS

RUSAL's total attributable bauxite output[13] was 16,047 thousand tonnes in 2019, as compared to 13,847 thousand tonnes in 2018.

The decrease in KBK bauxite mining and export was caused by no requirement for stock increase at Nikolaev Alumina Refinery (inventories were not lower than standards).

Timan Bauxite reduced bauxite production as compared to 2018. This was done to compensate for higher quality bauxite ore that contained 1.5% more Al_2O3 content than previously – facility had to decrease supply of bauxite ore to prevent overstocking at refined alumina warehouses.

Windalco mine increased bauxite production as compared to 2018 up to 1,856 thousand tonnes to replenish bauxite inventories up to standard volume. This became possible as result of contractors' mining and transportation equipment stabilization.

The most substantial bauxite production volume growth occurred at Friguia and Dian-Dian mines.

Friguia mine increased bauxite production volume up to 1,304 thousand tonnes per annum in line with Alumina production supply program and the 2nd digester launch.

The second phase of Dian project was deployed: all sections of assembly line, dryer, indoor dry bauxite warehouse, fuel handling facilities, railway depot etc. were put into operation. Dian-Dian mine reached capacity of 3 million tonnes per annum in 2019.

12 Pro-rata share of production attributable to RUSAL.

13 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	Interest	Year ended 31 December		Change year-on- year
(kt WET)		2019	2018	(%)
Jamaica				
Windalco (Ewarton)	100%	1,856	1,791	3.6%
Russia				
North Urals	100%	2,353	2,326	1.2%
Timan	100%	3,221	3,325	(3.1%)
Guinea				
Friguia	100%	1,304	720	81.1%
Kindia	100%	3,121	3,451	(9.6%)
Dian-Dian	100%	2,780	840	231.1%
Guyana				
Bauxite Company of Guyana, Inc.Guyana, Inc.	90%	1,412	1,394	1.3%
Total production		**16,047**	**13,847**	**15.9%**

NEPHELINE PRODUCTION RESULTS

RUSAL's nepheline syenite production was 4,244 thousand tonnes in 2019, as compared to 4,294 thousand tonnes in 2018.

The decrease of the production volume of nepheline mine in 2019 by 50 thousand tonnes or 1.2% compared to 2018 is mainly because of the mining works schedule.

Nepheline mines (Achinsk)	Interest	Year ended 31 December		Change year-on- year
(kt WET)		2019	2018	(%)
Kiya Shaltyr Nepheline Syenite	100%	4,244	4,294	(1.2%)
Total production		**4,244**	**4,294**	**(1.2%)**

FOIL AND PACKAGING PRODUCTIONS

The volume of foil produced by the Group's facilities in 2019 amounted to 98 thousand tonnes of foil materials, up 9.05 kt or 10.2% from 2018.

The output increase was mainly because of the recovery of demand after sanctions against the Group have been lifted on 27 January 2019. Higher volumes in 2019 were reported for both domestic and export sales.

Foil Mills	Interest	Year ended 31 December			Change 2019-on- 2018
(kt)		2019	2018	dev	(%)
Domestic market (RF and CIS)		**48.57**	**43.60**	**4.97**	**11.4%**
Sayanal	100%	28.05	24.43	3.62	15.0%
including converted foil		9.50	9.49	0.01	0.1%
Ural Foil	100%	16.42	15.14	1.28	8.5%
Sayana Foil	100%	4.10	4.02	0.08	2.0%
Export		**49.43**	**45.35**	**4.08**	**9.0%**
Sayanal	100%	11.27	10.32	0.95	9.2%
Ural Foil	100%	7.61	6.51	1.10	16.9%
Armenal	100%	30.55	28.52	2.03	7.1%
Total production		**98.00**	**88.95**	**9.05**	**10.2%**

WHEEL BUSINESS

Output, thousand	Year ended 31 December		Change year-on- year
	2019	2018	
Aluminium discs, including	3,053	970	215%
SKAD	957	970	(1)%
K&K	2,096	–	100%

K&K, a new plant purchased by RUSAL in December 2018, accounted for the significant production increase in 2019.

The output in the comparable perimeter remained at the 2018 level with a minor reduction (1-3%) caused by a change of the output structure as well as an inactive car market, which slowed down the sales by the end of the year.

OTHER BUSINESS

	Year ended 31 December		Change year-on- year
(t) unless otherwise indicated	2019	2018	(%)
Secondary alloys	18,161	14,313	26.9%
Powders	23,168	25,749	(10.0%)
Silicon	48,143	56,800	(15.2)%
Coal (50%) (thousand tonnes)	22,424	22,433	0%
Transport (50%) (thousand tonnes of transportation)	3,783	5,773	(34.5)%

Powders

In 2019 production reduced because of sanctions, which had been imposed against RUSAL during contracting with European consumers of coarse powders for 2019 (buyers entered into annual contracts with alternative suppliers). Also, production of special aluminium gas forming agents reduced temporarily because there was a partial emergency shutdown of capacities in Volgograd in 4Q 2018.

Secondary alloys

The growth in 2019 is the result of processing of the additional volume of slag due to the joining of a new wheel-business enterprise (K&K LLC) as well as due to the processing of excess slag residues accumulated in 2018.

Silicon production

Production volumes in 2019 decreased in comparison with 2018 due to falling market prices for silicon and, as a result, unprofitable production at RUSAL Kremny Ural LLC. The reduction of production volumes and personnel was carried out in stages over the course of the year. The facility was completely stopped on 1 December, 2019; the Company's staff was retained in the quantity necessary to launch the facility when the situation on the silicon market improves.

The work of Kremny JSC continued in full during 2019. The delivery of equipment for the construction of the gas cleaning plant for distribution transformer substations 1, 2 of Kremny JSC has started.

NEW PROJECTS DIRECTORATE

Volkhov Aluminium Smelter: based on previous decisions and agreements reached, a deal to sell asset complex of VAZ to AO METACHIM was completed in 2019.

Aluminium production results

The New Projects Directorate comprises the Nadvoitsy Aluminium Smelter, the aluminium production of the Urals Aluminium Smelter (all in Russia), ALSCON (Nigeria).

In 2019, there were no major changes in the status of aluminium production at ALSCON which had shut down in 2013.

Nadvoitsy Aluminium Smelter: it was decided to dismantle the equipment.

A decision was made and agreements were reached on the sale of part of the movable and immovable property of Nadvoitsy Aluminium Smelter to AVTORITET NSK LLC, including the main equipment of the reduction area with its subsequent dismantling. The deal was completed in May 2019.

The facility continues its activities related to the leasing of property.

Urals Aluminium Smelter: aluminium production was stopped in 2013.

In 2019, it was decided to dismantle the main and other equipment of the reduction area with the involvement of contractors. The manning table was approved, and the dismantling service was formed. At the end of 2019, we started the process of organizing dismantling works.

Downstream projects

One of the key activities of the New Projects Directorate 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:

- Bogoslovsky Cable Plant LLC (BKZ) is a joint venture for the production of cable and wire products in Krasnoturyinsk, founded in December 2016. Since April 2017, BKZ has been a resident of the priority social and economic development area.

  In July 2019, after completing the reconstruction of the production building and the construction of networks and utilities, a workshop for the production of cable and wire products was put into operation. Modern equipment for the production of cable and wire products was purchased, installed and put into operation: drawing lines, stranding machines, extrusion lines, armouring lines, bake oven, test station and auxiliary equipment. Production of cable and wire products has started: flexible aluminium cable, oil-submersible cable, self-supporting insulated wire, power cable.

  The volume of production in 2019 amounted to 379.7 tonnes by weight of metal, including 55 tonnes of cable and wire products and 324.7 tonnes of semi-finished products.

  Mandatory product certification was carried out and certificates were obtained. In December 2019, a certificate of quality management system according to ISO 9001:2015 was obtained.

  Accreditation at major customers (Rosneft, Gazprom), formation of a client base, participation in tender procedures, including at electronic platforms, and distribution of samples to customers are carried out.

  Development of production technology, hiring and training of personnel in cable production professions are carried out.

- At the industrial site of Nadvoitsy Aluminium Smelter, aluminium radiators for household use are produced. The project is implemented in a joint venture with ELSO Group of companies (50/50). The facility is the resident of a Priority Social and Economic Development Area.

  Certificates of compliance for manufactured goods as per GOST 31311-2005 were obtained.

  In November 2019, a license was obtained for the right to operate a hazardous production facility (HPF), and the commissioning stage was completed.

  The foundry complex was retrofitted for the production of bimetallic radiators. A robotic grip, a cooling station and a fettler were installed. The company has started industrial production and continuously improves the technology and trains the personnel.

  In 2019, three new product models were developed, which are planned for production in 2020.

Coal production results

The aggregate coal production attributable to the Company's 50% share in JV Bogatyr Coal LLP 22,424 thousand tonnes in 2019, as compared to 22,433 thousand tonnes in 2018.

Transportation results

The products transported by JV LLP Bogatyr Trans, in which the Company has a 50% share, decreased by 34.5% from 5,773 thousand tonnes in 2018 to 3,783 thousand tonnes in 2019 due to a decrease in demand in Russian Federation and in Kazakhstan.

FINANCIAL OVERVIEW

Revenue

	Year ended 31 December 2019			Year ended 31 December 2018		
	USD million	kt	Average sales price (USD/tonne)	USD million	kt	Average sales price (USD/tonne)
Sales of primary aluminium and alloys	8,019	4,176	1,920	8,293	3,671	2,259
Sales of alumina	664	1,753	379	975	1,930	505
Sales of foil and other aluminium products	410	–	–	346	–	–
Other revenue	618	–	–	666	–	–
Total revenue	**9,711**			**10,280**		

Total revenue decreased by USD569 million or by 5.5% to USD9,711 million in 2019 compared to USD10,280 million in 2018.

	Quarter ended 31 December		Change quarter on quarter, % (4Q to 4Q)	Quarter ended 30 September	Change quarter on quarter, % (4Q to 3Q)	Year ended 31 December		Change year-on-year, %
	2019 (unaudited)	2018 (unaudited)		2019 (unaudited)		2019	2018	
Sales of primary aluminium and alloys								
USD million	2,073	1,855	11.8%	2,069	0.2%	8,019	8,293	(3.3%)
Kt	1,107	877	26.2%	1,091	1.5%	4,176	3,671	13.8%
Average sales price (USD/t)	1,873	2,115	(11.4%)	1,896	(1.2%)	1,920	2,259	(15.0%)
Sales of alumina								
USD million	162	256	(36.7%)	162	0.0%	664	975	(31.9%)
Kt	512	473	8.2%	450	13.8%	1,753	1,930	(9.2%)
Average sales price (USD/t)	316	541	(41.6%)	360	(12.2%)	379	505	(25.0%)
Sales of foil and other aluminium products (USD million)	93	72	29.2%	112	(17.0%)	410	346	18.5%
Other revenue (USD million)	161	182	(11.5%)	143	12.6%	618	666	(7.2%)
Total revenue (USD million)	**2,489**	**2,365**	**5.2%**	**2,486**	**0.1%**	**9,711**	**10,280**	**(5.5%)**

Revenue from sales of primary aluminium and alloys decreased by USD274 million, or by 3.3%, to USD8,019 million in 2019, as compared to USD8,293 million in 2018, primarily due to 15.0% decrease in the weighted-average realized aluminium price per tonne (to an average of USD1,920 per tonne in 2019 from USD2,259 per tonne in 2018) driven by a decrease in the LME aluminium price (to an average of USD1,792 per in 2019 from USD2,110 per tonne in 2018), which was partially offset by a 13.8% increase in primary aluminium and allows sales volume.

Revenue from sales of alumina decreased by 31.9% to USD664 million for the year ended 31 December 2019 from USD975 million for the year ended 31 December 2018 due a decrease in the average sales price by 25.0% together with a decrease in the sales volumes by 9.2%.

Revenue from sales of foil and other aluminium products increased by USD64 million, or by 18.5%, to USD410 million in 2019, as compared to USD346 million in 2018, due to an increase in revenue from sales of aluminium wheels by USD62 million between the comparable periods.

Revenue from other sales, including sales of other products, bauxite and energy services decreased by 7.2% to USD618 million for the year ended 31 December 2019 as compared to USD666 million for the previous year, due to a 3.5% decrease in sales of other materials (such as silicon by 23.0%, aluminium powder by 10.6%, potassium sulfate by 15.5%).

Cost of sales

The following table demonstrates the breakdown of RUSAL's cost of sales for the year ended 31 December 2019 and 2018, respectively:

	Year ended 31 December		Change year-on-year, %	Share of costs, %
	2019	2018		
(USD million)				
Cost of alumina	764	877	(12.9%)	9.4%
Cost of bauxite	483	495	(2.4%)	6.0%
Cost of other raw materials and other costs	2,515	2,833	(11.2%)	31.0%
Purchases of primary aluminium from JV	454	307	47.9%	5.6%
Energy costs	2,054	2,147	(4.3%)	25.3%
Depreciation and amortisation	549	498	10.2%	6.8%
Personnel expenses	499	582	(14.3%)	6.2%
Repairs and maintenance	358	74	383.8%	4.4%
Reversal of inventories	(16)	(20)	(20.0%)	(0.3%)
Change in finished goods	453	(347)	NA	5.6%
Total cost of sales	**8,113**	**7,446**	**9.0%**	**100.0%**

Total cost of sales increased by USD667 million, or by 9.0%, to USD8,113 million for the year ended 31 December 2019, as compared to USD7,446 million for the year ended 31 December 2018. The increase was primarily driven by 13.8% increase in primarily aluminium sales volume, which was partially offset by depreciation of Russian Ruble against US dollar between the comparable periods.

Cost of alumina decreased by USD113 million, or by 12.9%, to USD764 million in 2019 as compared to USD877 million in 2018 primarily due to the decrease in alumina purchase price by 16.5% between the periods.

Cost of raw materials (other than alumina and bauxite) and other costs decreased by 11.2% for the year ended 31 December 2019 compared to the same period of 2018, due to a decrease in raw materials purchase price (prices for the calcined petroleum coke by 12.5%, raw pitch coke by 4.9%, anode blocks by 15.7%, caustic soda by 33.0%).

Cost of bauxite were almost flat between the comparable periods.

Energy costs decreased by USD93 million, or by 4.3%, to USD2,054 million for the year ended 31 December 2019, as compared to USD2,147 million for the year ended 31 December 2018 due to depreciation of Russian Ruble against US dollar and a decrease in the average electricity prices between the same periods.

The finish goods mainly consist of primary aluminium and alloys (app.92%). The dynamic of change between the reporting periods was driven by the fluctuations of primary aluminium and alloys physical inventory between the reporting dates: 38.0% decrease in 2019 and 40.7% increase in 2018.

Distribution, administrative and other expenses

Distribution expenses increased by 16.7% to USD539 million in 2019, compared to USD462 million in 2018, primarily due to the increase in primarily aluminium sales volume, as well as the increase in transportation tariffs partially compensated by depreciation of the Russian Ruble against the US Dollar between the periods.

Administrative expenses decreased to USD594 million in 2019 as compared to USD629 million in 2018 primarily due to depreciation of Russian Ruble against US dollar between the periods.

Gross profit

As a result of the foregoing factors, RUSAL reports a gross profit of USD1,598 million for the year ended 31 December 2019 as compared to USD2,834 million for the year ended 31 December 2018, representing gross margins over the periods of 16.5% and 27.6%, respectively.

Adjusted EBITDA and Results from operating activities

	Year ended 31 December		Change year-on-year, %
	2019	2018	
(USD million)			
Reconciliation of Adjusted EBITDA			
Results from operating activities	87	1,481	(94.1%)
Add:			
Amortisation and depreciation	566	513	10.3%
Impairment of non-current assets	291	157	85.4%
Loss on disposal of property, plant and equipment	22	12	83.3%
Adjusted EBITDA	**966**	**2,163**	**(55.3%)**

Adjusted EBITDA, defined as results from operating activities adjusted for amortization and depreciation, impairment charges and loss on disposal of property, plant and equipment, decreased to USD966 million for the year ended 31 December 2019, as compared to USD2,163 million for the year ended 31 December 2018. The factors that contributed to the decrease in Adjusted EBITDA margin were the same that influenced the operating results of the Company.

Finance income and expenses

	Year ended 31 December		Change, year-on-year,%
	2019	2018	
(USD million)			
Finance income			
Interest income on third party loans and deposits	44	31	41.9%
Interest income on loans to related party			
– companies related through parent company	1	1	0.0%
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%)*
	45	**203**	**(77.8%)**
Finance expenses			
Interest expense on bank loans and company loans, bonds and other bank charges, including	(576)	(498)	15.7%
Interest expense	*(517)*	*(459)*	*12.6%*
Bank charges	*(59)*	*(39)*	*51.3%*
Other finance cost	(13)	(2)	550.0%
Interest expense on provisions	(8)	(3)	166.7%
Net foreign exchange loss	(124)	(183)	(32.2%)
Change in fair value of derivative financial instruments, including:	(21)	–	100.0%
Change in fair value of embedded derivatives	*(6)*	–	*100.0%*
Change in other derivatives instruments	*(15)*	–	*100.0%*
Lease interest cost	(5)	–	100.0%
	(747)	**(686)**	**8.9%**

Finance income decreased by USD158 million, or 77.8% to USD45 million for the year ended 31 December 2019 compared to USD203 million for the year ended 31 December 2018 primarily due to net loss on change in fair value of derivative financial instruments in 2019 as compared to the net profit from this item in 2018.

Finance expenses increased by USD61 million or by 8.9% to USD747 million in 2019 as compared to USD686 million for the corresponding period of 2018 primarily due to the reason described above as well as 15.7% increase of interest expense and other bank charges between the comparable periods.

Share of profits of associates and joint ventures

(USD million)	Year ended 31 December 2019	2018	Change, year-on-year,%
Share of profits of Norilsk Nickel,	1,587	885	79.3%
with Effective shareholding of	*27.82%*	*27.82%*	
Share of profits of associates	**1,587**	**885**	79.3%
Share of profits of joint ventures	**82**	**70**	17.1%

The Company's share in profits of associates for the years ended 31 December 2019 and 2018 amounted to USD1,587 million and USD885 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 2019 was USD13,586 million as compared to USD8,286 million as at 31 December 2018.

Share of profits of joint ventures was USD82 million for the year ended 31 December 2019 as compared to USD70 million for the same period in 2018. 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 USD1,054 million for the year ended 31 December 2019, as compared to a profit before income tax in an amount of USD1,953 million for the year ended 31 December 2018 due to reasons set out above.

Income tax

Income tax expense decreased by USD161 million to USD94 million in 2019, as compared to USD255 million in 2018.

Current tax expenses decreased by USD143 million, or 46.9%, to USD162 million for the year ended 31 December 2019, as compared to USD305 million for the previous year primarily due to decrease in taxable profit.

The deferred tax benefit increased by USD18 million, or 36.0%, to USD68 million for the year ended 31 December 2019, as compared to USD50 million for the previous year primarily due to the tax effect of accruals of certain temporary differences, change in fair value of derivative financial instruments and reversal of deferred withholding tax related to the share of the Company in Norilsk Nickel's profits.

Profit for the period

As a result of the above, the Company recorded a profit of USD960 million in 2019, as compared to USD1,698 million in 2018.

Adjusted and Recurring Net (Loss)/Profit

	Quarter ended 31 December		Change quarter on quarter, % (4Q to 4Q)	Quarter ended 30 September	Change quarter on quarter, % (4Q to 3Q)	Year ended 31 December		Change year-on-year, %
	2019	2018		2019		2019	2018	
(USD million)	unaudited	unaudited		unaudited				
Reconciliation of Adjusted Net (Loss)/Profit								
Net profit for the period	141	149	(5.4%)	194	(27.3%)	960	1,698	(43.5%)
Adjusted for:								
Share of profits and other gains and losses attributable to Norilsk Nickel, net of tax effect	(505)	(118)	328.0%	(274)	84.3%	(1,543)	(839)	83.9%
Change in the fair value of derivative financial liabilities, net of tax (20%)	6	(39)	NA	24	(75.0%)	22	(160)	NA
Impairment of non-current assets, net of tax	220	(9)	NA	22	900.0%	291	157	85.4%
Adjusted Net (Loss)/Profit	**(138)**	**(17)**	**711.8%**	**(34)**	**305.9%**	**(270)**	**856**	**NA**
Add back:								
Share of profits of Norilsk Nickel, net of tax	505	118	328.0%	274	84.3%	1,543	839	83.9%
Recurring Net Profit	**367**	**101**	**263.4%**	**240**	**52.9%**	**1,273**	**1,695**	**(24.9%)**

Adjusted Net (Loss)/Profit for any period is defined as the net (loss)/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 (Loss)/Profit plus the Company's net effective share in Norilsk Nickel results.

Assets and liabilities

RUSAL's total assets increased by USD2,037 million, or 12.9%, to USD17,814 million as at 31 December 2019 as compared to USD15,777 million as at 31 December 2018. The increase in total assets driven primarily by the increase in investments in associates and cash and cash equivalents.

Total liabilities increased by USD499 million, or 4.7%, to USD11,067 million as at 31 December 2019 as compared to USD10,568 million as at 31 December 2018 mainly due to the increase in the Company's trade and other payables.

Cash flows

The Company generated net cash from operating activities of USD1,652 million for the year ended 31 December 2019 as compared to USD680 million for the previous year driven by the net decrease in working capital and provisions to USD950 million for 2019 as compared to the net increase in working capital and provisions to USD1,270 million for the previous year.

The Company generated USD246 million net cash from investing activities for the year ended 31 December 2019 as compared to USD106 million net cash used in the investing activities in the previous year primarily due to an increase in dividends from associates and joint ventures in 2019.

The above mentioned factors allowed the Company to assign USD337 million of its own cash flows for the debt repayment that together with the interest payments of USD553 million represent the main components of the cash used in the financing activities with the total net amount of USD949 million for 2019.

Segment reporting

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

The core segments are Aluminium and Alumina.

	Year ended 31 December			
	2019		2018	
	Aluminium	Alumina	Aluminium	Alumina
(USD million)				
Segment revenue				
kt	*4,036*	*7,662*	*3,596*	*7,525*
USD million	*7,732*	*2,539*	*8,068*	*2,753*
Segment result	800	(51)	1,813	239
Segment EBITDA[14]	1,167	79	2,150	353
Segment EBITDA margin	15.1%	3.1%	26.6%	12.8%
Total capital expenditure	554	267	271	332

The segment result margin (calculated as a percentage of segment profit to total segment revenue per respective segment) for aluminium segment decreased to 10.3% for the year ended 31 December 2019 from 22.5% for the year ended 31 December 2018, and decreased to negative 2.0% compared to positive 8.6%, 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 2019.

Capital expenditure

RUSAL recorded a total capital expenditure of USD848 million for the year ended 31 December 2019. RUSAL's capital expenditure in 2019 was aimed at maintaining existing production facilities.

14 Pro-rata share of production attributable to RUSAL.

	Year ended 31 December	
	2019	2018
(USD million)		
Development capex	349	453
Maintenance		
Pot rebuilds costs	131	101
Re-equipment	368	280
Total capital expenditure	**848**	**834**

The BEMO project companies utilise 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.

Consolidated financial statements

The audited consolidated financial statements of RUSAL for the year ended 31 December 2019 were approved by the Directors on 12 March 2020, and reviewed by the Audit Committee.

The full set of audited consolidated financial statements of RUSAL, together with the report of the independent auditor is available on RUSAL's website at http://www.rusal.ru/en/investors/financial_stat.aspx.

Purchase, sale or redemption of RUSAL's listed securities

Save as the redemption of bonds as disclosed in note 19(b) to the consolidated financial statements neither the Company nor any of its subsidiaries repurchased, sold or redeemed any of their securities during the financial year ended 31 December 2019.

Code of Corporate Governance Practices

RUSAL adopted a corporate code of ethics that 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 Listing Rules. The Directors consider that save for code provision A.1.7 (physical board meetings at which Directors have material interests) and A.6.7 (attendance of Directors at AGM) for reason set out below and also on page 102 of the RUSAL's interim report for the six months ended 30 June 2019, RUSAL has complied with the code provisions as set out in the Corporate Governance Code and Corporate Governance Report in Appendix 14 to the Listing Rules during the period from 1 January 2019 to 31 December 2019.

The Board generally endeavoured throughout the twelve-month period ended 31 December 2019 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 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 ten Board meetings held, there were eight occasions where one or more independent non-executive Directors 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.

Of the eight Board meetings held in the twelve month period ended 31 December 2019 where one or more Directors had disclosed a material interest, all the independent non-executive Directors were present at six of the Board meetings held. Given the size of the Board and the amount of urgent business transacted by the Company where Director(s) have material interests, it is difficult to rearrange any scheduled Board meeting or postpone the discussion of such business in order to ensure all of the independent non-executive Directors are present. The Board meeting on those occasions therefore proceeded despite the fact that the independent non-executive Director was unable to attend but on such occasions the other independent non-executive Directors were present.

Audit Committee

The Board established an 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. Maxim Poletaev (chairman of the committee, independent non-executive Director), Dr. Elsie Leung Oi-sie (independent non-executive Director), Mr. Dmitry Vasiliev (independent non-executive Director) and Mr. Kevin Parker (independent non-executive Director).

On 12 March 2020, the Audit Committee has reviewed the financial results of the Company for the year ended 31 December 2019.

Material events since the end of the year

21 January 2020	Fitch Ratings ("**Fitch**") has revised the rating outlook on the Company's Long-Term Issuer Default Rating (**IDR**) to Negative from Stable and affirmed the IDR "BB-". Fitch has also affirmed Rusal Capital D.A.C.'s senior unsecured rating at "BB-"/"RR4".
3 February 2020	RUSAL decided to suspend the operations of its business in Guyana as a result of serious illegitimate actions that have gone beyond the control of government and enforcement agencies. The suspension of BCGI will have no impact on the Company's overall performance, as the expected decline in the overall bauxite supply from Guyana will be substituted with raw material from other mines.
3 February 2020	EN+ completed the second stage of the securities exchange agreement with certain subsidiaries of Glencore plc. As a result, En+'s shareholding in the Company has increased to approximately 56.88% of the total issued share capital of the Company.
6 February 2020	RUSAL has been identified as a global leader for engaging with its suppliers on climate change by the Carbon Disclosure Project's (**CDP**) Supplier Engagement Leaderboard. The high CDP rating is further evidence of RUSAL's successful efforts to reduce emissions, manage climate risks and ensure transparent communications in this area.
28 February 2020	RUSAL announced operating results for the 4Q 2019 and full year 2019. Starting in 2020, the Company will release extended quarterly trading updates on a regular basis, but will stop the announcement and publication of quarterly financial results. The Company will continue to release its financial results for the half-year and full year periods.

Loans and borrowings

The nominal value of the Group's loans and borrowings was USD5,612 million as at 31 December 2019, not including bonds, which amounted to an additional USD2,601 million.

Set out below is an overview of certain key terms of the selected facilities in the Group's loan portfolio as at 31 December 2019:

Facility/Lender	Principal amount outstanding as at 31 December 2019	Tenor/Repayment Schedule	Pricing
Syndicated facilities			
PXF facility	USD1.085 billion	Up to USD1.085 billion syndicated aluminium pre-export finance term facility – until November 2024 equal quarterly repayments starting from January 2022	3 month LIBOR plus 2.25% 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.
The Russian Regional Development Bank (RRDB)	USD200 million	December 2020, bullet repayment at final maturity date	3.6% p.a.
Sberbank loan	USD2.1 billion RUB110.2 billion	December 2024, quarterly repayments starting from June 2021	3 month LIBOR plus 3.75% p.a. 9.15%
Bonds			
Eurobond	USD592 million	February 2022, repayment at final redemption date	5.125% p.a.
Eurobond	USD491 million	May 2023, repayment at final redemption date	5.3% p.a.
Eurobond	USD498 million	February 2023, repayment at final redemption date	4.85% p.a.
RUB Bonds	RUB60 billion (equivalent USD936 million after cross-currency swaps)	4 tranches, the last repayment is November 2029, repayments at final redemption dates, subject to a bondholders' put option exercisable within 3.0-3.5 years	3.65% – 4.69% p.a. (after cross-currency swaps)

The average maturity of the Group's debt as at 31 December 2019 was 3.1 years.

Security

As of the date of 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

On 25 October 2019, the Group entered into new five-year sustainability-linked pre-export finance facility for USD1,085,000,000. The interest rate is subject to a sustainability discount or premium depending on the Company's fulfilment of the sustainability key performance indicators (KPI). The proceeds were used to partly refinance the principal outstanding under the existing up to USD2 billion pre-export finance facility.

Debt Capital Markets

On 20 March 2019, the Group executed the put option under Panda bonds issuance (the first tranche) and redeemed bonds with notional value CNY680 million (USD101 million).

On 29 March 2019, RUSAL Bratsk announced a new coupon rate in respect of 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 and redeemed the bonds with notional value of RUB23.8 million.

On 4 April 2019, RUSAL Bratsk announced a new coupon rate in respect of 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 and redeemed the bonds with notional value of RUB3.8 billion.

On 29 April 2019, placement of the exchange-traded Ruble bonds of PJSC RUSAL Bratsk series BO-001P-01 in the amount of RUB15 billion with a coupon rate 9.0% was completed and the exchange-traded Ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years, subject to bondholders' put option exercisable in April 2022. In addition to the placement, the Group entered into a cross-currency interest rate swap, which resulted in the exchange-traded Ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3 years and the interest rate of 4.69%.

On 11 July 2019, placement of the exchange-traded Ruble bonds of PJSC RUSAL Bratsk series BO-001P-02 in the amount of RUB15 billion with a coupon rate 8.6% was completed and the exchange-traded Ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years, subject to bondholders' put option exercisable in January 2023. In addition to the placement, the Group entered into a cross-currency interest rate swap, which resulted in the exchange-traded Ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3.5 years and the interest rate of 4.45%.

On 4 September 2019, the Group executed the put option under Panda bonds issuance (the second tranche) and redeemed bonds with notional value CNY480 million (USD67 million).

On 12 September 2019, placement of the exchange-traded Ruble bonds of PJSC RUSAL Bratsk series BO-001P-03 in the amount of RUB15 billion with a coupon rate 8.25% was completed and the exchange-traded Ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years subject to bondholders' put option exercisable in September 2022. In addition to the placement, the Group entered into 2 cross-currency interest rate swaps, which resulted in the exchange-traded Ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3 years for both swaps and the interest rates of 3.82% and 3.85%.

On 14 November 2019, placement of the exchange-traded Ruble bonds of PJSC RUSAL Bratsk series BO-001P-04 in the amount of RUB15 billion with a coupon rate 7.45% was completed and the exchange-traded Ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years subject to bondholders' put option exercisable in November 2022. In addition to the placement, the Group entered into a cross-currency interest rate swap, which resulted in the exchange-traded Ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3 years and the interest rate of 3.65%.

Ratings

On 26 March 2019, Fitch Ratings assigned to the Company a Long-Term Issuer Default Rating (IDR) of "BB-" with Stable outlook. On 21 January 2020 Fitch revised outlook to Negative and affirmed Long-Term Issuer Default Rating (IDR) at "BB-".

On 8 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.

On 2 July 2019, China Chengxin Securities Rating Co., Ltd. has upgraded Company's corporate credit rating to AAA from AA+. The outlook is stable.

On 18 March 2020, Expert RA, a Russian rating agency, withdrew, without confirmation, UC Rusal's credit rating following the expiration of the rating service agreement. The Company decided to refrain from extending the agreement for cost optimisation purposes, given that the Group's issuer in the domestic market is only PJSC RUSAL Bratsk, and ratings assigned by national agencies are only necessary for the Group in terms bond issues in the domestic market.

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 2019 was 46.3% (as at 31 December 2018 – 52.5%, as at 31 December 2017 – 53.8%, as at 31 December 2016 – 62.0%, as at 31 December 2015 – 69.3%).

Return on Equity

The Group's return on equity, which is the amount of net profit as a percentage of total equity, as at 31 December 2019 was 14.2% (as at 31 December 2018 – 32.6%, as at 31 December 2017 – 27.5%, as at 31 December 2016 – 35.7%, as at 31 December 2015 – 40.1%).

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 year ended 31 December 2019 was 3.2 (for the year ended 31 December 2018 – 5.6, for the year ended 31 December 2017 – 3.8, for the year ended 31 December 2016 – 3.6, for the year ended 31 December 2015 – 2.4).

Environmental Performance and Safety

Industrial Safety

In 2019, the LTAFR (Lost Time Accident Frequency Rate) was 0.22, which is an increase as compared with the LTAFR of 0.16 in 2018, but does not exceed the global average for the aluminium industry in 2018 (according to the International Aluminium Institute).

Environmental indicators

Environmental charges for air emissions and discharges of liquids and other substances amounted to USD6.8 million in 2017, USD7.0 million in 2018, and USD7.7[15] million in 2019. There were no material environmental pollution incidents at any of the Group's sites or facilities during the year ended 31 December 2019.

Employees

The table below shows an aggregate average number of staff (a full-time equivalent), employed by each division of the Group in 2018 and 2019, respectively.

Division	Year ended 31 December 2018	Year ended 31 December 2019
Aluminium	18,849	19,058
Alumina	21,280	22,252
Engineering and Construction	14,411	3,717
Energy	28	27
Packaging	2,136	2,128
Management Company	813	715
Technical	1,335	1,458
Other	5,204	5,626
Total	**64,056**	**54,981**

15 The increase in environmental charges (payments) as compared to the 2018 level (10%) is due to the transitional period of amendments to the environmental laws of the Russian Federation with respect to requirements to permissive documents and their approval by governmental authorities.

Compensations and benefits

A compensation paid by the Group to an employee is based on his/her qualification, experience and performance as well as job complexity. As a rule, the salary is reconsidered annually and changed in accordance with efficiency and a local labour market environment.

Under the effective collective labour contract the salary of employees of the Company's smelters is subject to increase every year to compensate for inflation based on official reports published by the Federal State Statistics Service of the Russian Federation in relation to a minimum living wage of the employed population and the Consolidated Consumer Price Index.

RUSAL's HR Policy and the Corporate Code of Ethics regulate relations between the Group and its employees. The Corporate Code of Ethics of the Group strictly prohibits sex, race and/or religious discrimination as well as any form of child, forced or bonded labour.

Labour relations

Approximately 60% of employees of the Group are part of trade unions and 95% of employees work under collective labour contracts.

Company's productions participated in an industrial competition titled "Mining and Metallurgical Facility with a High Social Performance", six of them got onto the list of winners. RUSAL Krasnoyarsk won the "Social and Economic Efficiency of the Collective Contract" nomination; RUSAL Sayanogorsk – the "Health" nomination; RUSAL Bratsk – "Personnel Development"; the Shelekhov branch of RUSAL Bratsk – "Health and Safety"; RUSAL Achinsk and RUSAL Novokuznetsk – "Environment and Efficient Use of Resources".

In December 2019, the Company acted as part of the Association of Mining and Metallurgical Industrialists of Russia signed the 2020 to 2022 Sectoral Tariff Agreement with the Mining and Metallurgical Trade Union. The industry tariff agreement defines a set of benefits and compensations for all metallurgical enterprises in the industry, including all RUSAL enterprises in the Russian Federation. Also, on the basis of the OTS, collective agreements are concluded at enterprises that regulate the relationship between primary trade Union organizations (representatives of employees) and the administration of enterprises.

Changes in the corporate organizational structure

The Company undertook a number of obligations due to signing of the Terms of Reference (the "**TOR**") of OFAC and established a compliance department, reporting to the CEO, to ensure compliance with the TOR.

There were structural changes to the Engineering and Construction Division as part of maintenance re-organization.

Creation of a new generation of highly qualified specialists (external succession pool)

In 2019, the Company continued to train and develop its external and internal succession pool actively, provide professional knowledge to students and implement special projects associated with a promotion of the RUSAL brand being an attractive employer.

Number of students learning under the target recruitment program:

Universities and Colleges	People		
	2017	2018	2019
Siberian Federal University (students from Krasnoyarsk, Sayanogorsk and Bratsk)	51	14	19
Irkutsk State Technical University (students from Bratsk and Irkutsk)	12	8	9
Ural Federal University (students from Krasnoturyinsk and Kamensk-Uralsky)	6	12	–
The Kamensk-Uralsky branch of Ural Federal University (students from Kamensk-Uralsky)	–	–	8
Siberian State Industrial University (students from Novokuznetsk)	5	–	1
Ural State Mining University (students from Severouralsk and Kamensk-Uralsky)	20	20	18
Kamensk-Uralsky Polytechnics (students from Kamensk-Uralsky)	20	19	18
Krasnoyarsk Industrial and Metallurgical College (students from Krasnoyarsk)	15	11	15
Divnogorsk Hydroenergy Technical School (students from Divnogorsk)	–	–	11
Volgograd State Technical University (students from Volgograd)	11	1	8
Volgograd Management and New Technologies College	25	25	20
Achinsk Transport and Agricultural College	–	12	–
Total	**165**	**122**	**127**

The “New Generation” apprenticeship program was launched in 2017 as part of the external succession pool development. Mainly, the program addresses the workforce rejuvenation by engaging young experts with high potential. The participants were selected from the best graduates of target colleges and universities with high average score (above 4.5), English skills, willingness to relocate etc. A supervisor is assigned to every apprentice, who designs an individual development plan and helps adapt to the new environment and set professional targets and reach them. The probation period lasts 6 months. During the probation apprentices cope with fascinating and complicated projects and, then, defend them before their teams and heads of HR. If they defend successfully, a decision is taken whether or not the student can be employed full time. In 2019, the program involved 100 students with over 85% of them still working for RUSAL.

In 2019, the Company continued to implement the “RUSAL’s Laboratory” project. During the year the following four labs have been operating successfully as part of the project: in the Siberian Federal University, the Siberian State Industrial University, the Volgograd Technical University and the Irkutsk National Research Technical University. There were two terms, spring and autumn, when students solved topical problems of RUSAL. As a result, a team of experts consisting of the Company’s representatives and Management of universities selected over 20 projects.

In addition, there were centres of excellence functioning in two labs – the Siberian Federal University and the Siberian State Industrial University – where students were trained intensively for the Unified State Exam in RUSAL-specific disciplines. In 2020, Bratsk and Achinsk plan to open such centres to train students and help them get to the Basic Departments of RUSAL.

RUSAL opened offices in the Siberian Federal University, the Siberian State Industrial University, the Irkutsk National Research Technical University and the Volgograd Technical University while admission boards were functioning in order to enhance prestige of metallurgical and mining professions. RUSAL consulted applicants and their parents on professions and education demanded in the aluminium industry.

In 2019, over 4,000 students visited Company’s productions and received career guidance.

In 2019, the “Alchemistry of the Future”, a competition among schoolchildren with RUSAL being the general partner, almost doubled: over 2,200 pupils became its participants; 30 schools became organisers and 7 colleges acted as partners. It should be reminded that the “Alchemistry of the Future competition” is the only Metallurgy-oriented contest; and its aim is to disseminate science among the youth and knowledge of metallurgy, fundamentals and advanced technology, identify and develop potential employees of the Company.

In 2019, the Company distributed 576 vouchers to employees’ children letting them have rest in the corporate recreation full-time industry-specific camp (Sayanogorsk) and 80 vouchers to the day-care camp (Krasnoturyinsk), where children became career guided under the “Expedition to planet RUSAL” corporate program.

Foreign students

In 2019, as part of the engineering training for students who would work at African assets of RUSAL, 78 students from Guinea were admitted to bachelor degree courses; 17 students were admitted to technical colleges and three students were appointed as interns. At the moment, 123 students from Guinea and Jamaica are being educated in Russia.

Formation and development of the internal succession pool

In 2019, 426 BS-250 candidates were trained in management competences. They studied the following topics: public presentations, target setting – tools and practice as well as inspirational leadership.

Sixty-three BS-250 graduates shifted to BS250+, where they studied project management and strategic management.

In 2019, 338 succession pool candidates studied the following disciplines (among others): internal and external communications; strategic team-building; public presentations under pressure; operational thinking; economics in metallurgy; team building and operation; business target orientation; leadership; a leader and a team; persuasive communication and basic management skills.

Trainings as part of functional academies

The Company constantly develops its personnel training systems with the help of systematisation and development of professional education of its white-collar staff by updating functional academies and creating target module programs for business assignments.

The Company has reviewed its approach to personnel trainings within functional academies, defined experts in areas and developed topics for personnel development. Due to the new approach to development of topics for functional academies, employees enhance their skills in accordance with their KPIs and the Company's strategy.

In 2019, the following training programs were developed (among others):

Area	Contents	Number of students
Finance	CIMA Excel102 Microsoft Excel 2016 and Power Point	41
Quality management system	SPC, APQP, FMEA, MSA, 8D ISO, IATF Production process audit Internal quality standards	40
Procurement	Business economics Working capital Project pipeline	106
Internal control and audit	ACCA Operational audit in construction Fraud management Customer under Federal Law No. 223-FZ Internal control assessment	74
Legal	Compliance risk management in international trade Reform of the Civil Code of the Russian Federation and common law analysis	13
IT, resource protection, chief power engineer, process personnel, health, safety, environment, laboratory and metrology, human resources	Cisco ORACLE C# programming SAP logistics Construction inspections and audits Capacity market and revenue metering in the wholesale electricity and capacity market	31
Theory of inventive problem-solving (TRIZ)	Improved production with the help of TRIZ tools	126

Trainings of production personnel

Special personnel development programs and projects were implemented at productions, they included, among others:

- Use of A1212 Master control tool;
- Casting under pressure 4.0;
- Aluminium alloy DC casting;
- IA500 training – new analytical tool;
- Analysis of non-metallic inclusions for better material quality;
- Software for modelling of various types of welding in the magnetic field;
- Software for data panels to rapidly obtain process info from Krasnoyarsk potrooms;
- Slab production. Updated process instruction;
- Catalogue of casting defects;
- Metal science. Aluminium alloys;
- PROPERZI contents and operation; and
- Casting process.

Since May 2019, RUSAL ETC has been designing a computer training system at RUSAL Krasnoyarsk based on a real VR 3D Pit 5 model in casthouse 3. The system is expected to commence operating in March 2020.

Bachelor, master and postgraduate training of employees in colleges and universities

- The Company brings into effect modular mandatory training programs for white and blue collars so that they could obtain a bachelor's degree in branches of the Ural Federal University, the Siberian Federal University and the Siberian State Industrial University in the following disciplines: electrical installations and systems; metallurgical machines and equipment, non-ferrous metal science; non-metal, rare and precious metal science; casting process; low-melting and high-melting metal science. As of 2019, over 115 employees of RUSAL were studying bachelor programs.
- **There are training programs for managers who will obtain master's degrees of the Siberian Federal University in non-ferrous metal sciences. As of 2019, over 70 employees of RUSAL were studying their master programs.**
- In 2019, the Company continued cooperation with the key educational partner – the Siberian Federal University in relation to re-training and qualification increase of engineers in the following disciplines: energy saving and use of secondary energy resources; health; energy audits; and advanced resource saving aluminium reduction processes. During the last year the university assisted the Company to re-train over 30 employees.
- During the year, basic departments were functioning successfully in the following universities: the Irkutsk National Research Technical University in Bratsk, the Siberian Federal University in Achinsk and Sayanogorsk. As of 2019, 72 people studied bachelor, specialist and master programs.

In 2019, a new approach was designed to engage active young people from productions through Youth Councils of the Company and the single 2020 centralised action plan was devised.

Distance learning

Training courses and employees connected to the distance learning system were audited.

Description	2015	2016	2017	2018	2019
Number of productions and functions using distance learning	54	62	67	69	57
Number of distant learners	16,693	57,257	33,649	90,806	36,835
Number of computer trainings (courses)	Over 300	Over 400	Over 500	528	Over 550

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.

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

Directorate for Control, Internal Audit and Business Coordination (hereinafter referred to as 'the Directorate for Control') is responsible for methodological support of risk management system.

The main internal documents governing the risk management system are the following:

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

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 corporate risk register and its quarterly updating;
- Risk management performance review by the Directorate for Control;

Monitoring, reporting and performance assessment of the risk management system

The Directorate for Control reports the status of significant risks to the Audit Committee on a quarterly basis. As part of these reports, the Directorate for Control provides information on the risk management system, the results of preparing risk registers, new risks and the mitigation of various types of risks.

The Audit Committee oversees how competently and adequately 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 2019, 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 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. Adverse media speculation, claims and other public statements could materially and adversely affect the value of the Shares.
7. The Group's business may be affected by labor disruptions, shortages of skilled labor and labor costs inflation.
8. The Group relies on third-party suppliers for certain materials.

9. Equipment failures or other difficulties may result in production curtailments or shutdowns.
10. The Group is subject to certain requirements under Russian anti-monopoly laws.
11. The Group operates in an industry that gives rise to health, safety and environmental risks.
12. 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.
13. 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.
14. The Group is exposed to risks relating to the multi-jurisdictional regulatory, social, legal, tax and political environment in which the Group operates.

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 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 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 2019, the amount of claims, where management were able to assess outflows, were approximately USD21 million (as compared to USD31 million as at 31 December 2018).

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 ALSCON and alleged loss of BFIG's earnings resulting from its failed bid for the said stake in ALSCON. BFIG seeks 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 it was disclosed in the announcement of the Company dated 19 January 2018.

06
PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

PROFILES OF DIRECTORS AND SENIOR MANAGEMENT

EXECUTIVE DIRECTORS

Evgenii Nikitin, aged 54 (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. Before that, he held position of acting CEO of the Company since May 2018 and RUSAL's Head of Aluminium Division since January 2014. Prior to that, he held 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 39 (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 35 (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.

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 50 (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.

From 2013 until April 2019, Mr. Musetti was a member of the board of directors of Schmolz + Bickenbach AG. 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 November 2018. Between May 2018 and November 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 senior positions with the financial departments of INTERRAO UES Power Generating Company. Between 1996 and 2005, Mr. Solomin held various managing positions at PricewaterhouseCoopers.

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.

Vladimir Kolmogorov, aged 66 (Non-executive Director)

Mr. Kolmogorov was appointed as a non-executive Director with effect from 18 May 2019. Mr. Kolmogorov is the First Deputy CEO for Technical Policy of En+ and was appointed Deputy CEO – executive Director of En+ with effect from 13 February 2020.

Since 2016 Mr. Kolmogorov has been the Head of Technical Supervision of JSC "EuroSibEnergo". Mr. Kolmogorov started his career as a foreman at Krasnoyarsk HPP in 1975, which was later followed by his employment with Sayano-Shushenskaya HPP as Deputy Head (for Automated Control Systems) of Electrical Shop, and Chief Engineer of Taymyr HPP Cascade since 1982. During 1983 to 2014 Mr. Kolmogorov held senior management positions with various energy sector companies. In 2013 he was a First Deputy General Director of PJSC "IDGC of Siberia". During 2011 to 2012 he served as a Chairman of CJSC Distributed Energy. In 2005 to 2006 Mr. Kolmogorov was a General Director of JSC "OGK-3". During 1989 to 2006 he took various executive positions with companies such as EuroSibEnergo-engineering LLC, JSC Irkutskenergo, Siberian Energy Company LLC, Krasnoyarskenergo JSC, JSC Krasnoyarsk HPP, SibirEnergo representative office of PJSC RAO UES.

Mr. Kolmogorov graduated from the Novosibirsk Electrotechnical Institute, Electrical Energy Industry Faculty, in 1975. He received his Doctor of Business Administration from the Academy of National Economy in 2007. Mr. Kolmogorov has a PhD in Economics and PhD in Electrical Engineering. He was awarded the titles of the "Honoured Energy Industry Worker of the Russian Federation", "Honoured Energy Industry Worker", and "Merited Worker of Fuel and energy Complex".

Save as disclosed in this Annual Report, Mr. Kolmogorov 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 (Non-executive Director) (Ceased to be a Director with effect from 13 May 2019)

As referred to in the announcement of the Company dated 14 May 2019, Mr. Valiev resigned as a Director with effect from 13 May 2019. Reference may be made to his profile information in the Company's Annual Report for the financial year ended 31 December 2018.

INDEPENDENT NON-EXECUTIVE DIRECTORS

Elsie Leung Oi-sie, aged 80 (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. Between 2006 and 2018, she was 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 57 (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. Mr. Vasiliev served on the supervisory board of JSC Bank "Financial Corporation Otkrytie" as Independent Non-Executive Director since February 2013 till 22 December 2017.

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 63 (Independent non-executive Director, Chairman)

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. Since 2019, Mr. Poletaev served as chairman of the board of Fortenova grupa d.d. (Zagreb, Croatia) and as a member of the board of Norilsk Nickel. 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 78 (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 60 (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 63 (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 60 (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.

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

Board Committee Directors	Audit Committee	Corporate Governance & Nomination Committee	Remuneration Committee	Health, Safety and Environmental Committee*	Standing Committee	Marketing Committee*	Norilsk Nickel Investment Supervisory Committee	Compliance Committee
Dr. Elsie Leung Oi-sie	X		C					
Mr. Dmitry Vasiliev	X	C	X	X				
Mr. Bernard Zonneveld		X			C		X	X
Mr. Marco Musetti					X	X	X	
Mr. Evgenii Nikitin								
Mr. Evgenii Vavilov								
Mr. Vyacheslav Solomin				X	X		X	
Mr. Evgeny Kuryanov								
Mr. Maxim Poletaev	C						C	
Mr. Randolph N. Reynolds		X	X					
Mr. Kevin Parker	X			C				X
Mr. Christopher Burnham		X						C
Mr. Nick Jordan			X	X				X
Mr. Vladimir Kolmogorov								

Notes: –

C – Chairman

X – member

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

SENIOR MANAGEMENT

Evgenii Nikitin, aged 54 (Chief Executive Officer)

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. Before that, he held the position of acting CEO of the Company since May 2018 and RUSAL's Head of Aluminium Division since January 2014. Prior to that, he held the position 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.

Alexandra Bouriko, aged 42 (Chief Financial Officer)

Alexandra Bouriko has been RUSAL's CFO since October 2013 until 31 December 2019. She is responsible for the financial planning, auditing and preparation of financial reports and the execution of the Company's investment programs.

From June to October 2013, Alexandra Bouriko had been serving on the Board of RUSAL.

From November 2012 to October 2013, Alexandra Bouriko had been the Deputy CEO 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; since 2005 she held the position of Partner at KPMG.

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.

Alexandr Popov, aged 49 (Chief Financial Officer)

Alexandr Popov was appointed as RUSAL's CFO since January 2020. He is responsible for the financial planning, auditing and preparation of financial reports and the execution of the Company's investment programs.

Prior to that appointment Mr. Popov was Independent consultant for business turnaround and bankruptcy procedures. From 2007 till 2017 Mr. Popov held CFO positions in such companies as En+ Group, Kolmar coal company, NIAEP-ASE, Freight Link.

Between April 2008 and November 2011 Mr. Popov was a member of the Board.

From 2000 till 2006 Mr. Popov worked at PJSC LUKOIL, Moscow, Russia as a Head of US GAAP consolidated corporate reporting.

From 1994 till 2000 he was audit manager at PricewaterhouseCoopers, Moscow, Russia.

Mr. Popov graduated from the Bauman Moscow Technical University, Moscow, Russia, with Engineer for robots and automation qualification.

In 1994 he graduated from the Togliatty Politechnical University, Togliatty, Russia with degree Master of Science: Automobile engineer.

In 1996 Mr. Popov received a degree of Bachelor of Arts: Accounting and Audit in Saratov academy of economics, Saratov, Russia.

Mr. Popov is a member of American Institute of Certified Public Accountants (AICPA), USA.

He was ranked among the top 100 Russian CFOs in 2017 by Kommersant.

Save as disclosed in this Annual Report, Mr. Popov 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.

Roman Andryushin, aged 45 (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.

Alexey Arnautov, aged 45 (Deputy CEO on New Projects)

Alexey Arnautov was appointed as Deputy CEO on New Projects in May 2019. From February 2014 until May 2019 Alexey Arnautov was the Head of New Projects Directorate.

Prior to that appointment Mr. Arnautov held an office 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.

Vladimir Berstenev, aged 70 (Deputy CEO for Operations)

Vladimir Berstenev was appointed as Deputy CEO for Operations in April 2019.

Mr. Vladimir Berstenev started his career as an operator in Krasnoyarsk smelter and represents a true example of promotion from within along all stages of professional growth within the Company.

In 2016 Mr. Vladimir Berstenev was appointed as the Advisor of Aluminium Division of the Company. Mr. Berstenev is responsible for expert advice to division management on complex production and management issues.

In 2011-2015 Mr. Vladimir Berstenev successfully performed as the CEO of Irkutsk aluminium plant of the Company.

In 2007- 2011 Mr. Vladimir Berstenev was in a role of Production Director at RUSAL Global Management B.V.

Before that, since 2002, Mr. Vladimir Berstenev worked as CEO of Bratsk aluminium plant of the Company.

Mr. Vladimir Berstenev has the professional degree as an engineer in metallurgy, graduated from Siberian Metallurgical Institute.

Mr. Vladimir Berstenev was born in 1950.

Mr. Berstenev 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 57 (Head of Downstream Division)

Andrey Donets was appointed as director of RUSAL's Downstream Division 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 aluminium beverage cans) and headed ROSTAR (Russia's largest producer of aluminium cans). In 1998, he was appointed sales & marketing director, and in 2000, as commercial director of the ROSTAR company (RUSAL subsidiary). 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.

Anton Egorov, aged 46 (General Counsel)

Anton Egorov 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. Egorov 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. Egorov spent 5 years with RUSAL in his role as the head of Russian and CIS legal affairs.

Anton Egorov 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. Egorov 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.

Aleksey Gordymov, aged 48 (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.

Yakov Itskov, aged 53 (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 RussNeft 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.

Victor Mann, aged 61 (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.

Aleksey Mitsik, aged 41 (Director, Human Resources)

Aleksey Mitsik was appointed as the Director of Human Resources in April 2019.

His 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. He is also responsible for facilitating social and motivational programs for RUSAL employees.

Mr. Alexey Mitsik joined RUSAL in 2013 as a Head of Compensation, Benefits and Organizational Development Department.

Mr. Alexey Mitsik has a wide managerial experience in HR in different industries, including audit and consulting, oil and chemical. Prior to joining RUSAL, Mr. Mitsik was Senior Manager in KPMG. From 2007 till 2010 he worked as Head of department with Russneft, JSCB "Michelin" and AirBridgeCargo Airline LLC.

Mr. Alexey Mitsik has several professional degrees: bachelor's, engineering and economics degrees.

Mr. Mitsik 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 46 (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 M&A and growth projects, debt and equity capital markets, as well as maintaining investor relations.

From 2009-2011, he led the restructuring of RUSAL's USD16.6 billion debt in 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 M&A transactions, including the acquisition of a 25% stake in MMC 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 CFO, overseeing corporate finance.

From 2000 to August 2004, Oleg Mukhamedshin was Director of 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.

07 DIRECTORS' REPORT

DIRECTORS' REPORT

The Directors are pleased to present the 2019 Annual Report and the audited consolidated financial statements of the RUSAL Group for the year ended 31 December 2019.

1. PRINCIPAL ACTIVITIES

The principal activities of the Group are the production and sale of 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 2019 are set out in the consolidated financial statements on pages 146 to 232.

3. BUSINESS REVIEW

Please refer to the section headed "Business Overview" and "Management Discussion and Analysis" on pages 21 to 75 for further information on the review of the Group's business.

4. DIVIDENDS

No dividends were recommended or approved by the Board in 2019.

5. RESERVES

The Directors propose to transfer the amount of USD1,591 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 2019 was USD15,743 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

Save as the redemption of bonds as disclosed in note 19(b) to the consolidated financial statements, neither the Company nor any of its subsidiaries repurchased, sold or redeemed any of their securities during the financial year ended 31 December 2019.

Share issues

No Shares were issued/allotted by the Company during the financial year ended 31 December 2019.

8. GENERAL MANDATE GRANTED TO THE DIRECTORS IN RESPECT OF THE ISSUANCE OF SHARES

There was a general mandate granted to the Directors to issue Shares during the financial year.

The details of the general mandate is as follows:

Type of Mandate	Term	Maximum amount	Utilization during the financial year
issue of shares a general and unconditional mandate was given to the company and to the directors on behalf of the company on 20 june 2019, the date of the 2019 annual general meeting of the company, to allot, issue and deal with shares (and other securities) and such mandate came into effect on that date	from the date of the passing of the resolution granting the mandate to the earliest of: (i) the conclusion of the company's next annual general meeting of shareholders; (ii) the expiration of the period within which the company's next annual general meeting of shareholders is required to be held; and (iii) the variation or revocation of the mandate by an ordinary resolution of the shareholders in a general meeting	save in certain specified circumstances, not more than the sum of 20% of the aggregate nominal value of the share capital at the date of the resolution granting the mandate and the aggregate nominal value of share capital of the company repurchased by the company (if any)	NIL

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 and the Shareholding Changes in 2018, as of the Latest Practicable Date, the Shareholders' Agreement with the Company continues to be binding on En+ and SUAL Partners. The impact of the Shareholding Changes during the Year to the Shareholders' Agreement with the Company is described in Appendix A.

(b) Shareholders' Agreement between Major Shareholders only

The Shareholders' Agreement between Major Shareholders only, which has not been amended since the Listing Date, only 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 between Major Shareholders only are described in Appendix B.

Following the Shareholding Changes during the Year and the Shareholding Changes in 2018, as of the Latest Practicable Date, the Shareholders' Agreement among Major Shareholders only continues to be binding on En+ and SUAL Partners. 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 contracts, 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 summarised 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 2019 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 consolidated 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 2019 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 in the annual report (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 JSC "RUSAL Ural" 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, the one between RUSAL Energo Limited Liability Company ("RUSAL Energo") and EuroSibEnergo Joint Stock Company dated 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 Irkutskenergo in the original contracts with another subsidiary of En+ for that reorganization, on 28 November 2017, the original contracts with Irkutskenergo have been terminated and new replacement E&C 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 will cover 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 arrangements and the annual caps.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2019 under the contract between BrAZ and JSC "Irkutskenergo"/"EuroSibEnergo-Hydrogeneration" LLC (which replaced JSC "Irkutskenergo") was USD190 million.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2019 under the contract between BrAZ (which replaced JSC "RUSAL Ural" (formerly JSC "SUAL") pursuant to an addendum dated 31 December 2014) and JSC "Irkutskenergo"/EuroSibEnergo-Hydrogeneration (which replaced JSC "Irkutskenergo") was USD65.5 million.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2019 under the contract between KrAZ and Krasnoyarskaya HPP was nil.

The actual monetary value of electricity purchased for the year ended 31 December 2019 under the contract between RUSAL Energo and EuroSibEnergo Joint Stock Company was USD142.7 million.

Short-term electricity and capacity supply contracts

On 27 March 2014, the framework agreements (as mentioned on pages 11 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 Mr. Deripaska's associates (as further discussed below) respectively, were signed. Such agreements were respectively extended to cover three years ending 31 December 2019 by an addendum entered on 27 December 2016. On 12 December 2019, a new framework agreement was entered into with En+ to cover electricity and capacity supply contracts with En+'s associates, including long-term electricity and capacity supply contracts, short-term electricity and capacity supply contracts, miscellaneous electricity and capacity supply contracts, long-term capacity RSE contracts (as defined below) and long term mandatory agreements for the purchase of capacity of retrofitted generating facilities (as mentioned in the circular of the Company dated 18 October 2019).

Members of the Group, including BrAZ, SAZ, NkAZ, JSC "RUSAL Ural" (formerly JSC "SUAL") and RUSAL Energo have entered into, from time to time in the financial year ended 31 December 2019 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, LLC "Avtozavodskaya CHP", JSC "EuroSibEnergo" and "EuroSibEnergo-Hydrogeneration".

The prices of electricity and capacity supplied (excluding electricity and capacity supplied to residential users) were determined under a competitive procedure (involving bidding and tendering by suppliers and customers of electricity and capacity) through the "Trading System Administrator of Wholesale Electricity Market Transactions" (TSA), a commercial operator and facilitator of transactions which matches suppliers and customers, and prices determined through such competitive procedure were generally considered as market prices. The parties to these short-term E&C Contracts receive information relating to prices of electricity and capacity directly from the TSA and this is consistent with normal market practice whereby prices are provided to each participant of the market individually.

The mechanism for the determination of market prices of electricity and capacity through the TSA is approved by, and is in compliance with statutory requirements stipulated in applicable regulations of, the Government of the Russian Federation, and the Group may only enter into short-term E&C Contracts (with independent third parties or connected persons) through the TSA.

Under the terms of the short-term E&C Contracts, payments due to be paid by members of the Group shall be made in installments in accordance with the regulations of the Market Council, and all payment amounts shall be satisfied by the relevant members of the Group in cash via bank transfer.

In addition, members of the Group, including LLC "RUSAL Silicon Ural", JSC "RUSAL SAYANAL", JSC "Ural Foil" and, JSC "RUSAL Krasnoyarsk" have entered into, from time to time as part of their ordinary course of business, the additional agreements to the original 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, hydro-power plant output storage, transborder crossflow 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 prices of electricity and capacity under these contracts/addendums were derived from the wholesale market price regulated by regulations prescribed by the Government of the Russian Federation. Payments due by members of the Group shall be made in accordance with tentatively scheduled installments during each month, and the final payment shall be made in the middle of the month following the month of billing, and all payment amounts shall be satisfied by the relevant members of the Group in cash via bank transfer.

During 2019, members of the Group have also from time to time entered into the additional agreements to the original short-term electricity and capacity supply contracts with LLC "Irkutskaya Energosbytovaya Company" (**LLC "Irkutskenergosbyt"**), 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 due by members of the Group under each of these short-term electricity and capacity supply contracts shall be made by installments during each month of supply, and all payment amounts shall be satisfied by the relevant members of the Group in cash via bank transfer.

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2019 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 LLC "Irkutskenergosbyt" was USD236.2 million.

Miscellaneous electricity and capacity transmission contracts

The Group has also from time to time entered into miscellaneous electricity and capacity transmission contracts and/or addendums to those contracts with Joint Stock Company "Irkutsk Electronetwork Company" ("**JSC "IENC"**"), 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 2019.

The prices of electricity transmission under such miscellaneous electricity and capacity transmission contracts (and addendums thereto) were based on tariff rates 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 the same for all consumers (tariffs are differentiated depending on voltage levels). Payments under these miscellaneous electricity and capacity transmission contracts (and addendums thereto) were made in accordance with tentatively scheduled instalments during each month, with the final payment effected in the middle of the month following the month of billing, and all payment amounts were satisfied in cash via bank transfer.

The actual monetary value of electricity and capacity transmission purchased and sold for the year ended 31 December 2019 under these contracts with companies controlled by En+ was USD142.4 million.

Long-term capacity RSE contracts

The Group also entered into long-term capacity supply from renewable sources of energy ("**RSE**") contracts with a term of 15 years with companies controlled by En+ as sellers, including EuroSibEnergo-Hydrogeneration, from time to time during the year ended 31 December 2019.

The entering into these long-term capacity RSE contracts is compulsory for participants of the wholesale electric energy market under the capacity-based renewable energy support scheme of the Russian Federation. Under applicable regulations of the Government of the Russian Federation, participants in the electricity energy wholesale market must purchase capacity by entering into standard form of contracts, the terms and conditions (including the mechanics of price determination and duration of contract to be of 180 months) of which are determined by the Market Council and published on the website of the Market Council. Such terms and conditions prescribed by the Market Council may not be amended by the supplier or buyer entering into the long-term capacity RSE contracts. The exact capacity volume to be supplied under the contract and its value are determined by the TSA.

The price of capacity to be sold under 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 generating facilities using renewable energy sources approved by relevant legislation of the Government of the Russian Federation and the Wholesale Market Rules, details of which were set out in the circular of the Company dated 11 October 2016. Payment for the supply of capacity is made by the buyer of capacity via bank transfer using designated bank accounts it maintains pursuant to the TSA's instructions, and the buyer is only notified of the volume supplied for the payments made at a later stage.

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

The actual monetary value of electricity and capacity purchased for the year ended 31 December 2019 under the long-term capacity RSE contracts with Krasnoyarskaya HPP was USD0.8 million.

Long-term mandatory agreements for purchase of capacity of retrofitted generating facilities

Members of the Group are current participants (entities) on the wholesale electricity and capacity market, and purchase electricity and capacity on the wholesale electricity and capacity market.

Activity on the wholesale electricity and capacity market is regulated by legislation of the Russian Federation currently in effect (in particular, Resolution No. 1172 of the Government of the Russian Federation "On approving Rules for the wholesale electricity and capacity market and on making changes to some acts of the Government of the Russian Federation regarding the arrangement of functioning of the wholesale electricity and capacity market"). The wholesale electricity and capacity market operating principle is ensured by infrastructure organisations including the Market Council, the TSA, the "Financial Settlement Center" (the single settlement center of the wholesale electricity and capacity market) and "System Operator of the United Power System", Joint-stock Company, an office performing a centralized operational and dispatching management of the unified energy system of the Russian Federation, conferred, among others, with the authority to issue instructions compulsory to all subjects and consumers of the electric energy which influence the whole energy system (the "**System Operator**").

The aforementioned legislation of the Russian Federation introduced to the current wholesale electricity and capacity market model a procedure for selecting projects for the retrofitting of generating facilities of thermal power plants on the wholesale electricity and capacity market during the period from 2019 through 2025 (inclusively). This procedure guarantees the refund of cash spent for retrofitting thermal power plants at the expense of wholesale electricity and capacity market consumers.

As such, a new type of mandatory agreements for the purchase and sale (supply) of capacity of retrofitted generating facilities ("**KOMMod agreements**") has been introduced on the Russian wholesale electricity and capacity market in 2019.

System Operator and the Government Commission for Electric Power Industry Development select projects for retrofitting thermal power plant generating facilities on an annual basis. According to the selection results, based on commercial representation agreements as an agent, the "Financial Settlement Center" concludes KOMMod agreements with selected suppliers on behalf of wholesale electricity and capacity market participants, with a delivery period of 16 years.

According to results of a selection of projects for retrofitting of thermal power plant generating facilities carried out in 2019, Decree of the Government of the Russian Federation No.1713-r dated 2 August 2019 approved a list of generating facilities the capacity of which are to be supplied under KOMMod agreements. Projects for retrofitting of thermal power plant facilities owned by JSC Irkutskenergo, were included in the list of selected projects.

In accordance with wholesale electricity and capacity market regulations, the "Financial Settlement Center", as agent, is obliged to conclude KOMMod agreements on behalf of members of the Group participating in the Russian wholesale electricity and capacity market based on a commercial representation agreement. As such, the Company could neither participate nor exert control over conclusion of KOMMod agreements.

Members of the Group may not impede the conclusion of KOMMod agreements since this type of agreement is obligatory for conclusion by all wholesale electricity and capacity market members. If wholesale electricity and capacity market rules are not observed, members of the Group will be stripped of the wholesale electricity and capacity market entity status which will result in a significant growth in electricity and capacity purchase costs.

In September 2019, the "Financial Settlement Center" concluded KOMMod agreements on behalf of certain members of the Group (which are participants of the wholesale electricity and capacity market) with JSC Irkutskenergo, a company controlled by En+, as the counterparty/supplier. The obligations of the parties under these agreements (supply and payment) will commence from August 2022 at the earliest. Amounts payable by members of the Group under these KOMMod agreements shall be made in cash via bank transfer on payment terms prescribed by regulations of the Market Council.

It is expected that members of the Group will enter into KOMMod agreements with associates of En+ from time to time in the future on the same terms as described in the circular of the Company dated 18 October 2019.

As the obligations of the parties under the KOMMod agreements will commence from August 2022 at the earliest, the actual monetary value of electricity and capacity purchased for the year ended 31 December 2019 under the KOMMod agreements with JSC Irkutskenergo was USD nil

The aggregate consideration for the long-term and short-term electricity and capacity supply contracts, long-term capacity RSE contracts, KOMMod agreements together with the miscellaneous electricity and capacity transmission contracts between the Group and the associates of En+ for the year ended 31 December 2019 was USD777.6 million, which is within the annual cap of USD941.3 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 2019.

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 and ceased to be a connected person of the Company from 26 May 2019, ("**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 Group Autocomponents", LLC, JSC "UMZ", PJSC "AVTODIZEL" (YaMZ) (Mr. Deripaska's interest decreased to under 30% as at 30 June 2019), "Automobile plant "URAL", JSC (up until 30 June 2019). 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 2019, the Group, acting through JSC "RUSAL TH", entered into framework agreements with members of the GAZ Group ("GAZ Group Autocomponents", LLC, JSC "UMZ", PJSC "AVTODIZEL" (YaMZ), JSC "Automobile plant "URAL"), under which the Group agreed to supply aluminium and alloys at market prices defined on monthly basis until 31 December 2019, 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 2019 (for the period from 1 January 2019 until 26 May 2019) amounted to USD5.3 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 "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 2019 amounted to USD112.5 million. The consideration was satisfied in cash via wire transfer.

On 11 January 2019, RUSAL RESAL entered into an additional agreement to the original contract dated 28 June 2018 for supply of the secondary aluminium to "KraMZ" Ltd. for the period until 31 December 2019, at arm's length prices determined on a monthly basis. The payment under the contract is made by 100% advance payment.

The total consideration for the aluminium supplied under this contract to "KraMZ" Ltd. for the year ended 31 December 2019 amounted to USD0.6 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 2019 was approximately USD118.4 million, which was within the annual cap of USD507 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 2019.

C. Transportation Contracts

KraMZ-Auto is held by En+ as to more than 30% of the issued share capital and therefore 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+. "KraMZ" Ltd. is an indirect subsidiary of En+ and is therefore an associate of En+. Each of KraMZ-Auto, OVE, JSC "Irkutskenergotrans" and "KraMZ" Ltd. 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 one part and KraMZ-Auto, OVE, JSC Irkutskenergotrans or "KraMZ" Ltd. on the other, as described below, constitute continuing connected transactions for the Company under the Listing Rules. Pursuant to these contracts, KraMZ-Auto, OVE, JSC "Irkutskenergotrans" and "KraMZ" Ltd. 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 set-off of obligations.

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	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
KraMZ-Auto	JSC "RUSAL Krasnoyarsk"	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	2.3
KraMZ-Auto	JSC "RUSAL Krasnoyarsk"	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	0.7
KraMZ-Auto	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	4
KraMZ-Auto	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	0.1
KraMZ-Auto	LLC "Sayanogorsk Railcar Repair Works" (SVRZ)	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	–
KraMZ-Auto	LLC "Sayanogorsk Railcar Repair Works" (SVRZ)	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	–
KraMZ-Auto	PJSC "RUSAL Bratsk"	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	1.9
KraMZ-Auto	JSC "RUSAL Sayanogorsk"	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	0.3

Service provider (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
KraMZ-Auto	JSC "RUSAL Sayanogorsk"	01.01.2018	Up to 31.12.2020	Within 10 banking days from the date of receipt of the original invoice, billed on the basis of the signed certificate of rendered services	2.2
KraMZ-Auto	LLC "Russian Engineering Company" (Sayanogorsk)	28.12.2017 (the terms of the contract will commence on 01.01.2018)	Up to 31.12.2020	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	–
KraMZ-Auto	LLC "IT-Service"	25.12.2017 (the terms of the contract will commence on 01.01.2018)	Up to 31.12.2020	Payment within 60 days from the date of signing and provision of original invoice	–
KraMZ-Auto	JSC "RUSAL SAYANAL"	28.12.2017 (the terms of the contract will commence on 01.01.2018)	Up to 31.12.2020	Payment within 10 days after receipt of the VAT invoice	–
KraMZ-Auto	JSC "RUSAL SAYANAL"	28.12.2017 (the terms of the contract will commence on 01.01.2018)	Up to 31.12.2020	Payment within 15 days after receipt of the VAT invoice	0.2
KraMZ-Auto	LLC "Russian Engineering Company" (Shelekhov)	28.12.2017 (the terms of the additional agreement will commence on 01.01.2018)	Up to 31.12.2020	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	–
KraMZ-Auto	LLC "Russian Engineering Company" (Krasnoyarsk)	18.01.2018	Up to 31.12.2020	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	–
KraMZ-Auto	LLC "Russian Engineering Company"	01.02.2018 (addendum to the contract dated 28.12.2017)	Up to 31.12.2020	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	–

Service provider (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
OVE	JSC "RUSAL Sayanogorsk"	23.12.2018	Up to 31.12.2019	Payment to be made within 10 working days from the date of receipt of the invoice	4
OVE	JSC "RUSAL SAYANAL"	27.12.2018	Up to 31.12.2019	Payment to be made within 10 days after receipt of the VAT invoice	–
KraMZ-Auto	JSC "Kremniy"	27.12.2018	Up to 31.12.2019	Payment to be made within 10 days after receipt of the certificate of rendered services	–
KraMZ-Auto	LLC "Russian Engineering Company"	1.1.2019	Up to 31.12.2019	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	0.1
KraMZ-Auto	LLC "SUAL-PM"	27.12.2018	Up to 31.12.2019	Payment in 10 days after receiving invoice for services provided	–
JSC "Irkutskenergotrans"	JSC "Kremniy"	27.12.2018	Up to 31.12.2019	Payment in 60 days after receiving invoice for services provided	–
"KraMZ" Ltd.	JSC "RUSAL Krasnoyarsk"	20.3.2019	Up to 31.12.2019	Payment to be made monthly, within 30 days from the date of signing of the act	–
Total:					**15.8**

The aggregate consideration for the transportation services provided by the associates of En+ during the year ended 31 December 2019 amounted to USD15.8 million, which was within the maximum aggregate consideration of USD20.671 million for 2019 as disclosed in the announcement dated 21 March 2019.

D. Heat Supply Contracts with the associates of En+

Each of the issued share capital of JSC "Baykalenergo", LLC "Khakass Utility Systems", JSC "Irkutskenergo" and LLC "Irkutskenergosbyt" is held by En+ (being the Controlling Shareholder of the Company) as to more than 30%, and is therefore an associate of En+. Each of JSC "Baykalenergo", LLC "Khakass Utility Systems", JSC "Irkutskenergo" and LLC "Irkutskenergosbyt" is thus a connected person of the Company 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 into on arms-length commercial terms. The consideration for each of these contracts was satisfied in cash via wire transfer or set-off of obligations.

Supplier (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
JSC "Irkutskenergo"	JSC "SibVAMI"	28.12.2016	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	–
JSC "Baykalenergo"	LLC "RUSAL Taishet Aluminium Smelter"	01.03.2017	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	0.1
JSC "Irkutskenergo"	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018	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	1.3
JSC "Irkutskenergo"	PJSC "RUSAL Bratsk" (Shelekhov)	01.01.2018	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	0.8
LLC "Khakass Utility Systems"	JSC "RUSAL SAYANAL"	28.12.2017 (the terms of the contract will commence on 01.01.2018)	Up to 31.12.2020	Payment no later than the 20th day of the month following the accounting month	0.4
JSC "Baykalenergo"	LLC "RUSALTaishet Aluminium Smelter"	01.02.2018	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	–
JSC "Irkutskenergo"	PJSC "RUSAL Bratsk"	1.1.2019, which is an additional agreement to the contract dated 1.1.2013	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	–
JSC "Baykalenergo"	JSC "RUSAL Sayanogorsk"	23.12.2018	Up to 31.12.2019	Payment to be made monthly, no later than the 20th day of the month following the reporting period	–
JSC "Baykalenergo"	JSC "RUSAL Sayanogorsk"	23.12.2018	Up to 31.12.2019	Payment to be made monthly, no later than the 20th day of the month following the reporting period	–
LLC "Khakass Municipal Systems"	JSC "RUSAL Sayanogorsk"	24.12.2018	Up to 31.12.2019	First payment no later than the 20th day 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	4.2

Supplier (associate of En+)	Customer (member of the Group)	Date of contract	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
LLC "Irkutskenergosbyt" (as agent of JSC "Baikalenergo" which will supply the heat energy)	LLC "United Company RUSAL Anode Plant"	22.5.2019	Up to 31.12.2019	On or before the 18th day of the current accounting period, the consumer shall pay 35% of the heat energy cost as approved by the parties; on or before the last day of the current accounting period the consumer shall pay 50% of the heat energy cost as approved by the parties; on or before the 10th day of the month following the accounting period, the consumer shall pay the balance between the actual consumed heat energy as registered by metering instruments readings or based on the calculation if a metering instrument is not available, and the amount already paid by the consumer	–
LLC "Irkutskenergosbyt"	LLC "United Company RUSAL Anode Plant"	29.8.2019, which is an additional agreement to the original contract dated 22.5.2019 (the terms of this additional agreement commenced on 3.6.2019)	Up to 31.05.2022	On or before the 18th day of the current accounting period, the consumer shall pay 35% of the heat energy cost as approved by the parties; on or before the last day of the current accounting period the consumer shall pay 50% of the heat energy cost as approved by the parties; on or before the 10th day of the month following the accounting period, the consumer shall pay the balance between the actual consumed heat energy as registered by metering instruments readings or based on the calculation if a metering instrument is not available, and the amount already paid by the consumer	–
Total:					**6.8**

The aggregate consideration for the heat supply provided by the associates of En+ during the year ended 31 December 2019 amounted to USD6.8 million, which was within the maximum aggregate consideration of USD9.825 million for 2019 as disclosed in the announcement dated 30 August 2019.

E. Repair Services Contracts with the associates of En+

Each of the issued share capital of JSC "Bratskenergoremont" ("**Bratskenergoremont**"), JSC "Irkutskenergoremont", KraMZ-Auto, LLC "Khakassia Utilities" "KraMZ" Ltd., JSC "IENC" and JSC "Baykalenergo" is directly or indirectly held by En+ as to more than 30%, each of them 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 as customers and JSC "Bratskenergoremont", JSC "Irkutskenergoremont", KraMZ-Auto, LLC "Khakassia Utilities" "KraMZ" Ltd, JSC "IENC", 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 is 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.

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	Repair services	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
08.12.2017 (Note 1)	LLC "Casting and Mechanical Plant "SKAD""	"KraMZ" Ltd.	Up to 31.12.2019	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 banking days from the date of signing of the acceptance certificate for work performed	–
14.02.2018 (Note 1)	PJSC "RUSAL Bratsk"	JSC "IENC"	Up to 31.12.2019	Maintenance of equipment	Within 5 calendar days from the receipt of the invoice for the current month	0.6
01.03.2018 (Note 1)	JSC "RUSAL Krasnoyarsk"	KraMZ-Auto	Up to 31.12.2020	Services for maintenance and repair of cars	Payment is made within 10 banking days from the date of receipt of the original invoice	–
17.1.2019	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2019	Service maintenance of equipment	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 the end of the reporting month	5.9
17.1.2019	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2019	Works on overhaul of the boiler unit 2	Prepayment of 50% of the consideration before the 5th day of the current month, in accordance with the monthly financing schedule. The remaining payment of 50% to be paid within 10 calendar days from the date of receipt of the original invoices	3
10.1.2019	LLC "Russian Engineering Company"	JSC "Irkutskenergoremont"	Up to 31.12.2019	Production equipment maintenance and repair works	Payment within 60 calendar days of signature by the customer of the performed works certificate	0.1
10.1.2019	PJSC "RUSAL Bratsk"	JSC "Irkutskenergoremont"	Up to 31.12.2019	Production equipment maintenance and repair works	Payment within 60 calendar days of signature by the customer of the performed works certificate	1.6
1.1.2019	PJSC "RUSAL Bratsk"	KraMZ-Auto	Up to 31.12.2019	Car maintenance and repair services	Payment within 10 business days	–
11.4.2019	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2019	Repair services for performance of work upon overhaul of the turbine #1	A prepayment of 50% of the consideration is made according to the monthly financial schedule up to the 5th of the month, and the final payment of 50% is made within 10 calendar days from the date of receipt of the original invoices	0.9
29.4.2019, which is an additional agreement to the original contract dated 10.01.2019	PJSC "RUSAL Bratsk"	JSC "Irkutskenergoremont"	Up to 31.12.2019	Production equipment maintenance and repair works	Payment within 60 calendar days of signature by customer of the performed works certificate based on an invoice	–

Date of contract	Customer (member of the Group)	Contractor (associate of En+)	Term of contract	Repair services	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
29.4.2019, which is an additional agreement to the original contract dated 10.1.2019	PJSC "RUSAL Bratsk"	"Irkutskenergoremont" JSC	Up to 31.12.2019	Production equipment maintenance and repair works	Payment within 60 calendar days of signature by customer of the performed works certificate based on an invoice	–
22.5.2019	JSC "RUSAL Sayanogorsk Smelter"	JSC "Baykalenergo"	Up to 31.12.2019	Providing service to the external heat networks and industrial plant wiring at JSC "RUSAL Sayanogorsk"	Payment to be made within 60 calendar days after receipt of the documented original invoices corresponding to the certificates of acceptance signed by both parties	0.1
1.7.2019, which is an additional agreement to the original contract dated 10.1.2019	PJSC "RUSAL Bratsk"	JSC "Irkutskenergoremont"	Up to 31.12.2019	Production equipment maintenance and repair works	Payment to be made within 60 calendar days after receipt of the performed works certificate based on an invoice	–
10.7.2019	JSC "RUSAL Achinsk"	"Bratskenergoremont"	Up to 31.12.2019	Services for works on overhaul of the boiler #3	Prepayment of 50% of the works made according to the monthly financial schedule, and the final payment of 50% made within 10 calendar days of receipt of the original invoice	2.4
10.7.2019	JSC "RUSAL Sayanogorsk Smelter"	LLC "Khakassia Utilities"	Up to 31.12.2019	Providing monthly service to the external heat networks and industrial plant wiring at JSC "RUSAL Sayanogorsk"	Payment within 60 calendar days after receipt of the documented original invoices corresponding to the certificates of acceptance signed by both parties	–
28.11.2019	LLC "K&K"	"KraMZ" Ltd.	Up to 31.12.2019	Equipment maintenance services	70% prepayment to be paid on the date of the receiving invoice, and the remaining 30% payable within 5 banking days from the date of the acceptance certificate	–
23.12.2019	Societe Anonyme "FRIGUIA" (FRIGUIA SA)	JSC "Irkutskenergoremont"	Up to 31.12.2020	Works on overhaul of the boiler	15% prepayment to be paid within 5 calendar days from the date of the signing of the contract, and the remaining 85% payable within 30 calendar days from the date of the act of the performed works	0.1
Total:						**14.8***

* – The sum of the figures in the tables are different 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.

The aggregate consideration for the repair services provided under these contracts by the associates of En+ during the year ended 31 December 2019 amounted to USD14.8 million which was within the maximum aggregate consideration of USD17.265 million for 2019 as disclosed in the announcement dated 24 December 2019.

F. Operation of Ondskaya Hydro Power Station

EuroSibEnergo – Thermal Energy LLC 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 LLC "EuroSibEnergo – Thermal Energy" constitute continuing connected transactions of the Company under the Listing Rules. The consideration under each of these contracts is determined on an arm's length basis. The consideration for each of these contracts was satisfied in cash via wire transfer.

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

Member of the Group)	Associate of En+	Date of contract	Subject matter	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
JSC "RUSAL Ural"	LLC "EuroSibEnergo – Thermal Energy"	13.12.2018 (addendum to the lease dated 11.11.2016)	Lease of movable and immovable property of Ondskaya Hydro Power Station	From 01.01.2019 to 31.12.2021	50% of the monthly payment to be paid before the 20th day of the current lease month; the remaining 50% of the monthly payment to be paid before the 5th day of the month following the lease month	4.2
JSC "RUSAL Ural"	LLC "EuroSibEnergo – Thermal Energy"	13.12.2018 (addendum to the contract dated 11.11.2016)	Provision of operation and maintenance services in relation to the Ondskaya Hydro Power Station	From 01.01.2019 to 31.12.2021	An advance payment amounting to 50% of the monthly payment will be made by the 30th day of the current month and the remaining 50% of the monthly payment will be made within 10 calendar days after the customer and the contractor have signed a bilateral acceptance certificate to confirm that the rendered services meet the terms of the addendum.	2
Total:						**6.2**

The aggregate consideration for operation of Ondskaya Hydro Power Station under these contracts by EuroSibEnergo – LLC "Thermal Energy" during the year ended 31 December 2019 amounted to USD6.2 million which was within the maximum aggregate consideration of USD6,612,121 for 2019 as disclosed in the announcement dated 14 December 2018.

G. Connection of electrical grid by the associate of En+

Each of the issued share capital of JSC "Irkutsk electronetwork company" and JSC "IENC" is held by En+ as to more than 30% of the issued share capital 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 each of JSC "Irkutsk electronetwork company" or JSC "IENC" as service provider constitute continuing connected transactions of the Company under the Listing Rules. The consideration for the electrical grid connection services under the contracts is determined on an arm's length basis. The consideration for the contracts was satisfied in cash via wire transfer.

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

Date of contract	Customer (member of the Group)	Service provider (associate of En+)	Term of contract	Payment terms	Actual consideration for the year ended 31 December 2019 USD million (excluding VAT)
03.10.2017	LLC "RUSAL Taishet Aluminium Smelter"	Joint Stock Company "Irkutsk electronetwork company"	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	–
09.11.2018 (addendum to the original contract dated 10.11.2016)	LLC "United Company RUSAL Anode Plant"	JSC "IENC"	From 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	–
29.04.2019 an additional agreement to the original contract dated 3.10.2017	LLC "RUSAL Taishet Aluminium Smelter"	JSC "IENC"	Up to 31.08.2020 and may be extended until 30.11.2021 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 and the subsequent work acceptance certificates based on stages	–
14.11.2019	LLC "United Company RUSAL Anode Plant"	JSC "IENC"	Up to 30.09.2021	The payment of consideration shall be made within 15 days after the contract date	–
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 2019 amounted to nil which was within the maximum aggregate consideration of USD18.946 million for 2019 as disclosed in the announcement dated 15 November 2019.

(II) The transactions and arrangements summarised below were entered into by members of the Group on or prior to 31 December 2019 and are in relation to transactions for the year ending 31 December 2020 and subsequent years (and not for the year ended 31 December 2019):

A. Transportation Contracts

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

During 2019, 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	Estimated consideration for the relevant year payable excluding VAT (USD)	Scheduled termination date	Payment terms
31.12.2019	JSC "RUSAL Sayanogorsk"	OVE	Services for the transportation and provision of railway transport services	2020: 4,199,911	Up to 31.12.2020	Payment is made within 10 working days from the date of receipt of the invoice
31.12.2019	JSC "RUSAL SAYANAL"	OVE	Services for the transportation and provision of cargo forwarding	2020: 24,458	Up to 31.12.2020 If neither party declares its intention to terminate the contract one month before its expiration date, the contract is considered to be extended for each subsequent calendar year on the same terms, and the total term of the contract cannot be longer than three years.	Payment is made within 10 working days from the date of receipt of the invoice
27.12.2019	JSC "Kremniy"	KraMZ-Auto	Transportation services	2020: 14,029	Up to 31.12.2020	Payment is made within 60 days after receiving the invoice
27.12.2019	LLC "SUAL-PM"	KraMZ-Auto	Transportation services	2020: 25,914	Up to 31.12.2020	Payment is made within 10 days after receiving the invoice

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", LLC "Khakass Municipal Systems", JSC "Baykalenergo" and LLC "Irkutskenergosbyt" 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", LLC "Khakass Municipal Systems", JSC "Baykalenergo" or LLC "Irkutskenergosbyt" on the other, as discussed below, constitute continuing connected transactions of the Company under the Listing Rules.

During 2019, 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	Estimated amount of heat to be supplied for the relevant year	Estimated consideration payable for the relevant years excluding VAT (USD)	Schedule Termination Date	Payment terms
01.01.2019, which is an additional agreement to the contract dated 01.01.2013	PJSC "RUSAL Bratsk"	JSC "Irkutskenergo"	Water, steam	Thermal energy in hot water: 2020 – 330 Gcal Coolant: 2020 – 559 tn	2020: 5,144	Up to 31.12.2020.	Advance payment at the 18th day of month – 35% of the consideration, at the 30th day of month – 50% of the consideration, and the remaining month – 15% of the consideration
29.8.2019, which is an additional agreement to the original contract dated 22.5.2019 (the terms of this additional agreement commenced on 3.6.2019	LLC "United Company RUSAL Anode Plant"	LLC "Irkutskenergosbyt"	Supply of domestic hot water	Gcal/m^2 – 1258.58	2020: 2,768 2021: 2,768 2022: 1,154	Up to 31.05.2022.	On or before the 18th day of the current accounting period, the consumer shall pay 35% of the heat energy cost as approved by the parties; on or before the last day of the current accounting period the consumer shall pay 50% of the heat energy cost as approved by the parties; on or before the 10th day of the month following the accounting period, the consumer shall pay the balance between of actual consumed heat energy as registered by metering instruments readings or based on the calculation if a metering instrument is not available, and the amount already paid by the consumer
31.12.2019	JSC "RUSAL Sayanogorsk"	JSC "Baykalenergo"	Thermal energy in hot water to provide heating garage	428 Gcal	2020:15,443	Up to 31.12.2020.	Payment to be made monthly no later than the 10th day of the month following the reporting period.
31.12.2019	JSC "RUSAL Sayanogorsk"	LLC "Khakass Municipal Systems"	Thermal energy for industrial, administrative and domestic facilities on the industrial site of the plant	Heat: 340,137 Gcal Chemical purified water (coolant): 1,350,000 m^3	Heat: 2020: 4,553,676 Chemical purified water (coolant): 2020: 170,058	Up to 31.12.2020.	First payment (85% of the total amount of thermal energy) shall be paid no later than the 20th day of the month of the current billing period, based on the invoice. Second payment (the difference between the quantity of thermal energy actually received based on readings of metering devices or by calculation in case of absence of metering devices, and the amount paid by the purchaser) shall be paid no later than the 10th day of the month following the billing period
31.12.2019	JSC "RUSAL Sayanogorsk"	JSC "Baykalenergo"	Thermal energy in hot water for provision of sports complex	Heat: 4,213 Gcal Coolant: 49,968 m^3	Heat: 2020: 151,999 Coolant: 2020: 15,021	Up to 31.12.2020.	Payment is made monthly no later than the 10th day of the month following the reporting period.

C. Repair Services Contracts with associates of En+

As discussed above JSC "Irkutskenergoremont" 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 JSC "Irkutskenergoremont" on the other, as discussed below, constitute continuing connected transactions of the Company under the Listing Rules.

During 2019, 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	Scheduled termination date	Estimated consideration payable for the relevant year USD	Payment terms
23.12.2019	Societe Anonyme "FRIGUIA" (FRIGUIA SA)	JSC "Irkutskenergoremont"	Works on overhaul of the boiler	Up to 31.12.2020	2020: 1,800,720	15% prepayment to be paid within 5 calendar days from the date of the signing of the contract, and the remaining 85% payable within 30 calendar days from the date of the act of the performed works
27.12.2019	JSC "RUSAL Achinsk"	JSC "Irkutskenergoremont"	Services for works on overhaul of the boiler #1	Up to 31.12.2020	2020: 2,769,114	A prepayment of 50% of the consideration is made according to the monthly finance schedule up to the 5th of the month, the final payment of 50% of the consideration is made within 10 days from receipt of the original invoic

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, LLC "EuroSibEnergo–Thermal Energy" 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 LLC "EuroSibEnergo–Thermal Energy" 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:

Customer (member of the Group)	Associate of En+	Date of contract	Subject matter	Term of contract	Payment terms	Estimated consideration payable for the relevant year, excluding VAT (USD)
JSC "RUSAL Ural" (formerly JSC "Siberian and Urals Aluminium Company")	LLC "EuroSibEnergo–Thermal Energy"	13.12.2018 (addendum to the lease dated 11.11.2016)	Lease of movable and immovable property of Ondskaya Hydro Power Station	01.01.2019 to 31.12.2021	50% of the monthly payment to be paid before the 20th day of the current lease month; the remaining 50% of the monthly payment to be paid before the 5th day of the month following the lease month	2020: 4,090,909 2021: 4,090,909
JSC "RUSAL Ural"	LLC "EuroSibEnergo–Thermal Energy"	Addendum dated 13.12.2018	Provision of operation and maintenance services in relation to the movable and immovable property of Ondskaya Hydro Power Station	01.01.2019 to 31.12.2021	An advance payment amounting to 50% of the monthly payment will be made by the 30th day of the current month and the remaining 50% of the monthly payment will be made within 10 calendar days after the customer and the contractor have signed a bilateral acceptance certificate to confirm that the rendered services meet the terms of the addendum	2019-2021: 7,563,636 for three years

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.

During 2019, 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+)	Term of contract	Payment terms	Estimated consideration payable for the relevant year, excluding VAT (USD)
29.4.2019 (additional agreement to the original contract dated 3.10.2017)	LLC "RUSAL Taishet Aluminium Smelter"	JSC "IENC"	Up to 31.8.2020 and may be extended until 30.11.2021 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 and the subsequent work acceptance certificates based on stages.	2020: 33,527,872

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 2019, the outstanding nominal value of debt was USD1,085 million and the final maturity of the debt is 7 November 2024.

(b) Credit facility agreement dated 31 August 2017 between, Sberbank as lender and the Company as borrower – as of 31 December 2019, the outstanding nominal value of debt was equal to USD3.9 billion and the final maturity 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 2019, 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, Yingli Trading Company Ltd., CNM TRADE FZE, DK Trade AG and JSC "Arkonik SMZ".

The largest customer and the five largest customers of the Group accounted for 25.60% and 43.01%, respectively, of the Group's total sales for the year ended 31 December 2019.

The major suppliers of the Company are JSC "FSC" and LLC "EuroSibEnergo-Hydrogeneration" with respect to electricity and capacity and power supply or transmission, OJSC "Russian Railways" with respect to railway transportation, CJSC "Boguchansky Aluminium Smelter" with respect to primary aluminium supply and LLC "ISO" with respect to repair and maintenance services.

The amount of purchases from the largest supplier and the five largest suppliers of the Group accounted for 7.40% and 26.33%, respectively, of the Group's total cost of sales for the year ended 31 December 2019.

Save for the fact that Glencore was deemed to be interested in 6.78 % (long position) of the total issued share capital of the Company within the meaning of Part XV of the SFO as at 31 December 2019, 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 2019.

14. DIRECTORS

The following individuals served as Directors during the financial year:

Name	Position at year end (unless specified otherwise)
Evgenii Nikitin	Executive Director
Sergei Popov	Executive Director (resigned with effect from 14 February 2019)
Evgenii Vavilov	Executive Director
Evgeny Kuryanov	Executive Director (appointed with effect from 14 February 2019)
Marco Musetti	Non-executive Director
Vyacheslav Solomin	Non-executive Director
Timur Valiev	Non-executive Director (resigned with effect from 13 May 2019)
Vladimir Kolmogorov	Non-executive Director (appointed with effect from 18 May 2019)
Elsie Leung Oi-sie	Independent non-executive Director
Dmitry Vasiliev	Independent non-executive Director
Bernard Zonneveld	Independent non-executive Director (appointed as Chairman of the Company with effect from 6 March 2019)
Philippe Bernard Henri Mailfait	Independent non-executive Director (resigned with effect from 26 January 2019)
Jean-Pierre Thomas	Independent non-executive Director (resigned with effect from 26 January 2019)
Maxim Poletaev	Independent non-executive Director (appointed with effect from 14 February 2019)
Randolph N. Reynolds	Independent non-executive Director (appointed with effect from 14 February 2019)
Kevin Parker	Independent non-executive Director (appointed with effect from 14 February 2019)
Christopher Burnham	Independent non-executive Director (appointed with effect from 14 February 2019)
Nick Jordan	Independent non-executive Director (appointed with effect from 14 February 2019)

Particulars of appointments of Directors

A. Executive Directors

Each of the executive Directors has agreed 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 will be 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. Bernard Zonneveld was appointed as Chairman of the Company with effect from 6 March 2019.

Mr. Vladimir Kolmogorov was appointed Deputy CEO – executive Director of En+ with effect from 13 February 2020.

E. Resignation of Directors

Each of Mr. Jean-Pierre Thomas and Mr. Philippe Bernard Henri Mailfait, both independent non-executive Directors, has tendered his resignation as a Director with effect from 26 January 2019, and ceased to be members of their respective Board committees.

Mr. Sergei Popov, executive Director, has tendered his resignation as a Director with effect from 14 February 2019.

Mr. Timur Valiev, a non-executive Director, tendered his resignation as a Director with effect from 13 May 2019, and ceased to be a member of his respective Board committee.

F. Appointment of Directors

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.

Mr. Vladimir Kolmogorov was appointed as a non-executive Director with effect from 18 May 2019.

G. Changes to the composition of Board Committees

Mr. Randolph N. Reynolds was appointed as a member of the Corporate Governance & Nomination Committee with effect from 14 February 2019.

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. 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. Christopher Burnham was appointed as a member of the Corporate Governance and Nomination Committee of the Company with effect from 6 March 2019.

Each of Mr. Maxim Poletaev, Mr. Bernard Zonneveld 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.

Mr. Bernard Zonneveld was appointed as the chairman of the Standing 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. 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 2019, 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).

Interests and short positions in underlying Shares and in the underlying Shares of the associated corporations of RUSAL

As at 31 December 2019, none of the 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 RUSAL 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 RUSAL and the Hong Kong Stock Exchange pursuant to the Model Code.

16. DIRECTORS' INTERESTS IN BUSINESSES THAT MAY COMPETE WITH THE COMPANY

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. Vyacheslav Solomin is the chief operating officer of En+; and Mr. Vladimir Kolmogorov is the first deputy chief executive officer for technical policy of En+, deputy CEO – executive director of En+ and also the head of technical supervision of JSC EuroSibEnergo, a company which is owned by En+. En+ has 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 the Company 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 En+, the Directors have taken into account the following general reasons, as well as the specific reasons applicable to each of En+:

(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 makes 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 company registered in accordance with the procedure established by the laws of the Russian Federation, in accordance with the Federal Law of the Russian Federation "On International Companies" with its registered office at Oktyabrskaya St. 8, office 34, Kaliningrad, Kaliningrad Region, 236006, Russian Federation. 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+ Group is a leading international vertically integrated aluminium and hydropower producer. En+ combines power plants with a total installed capacity of 19.5 GW (including 15.1 GW of hydropower assets), and 3.9 Mt of annual aluminium production capacity (through a controlling stake in RUSAL Plc) which is the major consumer of En+ Group's hydroelectricity. Key assets of En+ include:

EuroSibEnergo – a 100% subsidiary of En+ Group, managing its power assets.

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 hydropower. 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, Mr. Christopher Burnham (independent non-executive Director) and Mr. Nick Jordan (independent non-executive Director) are also directors of En+. Four of the Company's Directors were proposed for nomination by En+, one of which, Mr. Vyacheslav Solomin, a non-executive director, is also a chief operations officer of En+ and the other one, Mr. Vladimir Kolmogorov, a non-executive director, is the first deputy chief executive officer for technical policy of En+, deputy CEO – executive director of En+ and also the head of technical supervision of JSC "EuroSibEnergo", a company which is owned by En+. 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 were proposed for nomination 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 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 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 2019, the overall share of electricity purchased by the Group's aluminium plants from the suppliers related to the Controlling Shareholder did not exceed 58.6%.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 2019, the Group has consumed approximately 27% 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 2019, 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+.

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 2019, 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.

C. Glencore

As announced by the Company on 3 February 2020, the share swap between En+ and certain subsidiaries of Glencore was completed and the indirect shareholding of Glencore in the Shares reduced to 0%. Glencore is therefore not a Shareholder as at the Latest Practicable Date.

17. SUBSTANTIAL SHAREHOLDERS' INTERESTS

As at 31 December 2019, so far as the Directors are aware based on their understanding and based on notifications made to the Company pursuant to the provisions of Divisions 2 and 3 of Part XV of the SFO and recorded in the register required to be kept by the Company under section 336 of the SFO, the following persons had interests or short positions in the Shares or underlying Shares (unless specified otherwise):

Interests and short positions in Shares

Name of Shareholder	Capacity	Number of Shares held as at 31 December 2019	Percentage of issued share capital as at 31 December 2019
Oleg Deripaska	Beneficiary of a trust (Note 1)	8,641,888,022 (L)	56.88%
	Beneficial owner	1,669,065 (L)	0.01%
	Total	**8,643,557,087 (L)**	**56.89%**
Fidelitas Investments Ltd. ("Fidelitas Investments") (Note 1)	Interest of controlled corporation	8,641,888,022 (L)	56.88%
B-Finance Ltd. ("B-Finance") (Note 1)	Interest of controlled corporation	8,641,888,022 (L)	56.88%
En+ (Note 1)	Beneficial owner	8,641,888,022 (L)	56.88%
Access Aluminum Holdings Ltd. ("Access Aluminum") (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
LLC Access Industries Holdings ("Access Holdings") (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 (BVI) L.P. ("Access BVI")	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
LLC Access Industries ("Access LLC") (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
LLC GPTC (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note 2)	33.20% 6.70%
Zonoville Investments Ltd. ("Zonoville") (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.("TCO") (Note 2)	Interest of controlled corporation	5,044,554,678 (L) 1,017,931,998 (S) (Note2)	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) (Note2)**	**33.20%**
Victor Vekselberg ("Mr. Vekselberg") (Note 3)	Beneficiary of a trust	5,044,554,678 (L) (Note 3)	33.20%
Glencore (Note4)	Interest of controlled corporation	1,029,588,048(L) 1,029,588,048(S) (Note 4)	6.78%

(L) Long position

(S) Short position

Notes – see notes on page 125.

Other than the interests disclosed above and the notes set out below, so far as the Directors are aware, as at 31 December 2019, the Company has not been notified of any other notifiable interests or short positions in Shares or underlying Shares.

(Note 1)

Based on the disclosure of interests forms available on the Hong Kong Stock Exchange, Mr. Oleg Deripaska was the founder and a beneficiary of a private discretionary trust which held 86.33% of the share capital of Fidelitas International Investments Corp. (formerly Fidelitas Investments Ltd.), which in turn held 99.99% of the share capital of B-Finance, which in turn held 44.95% of the share capital of En+. Each of B-Finance, Fidelitas International and Mr. Oleg Deripaska was deemed to be interested in the Shares and underlying Shares held by En+ by virtue of the SFO.

As at 31 December 2019, En+ was the registered Shareholder and the legal and beneficial owner of approximately 50.10% of the total issued share capital of the Company.

In relation to the remaining 6.78% interests in the Company, the Shares were subject to transfer to En+ from Glencore in 12 months following the removal of En+ from the SDN List pursuant to a securities exchange agreement and certain related agreements entered into by En+ and certain subsidiaries of Glencore. Further details of such transaction were disclosed in the Company's announcement dated 28 January 2019. As disclosed in the Company's announcement dated 3 February 2020, the transfer was completed, En+ was the registered Shareholder and the legal and beneficial owner of approximately 56.88% of the total issued share capital of the Company as at the Latest Practicable Date.

(Note 2)

Based on the disclosure of interests forms filed on the Hong Kong Stock Exchange, SUAL Partners was owned as to 35.84% by Renova Metals & Mining Ltd ("**Renova Metals**"), which in turn was wholly-owned by Renova Holding Ltd. ("**Renova Holding**"). Renova Holding. was controlled by TZ Columbus Services Limited ("**TZC**") as to 100% and TZC was in turn wholly-owned by TCO.

Zonoville was owned as to 40.32% by Access Aluminum, which in turn was owned as to 98.48% by Access Holdings Access Holdings was wholly-owned by Access BVI. Access BVI was owned as to 67.16% by Access Industries, which in turn was controlled as to 69.70% by GPTC LLC.

Each of Renova Metals & Mining Ltd., Renova Holding., TZC, TCO, Access Aluminum, Access Holdings, Access Industries, Access BVI, Access Industries and GPTC LLC were deemed to be interested in the Shares held by SUAL Partners and/or Zonoville by virtue of the SFO.

(Note 3)

The Company has been informed by a representative of Mr. Vekselberg that he is a beneficiary under certain irrevocable and fully discretionary trust arrangement pursuant to which the trustee under such trust arrangement held 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 since 12 April 2013 up to the Latest Practicable Date, and according to the latest disclosure of interests filings available on the Hong Kong Stock Exchange, the number of Shares which he was interested in was 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 disclosure of interests forms filed on the Hong Kong Stock Exchange, the interests of Glencore were held through its controlled corporations, including, Amokenga Holdings, which directly held the relevant interests in the Company. Amokenga Holdings was wholly-owned by Glencore Finance (Bermuda) Ltd., which was in turn wholly-owned by Glencore Group Funding Limited. Glencore Group Funding Limited was wholly-owned by Glencore International AG, which was in turn wholly-owned by Glencore. In accordance with the SFO, each of Glencore, Glencore International AG, Glencore Group Funding Limited and Glencore Finance (Bermuda) Ltd. was deemed to be interested in the Shares held by Amokenga Holdings.

While it was disclosed in its disclosure filing 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 Note 1 above, Glencore shall transfer 6.78% interests to En+ 12 months after the removal of En+ from the SDN Listing. As such, Glencore and its controlled corporations have a long position and a short position in respect of its shareholding in the Company. As disclosed in the Company's announcement dated 3 February 2020, the transfer was completed, and Glencore ceased to have a notifiable interest under the SFO.

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 2019 was approximately USD6 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 labour 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

The Chairman of the Board was entitled to receive a chairman's fee of EUR360,000 per annum. Commencing on 1 September 2019, the Chairman of the Board was entitled to receive a chairman's fee of EUR1,000,000 per annum.

2. Non-executive Directors

(a) 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+ or SUAL Partners 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) 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

For 2019, the CEO's annual compensation comprised the following:

(a) RUB72 million per annum base salary, paid monthly;

(b) Annual discretionary bonus at a target level of RUB72 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.

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 HK$6 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 2019, RUSAL allocated more than USD31 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 2019 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 2019 and as of the date of this report.

On behalf of the Board

Wong Po Ying, Aby
Company Secretary
31 March 2020

08 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. 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(a) and 3(f) 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 maximise 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 was made 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 2019, the Board consisted of the Directors listed below and their attendance record for the 10 Board meetings held by the Board during the Review Period, other Board committee meetings held during the Review Period, the annual general meeting held on 20 June 2019 ("**AGM**"), the extraordinary general meeting held on 1 August 2019 ("**EGM 1**") and the extraordinary general meeting held on 14 November 2019 ("**EGM 2**") is as follows:

	Attendance and number of meetings						
	Board meetings (total: 10 meetings in 2019)	Corporate Governance and Nomination Committee meetings (total: 6 meetings in 2019)	Remuneration Committee meetings (total: 2 meetings in 2019)	Audit Committee meetings (total: 9 meetings in 2019)	AGM (total: 1 meeting in 2019)	EGM 1 (total: 1 meeting in 2019)	EGM 2 (total: 1 meeting in 2019)
Executive Directors							
Evgenii Nikitin	10	–	–	–	1	–	–
Sergei Popov (resigned with effect from 14 February 2019)	1	–	–	–	–	–	–
Evgenii Vavilov	10	–	–	–	–	–	–
Evgeny Kuryanov (appointed with effect from 14 February 2019)	9	–	–	–	–	–	–
Non-executive Directors							
Marco Musetti	10	–	–	–	–	–	–
Vyacheslav Solomin	10 (1)	–	–	–	–	–	–
Timur Valiev (resigned with effect from 13 May 2019)	4	–	–	–	–	–	–
Vladimir Kolmogorov (appointed with effect from 18 May 2019)	5	–	–	–	–	–	–
Independent non-executive Directors							
Elsie Leung Oi-sie	10 (2)	–	2	9	1	1	1
Dmitry Vasiliev	10	6	1	9	1	–	–
Bernard Zonneveld	10	6	1	2	1	–	–
Philippe Bernard Henri Mailfait (resigned with effect from 26 January 2019)	0	–	–	–	–	–	–
Jean-Pierre Thomas (resigned with effect from 26 January 2019)	1	–	–	–	–	–	–
Maxim Poletaev (appointed with effect from 14 February 2019)	7 (3)	–	–	7	1	–	–
Randolph N. Reynolds (appointed with effect from 14 February 2019)	9 (4)	6	1	–	1	–	–
Kevin Parker (appointed with effect from 14 February 2019)	9	–	–	7	1	–	–
Christopher Burnham (appointed with effect from 14 February 2019)	9	5	–	–	1	–	–
Nick Jordan (appointed with effect from 14 February 2019)	9	–	2	–	1	–	–

Biographical details of the Directors are set out in the section headed Profiles of Directors and Senior Management on pages 77 to 93 of this Annual Report.

A.6.7 of the CG Code provides that independent non-executive directors and other non-executive directors should attend general meetings. Certain executive directors and non-executive directors were unable to attend the AGM, EGM 1 and EGM 2 due to conflicting business schedules.

Notes:

1. During 2019, Vyacheslav Solomin attended 10 Board meetings in person, and 1 Board meeting on 19 September 2019 was attended by his alternate Mr. Vladimir Kolmogorov from item 6 -A on the meeting agenda.
2. During 2019, Elsie Leung Oi-sie attended 10 Board meetings in person, and 1 Board meeting on 12 December 2019 was attended until item 6 on the meeting agenda.
3. During 2019, Maxim Poletaev attended 7 Board meetings in person, and 2 Board meetings on 19 September 2019 and 13 December 2019 were attended by his alternate Mr. Bernard Zonneveld.
4. During 2019, Randolph N. Reynolds attended 9 Board meetings in person, and 1 Board meeting on 19 September 2019 was attended until item 6 on the meeting agenda.

(b) Board meetings

During 2019, 10 Board meetings were held.

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.

(c) 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 of the performance of the Company in respect of its strategies, budgets and plans;
- approving and supervising of the management;
- giving an account of the Company's activities to the parties to whom an account is properly due;
- responsible for the risk management and internal control systems and reviewing their effectiveness; 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 (including voting in absence). The executive committee operated during 2019 as the management board of RUSAL Global Management B.V.

(d) Relationships among members of the Board

Please refer to the profiles of Directors and Senior Management for more information about the relationships among members of the Board.

(e) Shareholders' Agreements

The Shareholders' Agreement with the Company and the Shareholders' Agreement between Major Shareholders only 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.

(f) 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 2019 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 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 10 Board meetings held, there were eight occasions where one or more independent non-executive Directors had a material interest in the transaction. On such occasions, the independent non-executive Directors abstained from voting and the resolutions approving entry into such transactions were passed by the requisite majority excluding the materially interested independent non-executive Directors.

Of the eight Board meetings held in the twelve-month period ended 31 December 2019 where one or more Directors had disclosed a material interest, all the independent non-executive Directors were present at six of the Board meetings held. Given the size of the Board and the amount of urgent business transacted by the Company where Director(s) have material interests, it is difficult to rearrange any scheduled Board meeting or postpone the discussion of such business in order to ensure all of the independent non-executive Directors are present. The Board meeting on those occasions therefore proceeded despite the fact that the independent non-executive Director was unable to attend but on such occasions the other independent non-executive Directors were present.

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. Jean-Pierre Thomas until he resigned on 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. The role of 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 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. 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 six 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 2019, 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 last appointment or reappointment, he 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 recognizes 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 recognizes 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 labour market conditions. The Remuneration Committee consists 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 two meetings during the Review Period. At those meetings, the Remuneration Committee discussed and recommended the Board to approve the achievement of KPIs of senior executives for 2018 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 2019, 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 2019 is set out below:

	Year ended 31 December	
	2019	2018
	Number of individuals	Number of individuals
Nil to HKD29,500,000 (USD3,750,000)	34	23
HKD29,500,001-HKD30,000,000 (USD3,750,001 – USD3,850,000)	1	–
HKD37,000,001-HKD37,500,000 (USD4,700,001 – USD4,800,000)	–	1
HKD39,000,001-HKD39,500,000 (USD4,900,001 – USD5,000,000)	–	1
HKD41,000,001-HKD41,500,000 (USD5,200,001 – USD5,300,000)	–	1
HKD48,000,001-HKD48,500,000 (USD6,100,001 – USD6,200,000)	1	1
HKD51,000,001-HKD51,500,000 (USD6,500,001 – USD6,600,000)	1	–
HKD51,500,001-HKD52,000,000 (USD6,600,001 – USD6,700,000)	1	–
HKD59,500,001-HKD60,000,000 (USD7,600,001 – USD7,700,000)	–	1
HKD83,000,001-HKD83,500,000 (USD10,600,001 – USD10,700,000)	1	–

The total remuneration, including the basic salary, performance-linked salary, incentive-linked salary and bonus of the Directors in 2019 amounted to approximately USD6 million. All other 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 2019 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 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 nine meetings. The Company's external auditors are regularly invited to attend meetings of the Audit Committee. At the meeting on 6 March 2019, members of the Audit Committee reviewed the consolidated financial statements for the year ended 31 December 2018. At a meeting on 8 August 2019, members of the Audit Committee reviewed the interim condensed financial information as at and for the three and six months ended 30 June 2019, and at a meeting on 12 March 2020, members of the Audit Committee reviewed the consolidated financial statements for the year ended 31 December 2019. 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 2019, 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 2019, 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 2019, 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 2019 USD'000
Audit services	
Annual audit services	6,500
Annual non-audit services	1,000

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 2019 consolidated financial statements are set out in the "Independent Auditors' Report" on page 147.

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 2019, in accordance with applicable law 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 apply them consistently;
- make judgments and estimates which are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the consolidated 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 proper accounting records that disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the consolidated financial statements comply with the Companies (Jersey) Law 1991. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of 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 147 to 150 of this Annual Report.

11. RISK MANAGEMENT AND INTERNAL CONTROL

The Company's risk management and internal control system (hereinafter referred to as 'the System') assures that the Company's operations are effective and well aligned with its strategic objectives. The System is designed to determine the nature and extent of risks, to safeguard the assets of the Company, to ensure correct, reliable, complete and timely financial reporting. The System promotes ethical values, good corporate governance and ensures regulatory compliance.

Roles and responsibilities

The System stipulates the following roles and responsibilities:

- Owners of the Company's business processes (hereinafter referred to as 'Process owners');
- Directorate for Control, Internal Audit and Business Coordination (hereinafter referred to as 'the Directorate for Control');
- Audit Committee.

Process owners are responsible for running specific business processes in compliance with the System, identifying risks and defining subsequent risk mitigation activities.

The Directorate for Control is responsible for methodological support and independent assessment of the System. The Directorate for Control performs audits and revisions to assess effectiveness and efficiency of business processes and applicable controls. Thus, the System is based on both best practices suggested by Process owners and recommendations from audits and revisions (compliance with the recommendations is also regularly checked).

The Directorate for Control reports the results of audits and revisions, as well as other activities related to internal controls, to the Audit Committee on a quarterly basis.

Risk management aspects of the System are covered in the quarterly risk management status reports to the Audit Committee.

The Audit Committee is responsible for oversight of the financial reporting process, the audit process, the Company's system of internal controls and compliance with laws and regulations.

In accordance with CG Code provision C.2.1., the Audit Committee reviews the Company's risk management and internal control system on a quarterly basis to ensure its effectiveness and efficiency. The Audit Committee approves the annual schedule of audits and revisions to be performed by the Directorate for Control, though the scope of the Directorate's activities is not limited to scheduled audits – the Audit Committee and the Company's management can initiate additional unscheduled activities.

Risk management patterns

The Company aims to promote a risk-aware culture among all its employees, including those directly engaged in day-to-day operations. Such attitude to risk management improves risk awareness and enables the Company to respond to changes in the business environment on a timely basis.

However, it is important to note that the System is designed to manage rather than eliminate the risk of failure to achieve business objectives, and can only provide reasonable assurance against material misstatement or loss.

The Company faces the following types of risks:

Operational risks are those related to direct or indirect damages incurred within the Company's core operating activities due to inefficient or ineffective business-processes, systems or human error.

Financial and market risks are those related to financing the Company's activities and volatility on global markets including commodity prices, interest rates and foreign currency rates.

Corporate risks are those related to business environment affecting financial results of the Company, including political, legal and other risks.

Project risks are those faced by the Company due to implementation of investment projects and minor continuous improvement projects.

All material risks are consolidated in the Company's Risk Register monitored at all management levels. A specific responsible employee is allocated to each risk. The Directorate for Control cross-verifies risk management instruments applied to each material risk.

The Audit Committee and Directorate for Control aim to regularly improve and enhance the Company's internal controls and risk management processes. The results of the Audit Committee's quarterly reviews of the System in 2019 are as follows:

Key improvements of procurement controls:

Control of significant purchases of materials, equipment, transportation and construction services through participation in tender committees;

Implementation of inventory turnover control;

Implementation of the project to dispose of the Company's non-liquid and non-core assets;

Optimization of cooperation with business-to-business trading platforms;

Enhancing transparency through rebranding and promotion of an ethics hotline for suppliers;

Introduction of alternative suppliers of ligature to move from sole-source contracts to a more competitive sourcing landscape;

Development and implementation of tools to improve the efficiency of procurement.

Key enhancements of risk management:

Organization of independent risk audits of Company's production facilities conducted by Willis Group to mitigate risks and optimize the Company's insurance programs;

Development and analysis of the Risk Register (updated on a quarterly basis);

Quarterly reports on the status of Company's risk management activities to the Audit Committee;

Update of the insurance program for 2019-2020;

Update of the Risk Management Procedure with the focus on risk mitigation activities;

On-site risk management trainings for the Aluminium Division covering key smelters;

Development of business continuity methodology based on identified risks.

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 2019 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, Dr. Elsie Leung Oi-sie, Mr. Dmitry Vasiliev, Mr. Bernard Zonneveld, Mr. Marco Musetti, Mr. Evgenii Nikitin, Mr. Evgenii Vavilov, Mr. Vyacheslav Solomin, Mr. Evgeny Kuryanov (appointed with effect from 14 February 2019), Mr. Vladimir Kolmogorov (appointed with effect from 18 May 2019), Mr. Maxim Poletaev (appointed with effect from 14 February 2019), Mr. Randolph N. Reynolds (appointed with effect from 14 February 2019), Mr. Kevin Parker (appointed with effect from 14 February 2019), Mr. Christopher Burnham (appointed with effect from 14 February 2019) and Mr. Nick Jordan (appointed with effect from 14 February 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, including training on responsibilities of directors pursuant to the Listing Rules conducted in June 2019.

14. GOING CONCERN

As of 31 December 2019, 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 has developed its own systems and process for communications 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 2019.

16. SHAREHOLDERS' RIGHT

Right to convene an extraordinary general meeting

According to Article 13.4 of the Articles of Association, 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.

According to Article 13.5 of the Articles of Association, 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.

According to Article 13.6 of the Articles of Association, 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 2,000 Hong Kong dollars 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, 3rd Floor, 44 Esplanade, St Helier, JE4 9WG".

17. COMPANY SECRETARY

The Company engages Ms. Aby Wong Po Ying from an external service provider as its company secretary. The primary contract person in the Company is Mr. Eugene Choi, Authorised 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.

09 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 2019, 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 AUDITORS' REPORT

To the Members of United Company RUSAL Plc

Report on the Audit of the Consolidated Financial Statements

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 2019, 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 2019, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) as issued by IASB, and have been properly 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) and applicable law. 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 Code of Ethics for Professional Accountants (including International Independence Standards), and we have fulfilled our other ethical responsibilities in accordance with the International Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

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.

Audited entity: United Company RUSAL Plc

Registration No. 94939

Jersey, British Channels Islands.

Independent auditor: JSC "KPMG", a company incorporated under the Laws of the Russian Federation, a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.

Registration No. in the Unified State Register of Legal Entities 1027700125628.

Member of the Self-regulatory Organization of Auditors Association "Sodruzhestvo" (SRO AAS). The Principal Registration Number of the Entry in the Register of Auditors and Audit Organisations: No. 12006020351..

VALUATION OF PROPERTY, PLANT AND EQUIPMENT

Please refer to the Note 13 in the consolidated financial statements.

The key audit matter	How the matter was addressed in our audit
The Group has significant property, plant and equipment balance which is material to the financial statements as at 31 December 2019. 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 aluminium and 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.	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; – 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

Matters 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
For and on behalf of JSC "KPMG"
Recognized Auditors
Moscow, Russia
12 March 2020

CONSOLIDATED STATEMENT OF INCOME

FOR THE YEAR ENDED 31 DECEMBER 2019

		Year ended 31 December	
		2019	2018
	Note	USD million	USD million
Revenue	5	9,711	10,280
Cost of sales	6(a)	(8,113)	(7,446)
Gross profit		**1,598**	**2,834**
Distribution expenses	6(b)	(539)	(462)
Administrative expenses	6(b)	(594)	(629)
Impairment of non-current assets	6(b)	(291)	(157)
Net other operating expenses	6(b)	(87)	(105)
Results from operating activities		**87**	**1,481**
Finance income	7	45	203
Finance expenses	7	(747)	(686)
Share of profits of associates and joint ventures	15	1,669	955
Profit before taxation		**1,054**	**1,953**
Income tax	8	(94)	(255)
Profit for the year		**960**	**1,698**
Attributable to Shareholders of the Company		960	1,698
Profit for the year		**960**	**1,698**
Earnings per share			
Basic and diluted earnings per share (USD)	12	0.063	0.112
Adjusted EBITDA	6(d)	966	2,163

The consolidated statement of income is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 DECEMBER 2019

		Year ended 31 December	
		2019	2018
	Note	USD million	USD million
Profit for the year		**960**	**1,698**
Other comprehensive income			
Items that will never be reclassified subsequently to profit or loss:			
Actuarial (loss)/gain on post retirement benefit plans	20	(9)	6
		(9)	**6**
Items that are or may be reclassified subsequently to profit or loss:			
Change in fair value of cash flow hedges	21	34	–
Share of other comprehensive income of associates	15	–	10
Disposal of subsidiary		4	–
Foreign currency translation differences for equity-accounted investees	15	448	(810)
Foreign currency translation differences on foreign operations		101	(139)
		587	**(939)**
Other comprehensive income/(loss) for the year, net of tax		**578**	**(933)**
Total comprehensive income for the year		**1,538**	**765**
Attributable to:			
Shareholders of the Company		1,538	765
Total comprehensive income for the year		**1,538**	**765**

There was no significant tax effect relating to each component of other comprehensive income.

The consolidated statement of comprehensive income is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2019

	Note	31 December 2019 USD million	31 December 2018 USD million
ASSETS			
Non-current assets			
Property, plant and equipment	13	4,499	4,421
Intangible assets	14	2,557	2,409
Interests in associates and joint ventures	15	4,240	3,698
Deferred tax assets	8	130	93
Derivative financial assets	21	33	33
Other non-current assets		87	57
Total non-current assets		**11,546**	**10,711**
Current assets			
Inventories	16	2,460	3,006
Short-term investments		171	105
Trade and other receivables	17(a)	1,351	1,102
Dividends receivable		430	–
Derivative financial assets	21	75	9
Cash and cash equivalents	17(c)	1,781	844
Total current assets		**6,268**	**5,066**
Total assets		**17,814**	**15,777**

The consolidated statement of financial position is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

	Note	31 December 2019 USD million	31 December 2018 USD million
EQUITY AND LIABILITIES			
Equity	18		
Share capital		152	152
Share premium		15,786	15,786
Other reserves		2,892	2,863
Currency translation reserve		(9,201)	(9,750)
Accumulated losses		(2,882)	(3,842)
Total equity		**6,747**	**5,209**
Non-current liabilities			
Loans and borrowings	19	7,699	7,372
Provisions	20	403	366
Deferred tax liabilities	8	465	502
Derivative financial liabilities	21	27	24
Other non-current liabilities		83	50
Total non-current liabilities		**8,677**	**8,314**
Current liabilities			
Loans and borrowings	19	548	914
Trade and other payables	17(b)	1,770	1,274
Derivative financial liabilities	21	27	7
Provisions	20	45	59
Total current liabilities		**2,390**	**2,254**
Total liabilities		**11,067**	**10,568**
Total equity and liabilities		**17,814**	**15,777**
Net current assets		**3,878**	**2,812**
Total assets less current liabilities		**15,424**	**13,523**

Approved and authorised for issue by the board of directors on 12 March 2020.

Evgenii V. Nikitin
Chief Executive Officer

Alexander V. Popov
Chief Financial Officer

The consolidated statement of financial position is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED 31 DECEMBER 2019

	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 2019	**152**	**15,786**	**2,863**	**(9,750)**	**(3,842)**	**5,209**
Profit for the year	–	–	–	–	960	960
Other comprehensive income for the year	–	–	29	549	–	578
Total comprehensive income for the year	**–**	**–**	**29**	**549**	**960**	**1,538**
Balance at 31 December 2019	**152**	**15,786**	**2,892**	**(9,201)**	**(2,882)**	**6,747**
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/(loss) 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**

The consolidated statement of changes in equity is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

CONSOLIDATED STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 DECEMBER 2019

		Year ended 31 December	
		2019	2018
	Note	USD million	USD million
OPERATING ACTIVITIES			
Profit for the year		**960**	**1,698**
Adjustments for:			
Depreciation	6, 13	562	511
Amortisation	6, 14	4	2
Impairment of non-current assets	6(b)	291	157
(Reversal of)/impairment of trade and other receivables	6(b)	(12)	36
Reversal of impairment of inventories	16	(16)	(20)
Reversal of pension provision	20	(7)	(2)
Provision for legal claims	20	14	–
Change in fair value of derivative financial instruments	7	21	(171)
Net foreign exchange loss	7	124	80
Loss on disposal of property, plant and equipment	6(b)	22	12
Interest expense	7	602	503
Interest income	7	(45)	(32)
Income tax expense	8	94	255
Share of profits of associates and joint ventures	15	(1,669)	(955)
Cash from operating activities before changes in working capital and provisions		**945**	**2,074**
Decrease/(increase) in inventories		580	(498)
Increase in trade and other receivables		(210)	(154)
Increase/(decrease) in trade and other payables		586	(608)
Decrease in provisions		(6)	(10)
Cash generated from operations before income tax paid		**1,895**	**804**
Income taxes paid	8	(243)	(124)
Net cash generated from operating activities		**1,652**	**680**

The consolidated statement of cash flows is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

	Note	Year ended 31 December 2019 USD million	2018 USD million
INVESTING ACTIVITIES			
Proceeds from disposal of property, plant and equipment		43	22
Interest received		31	29
Acquisition of property, plant and equipment		(811)	(812)
Dividends from associates and joint ventures		1,141	909
Acquisition of intangible assets		(37)	(22)
Other investments		(85)	(153)
Contribution to joint venture		(75)	–
Acquisition of subsidiaries		(35)	(53)
Return of prepayment for investment in associate		44	–
Changes in restricted cash	17(c)	30	(26)
Net cash generated from/(used in) investing activities		**246**	**(106)**
FINANCING ACTIVITIES			
Proceeds from borrowings		1,568	1,996
Repayment of borrowings		(1,905)	(2,142)
Refinancing fees and other expenses		(33)	(6)
Interest paid		(553)	(490)
Settlement of derivative financial instruments		(26)	125
Net cash used in financing activities		**(949)**	**(517)**
Net increase in cash and cash equivalents		**949**	**57**
Cash and cash equivalents at the beginning of the year	17(c)	801	814
Effect of exchange rate fluctuations on cash and cash equivalents		18	(70)
Cash and cash equivalents at the end of the year	17(c)	**1,768**	**801**

Restricted cash amounted to USD13 million and USD43 million at 31 December 2019 and 31 December 2018, respectively.

The consolidated statement of cash flows is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 158 to 232.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER 2019

1. BACKGROUND

(a) Organisation

United Company RUSAL Plc (the "Company" or "UC 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 3rd floor, 44 Esplanade, St Helier, Jersey, JE4 9WG, Channel Islands.

The extraordinary general meeting of the Company held on 1 August 2019 approved the application by the Company to the regulatory authorities in the Russian Federation (the "New Jurisdiction") for continuance as a company with the status of an International Company established under the laws of the New Jurisdiction. The Company is currently in process of completing relevant actions for approved redomiciliation.

The Company directly or through its wholly owned subsidiaries controls a number of production and trading entities 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 2019 and 31 December 2018 was as follows:

	31 December 2019	31 December 2018
IPJSC EN+GROUP ("EN+", former En+ Group Plc)	50.10%	48.13%
SUAL Partners Ltd. ("SUAL Partners")	22.50%	22.50%
Zonoville Investments Ltd. ("Zonoville")	4.00%	4.00%
Amokenga Holdings Ltd. ("Amokenga Holdings")	6.78%	8.75%
Mr. Oleg V. Deripaska	0.01%	0.01%
Publicly held	16.61%	16.61%
Total	**100.00%**	**100.00%**

At 31 December 2019 and 2018 the directors consider the immediate parent of the Group to be EN+, which was incorporated in Jersey with its registered office at 44 Esplanade, St Helier, Jersey, JE4 9WG, Channel Islands. On 9 July 2019 the Parent Company changed its domicile to Russian Federation with a registration as EN+ GROUP International public joint-stock company (IPJSC EN+GROUP). As at the reporting date the Parent Company's registered office is Oktyabrskaya st. 8, office 34, Kaliningrad, Kaliningrad Region, 236006, Russian Federation.

Based on the information provided by EN+, at the reporting date there is no individual that has an indirect prevailing ownership interest in EN+ GROUP IPJSC exceeding 50%, who could exercise voting rights in respect of more than 35% of IPJSC EN+ GROUP's issued share capital or has an opportunity to exercise control over IPJSC EN+ GROUP. As at 31 December 2019 Mr. Oleg Deripaska beneficially controls and exercises voting rights in respect of 35% of the voting shares of IPJSC EN+ GROUP and cannot exceed his direct or indirect shareholding over 44.95% of the shares of the Company.

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. Major ultimate beneficiaries of SUAL Partners are Mr. Victor Vekselberg and Mr. Len Blavatnik.

At the date of these financial statements the shareholding structure of the Company was as follows:

IPJSC EN+GROUP ("EN+", former En+ Group Plc)	56.88%
SUAL Partners Limited ("SUAL Partners")	22.50%
Zonoville Investments Limited ("Zonoville")	4.00%
Mr. Oleg V. Deripaska	0.01%
Publicly held	16.61%
Total	**100.00%**

Based on publicly available information at the Company's disposal at the date of these financial statements, Mr. Oleg Deripaska has indirect ownership interest in the Company exceeding 25%. There is no individual that 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 Ruble, 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 IPJSC EN+GROUP ("EN+", former En+ Group Plc), 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 16 Leases 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 2019 but they do not have a material effect on the Group's financial statements.

Due to the transition method chosen by the Group in applying this standard, comparative information throughout these financial statements has not been restated to reflect the requirements of the new standards.

A number of new standards are effective for annual periods beginning after 1 January 2020 and earlier application is permitted; however, the Group has not early adopted the 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.

– *Amendments to References to Conceptual Framework in IFRS Standards.*

– *Definition of a Business (Amendments to IFRS 3).*

– *Definition of Material (Amendments to IAS 1 and IAS 8).*

– *IFRS 17 Insurance Contracts.*

– *Interest Rate Benchmarking Reform (Amendments to IFRS 9, IAS 39 and IFRS 7).*

3. SIGNIFICANT ACCOUNTING POLICIES

(a) Changes in accounting policies

The Group has initially adopted IFRS 16 *Leases* from 1 January 2019.

IFRS 16 introduced a single, on-balance sheet accounting model for lessees. As a result, the Group, as a lessee, has recognised right-of-use assets representing its rights to use the underlying assets and lease liabilities representing its obligation to make lease payments. Lessor accounting remains similar to previous accounting policies.

The Group has applied IFRS 16 using the modified retrospective approach, under which the comparative information presented for 2018 has not been restated – i. e. it is presented, as previously reported, under IAS 17 and related interpretations. The details of the changes in accounting policies are disclosed below.

Definition of a lease

Previously, the Group determined at contract inception whether the arrangement was or contained a lease under IFRIC 4 *Determining Whether an Arrangement contains a Lease.* The Group now assesses whether a contract is or contains a lease based on the new definition of a lease. Under IFRS 16 a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

On transition to IFRS 16 the Group elected to apply the practical expedient to grandfather the assessment of which transactions are leases. It applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 have not been reassessed. Therefore, the definition of a lease under IFRS 16 has been applied only to contracts entered into or modified on or after 1 January 2019.

At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices. However, for the leases of properties in which Group acts as a lessee, the Group has elected not to separate non-lease components and will instead account for the lease and non-lease components as a single lease component.

As a lessee

The Group leases many assets, including land, properties and production equipment.

As a lessee, the Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred substantially all of the risks and rewards of ownership. Under IFRS 16 the Group recognises right-of-use assets and lease liabilities for most leases – i. e. these leases are on-balance sheet.

However, the Group has elected not to recognise right-of-use assets and lease liabilities for some leases of low-value assets and short-term leases. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The group presents right-of-use assets as part of property plant and equipment, the same line item as it presents underlying assets of the same nature that it owns. The carrying amounts of right-of-use assets are presented below.

	Property, plant and equipment		
USD Million	Land and buildings	Machinery and equipment	Total
Balance at 1 January 2019	19	19	38
Balance at 31 December 2019	**17**	**13**	**30**

The Group presents lease liabilities as part of other payables and other non-current liabilities in the statement of financial position depending on the period to which future lease payments relate.

Significant accounting policies

The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost and subsequently measured at cost less any accumulated depreciation and impairment losses and adjusted for certain remeasurements of the lease liability as required by IFRS 16.

The cost comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payment made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised.

The Group has applied judgement to determine the lease term for some lease contracts in which it is a lessee that include renewal options, the assessment of whether the Group is reasonably certain to exercise such options impacts the lease term, which significantly affects the amount of lease liabilities and right-of-use assets recognised.

In determining the enforceable period (i.e. the maximum lease term), the Group considers whether both it and the lessor has a right to terminate the lease without permission from the other party and, if so, whether that termination would result in more than an insignificant penalty. If a more than insignificant penalty exists, then the enforceable period extends until the point at which a no more than an insignificant penalty exists.

In accordance with IFRS 16 variable payments which do not depend on index or rate, e. g. which do not reflect changes in market rental rates, should not be included in the measurement of lease liability. In respect of municipal or federal land leases where lease payments are based on cadastral value of the land plot and do not change until the next revision of that value or the applicable rates (or both) by the authorities, the Group has determined that, under the current revision mechanism, the land lease payments cannot be considered as either variable that depend on index or rate or in-substance fixed, and therefore these payments are not included in the measurement of the lease liability.

Transition

Previously, the Group classified property and equipment leases as operating leases under IAS 17. These mainly include land plots, office spaces and items of machinery and equipment. The leases run for different periods of time, with longer periods for land plots. Some leases include an option to renew the lease for an additional period after the end of the non-cancellable period. Some leases provide for additional rent payments that are based on changes in various indices.

At transition, for leases classified as operating leases under IAS 17, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as at 1 January 2019. Right-of-use assets are measured at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments.

The Group used the following practical expedients when applying IFRS 16 to lease previously classified as operating leases under IAS 17:

- Applied the exemption not to recognise right-of-use assets and liabilities for leases with less than 12 months of lease term.
- Excluded initial direct costs from measuring the right-of-use asset at the date of initial application.
- Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

For the leases that were classified as finance leases under IAS 17, the carrying amount of the right-of-use asset and the lease liability at 1 January 2019 were determined at the carrying amount of the lease asset and lease liability under IAS 17 immediately before that date.

As a lessor

The accounting policies applicable to the Group as a lessor are not different from those under IAS 17. However, when the Group is an intermediate lessor the sub-leases are classified with reference to the right-of the use asset arising from the head lease, not with reference to the underlying asset.

Impacts on financial statements

Impacts on transition

On transition to IFRS 16, the Group recognised additional right-of-use assets and additional lease liabilities in equal amounts. The impact on transition is summarised below.

	1 January 2019 USD million
Right-of-use assets presented in property, plant and equipment less impairment losses	38
Lease liabilities	38

When measuring lease liabilities for leases that were classified as operating leases, the Group discounted lease payments using its incremental borrowing rate at 1 January 2019. The weighted average rate applied is 11%.

	1 January 2019 USD million
Discounted using incremental borrowing rate at 1 January 2019	59
– Recognition exemption for leases with less than 12 month of lease term at transition	(12)
– Termination options reasonably certain to be exercised	(9)
Lease liabilities recognised at 1 January 2019	38

Impacts for the period

As a result of initially applying IFRS 16, in relation to the leases that were previously classified as operating leases, the Group recognised USD30 million of right-of-use assets and USD39 million of lease liabilities as at 31 December 2019. USD25 million of lease liabilities (including USD4 million of related parties – companies related through parent company) are long-term and included in other non-current liabilities, USD14 million of lease liabilities (including USD4 million of related parties – companies related through parent company) are short-term and included in other payables.

Also in relation to these leases under IFRS 16, the Group has recognised USD10 million of depreciation charges and USD5 million of interest costs for the year ended 31 December 2019. USD8 million of right-of-use assets have been impaired during the year ended 31 December 2019. The Group's total cash outflow for leases was in the amount of USD13 million.

The expense relating to short-term leases in the amount of USD23 million is included in cost of sales or administrative expenses depending on type of underlying asset.

Future cash outflows to which the Group is potentially exposed that are not recognised in right-to-use assets and are not reflected in the measurement of lease liabilities and which arise from variable lease payments not linked to index or rate are in the amount of USD45 million.

(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 Rubles ("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 2019 and 2018.

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 2019

	Aluminium USD million	Alumina USD million	Energy USD million	Mining and Metals USD million	Total segment result USD million
Revenue from external customers	8,082	984	–	–	9,066
Inter-segment revenue	232	2,881	–	–	3,113
Total segment revenue	**8,314**	**3,865**	**–**	**–**	**12,179**
Segment profit	**275**	**456**	**–**	**–**	**731**
Impairment of non-current assets	(153)	(42)	–	–	(195)
Share of profits of associates and joint ventures	–	–	82	1,587	1,669
Depreciation/amortisation	(378)	(158)	–	–	(536)
Non-cash income other than depreciation	9	10	–	–	19
Additions to non-current segment assets during the year	554	267	–	–	821
Non-cash disposals to non-current segment assets related to site restoration	(3)	(8)	–	–	(11)
Segment assets	6,912	2,656	–	–	9,568
Interests in associates and joint ventures	–	–	699	3,462	4,161
Total segment assets					**13,729**
Segment liabilities	(966)	(614)	(11)	–	(1,591)
Total segment liabilities					**(1,591)**

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)**

(ii) Reconciliation of reportable segment revenue, profit or loss, assets and liabilities

	Year ended 31 December	
	2019	2018
	USD million	USD million
Revenue		
Reportable segment revenue	12,179	13,268
Elimination of inter-segment revenue	(3,113)	(3,609)
Unallocated revenue	645	621
Consolidated revenue	**9,711**	**10,280**

	Year ended 31 December	
	2019	2018
	USD million	USD million
Profit		
Reportable segment profit	731	2,012
Impairment of non-current assets	(291)	(157)
Share of profits of associates and joint ventures	1,669	955
Finance income	45	203
Finance expenses	(747)	(686)
Unallocated expenses	(353)	(374)
Consolidated profit before taxation	**1,054**	**1,953**

	31 December	31 December
	2019	2018
	USD million	USD million
Assets		
Reportable segment assets	13,729	13,215
Unallocated assets	4,085	2,562
Consolidated total assets	**17,814**	**15,777**
Liabilities		
Reportable segment liabilities	(1,591)	(1,212)
Unallocated liabilities	(9,476)	(9,356)
Consolidated total liabilities	**(11,067)**	**(10,568)**

(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	
	2019	2018
	USD million	USD million
Russia	2,290	2,485
Turkey	1,051	750
Netherlands	985	1,121
USA	649	887
South Korea	577	282
Italy	570	359
Poland	456	333
Japan	440	800
Germany	220	227
France	209	311
Norway	203	372
Greece	188	262
Sweden	158	333
China	118	53
Other countries	1,597	1,705
	9,711	**10,280**

	Specified non-current assets	
	31 December	31 December
	2019	2018
	USD million	USD million
Russia	7,357	7,031
Ireland	655	376
Guinea	230	152
Ukraine	158	158
Sweden	–	126
Unallocated	3,146	2,868
	11,546	10,711

5. REVENUE

Accounting policies

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised.

The details of significant accounting policies in relation to the Group's various goods and services are set out below:

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.

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. In these cases rendering of transportation services from when the control of the goods has transferred is considered as a separate performance obligation.

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. Revenue is recognised over time during the month of energy supply.

Disclosures

	Year ended 31 December	
	2019	2018
	USD million	USD million
Revenue from contracts with customers	**9,711**	**10,280**
Sales of products	**9,529**	**10,066**
Sales of primary aluminium and alloys	8,019	8,293
Sales of alumina and bauxite	668	984
Sales of foil and other aluminium products	410	346
Sales of other products	432	443
Provision of services	**182**	**214**
Supply of energy	118	143
Provision of transportation services	10	8
Provision of other services	54	63
Total revenue by types of customers	**9,711**	**10,280**
Third parties	6,530	6,150
Related parties – companies capable of exerting significant influence	2,727	3,671
Related parties – companies related through parent company	140	166
Related parties – associates and joint ventures	314	293
Total revenue by primary regions	**9,711**	**10,280**
Europe	4,805	4,804
CIS	2,669	2,944
America	799	1,076
Asia	1,381	1,400
Other	57	56

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 6.78% share – refer to note 1(a)) – with whom transactions have exceeded 10% of the Group's revenue. In 2019 revenues from sales of primary aluminium and alloys to this customer amounted to USD2,325 million (2018: USD3,115 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	
	2019	2018
	USD million	USD million
Cost of alumina, bauxite and other materials	**(3,388)**	**(3,720)**
Third parties	*(3,300)*	*(3,588)*
Related parties – companies capable of exerting significant influence	*(54)*	*(78)*
Related parties – companies related through parent company	*(34)*	*(54)*
Purchases of primary aluminium	**(516)**	**(467)**
Third parties	*(49)*	*(145)*
Related parties – companies related through parent company	*(13)*	*(15)*
Related parties – associates and joint ventures	*(454)*	*(307)*
Energy costs	**(2,054)**	**(2,147)**
Third parties	*(1,235)*	*(1,267)*
Related parties – companies capable of exerting significant influence	*(5)*	*(4)*
Related parties – companies related through parent company	*(782)*	*(839)*
Related parties – associates and joint ventures	*(32)*	*(37)*
Personnel costs	**(499)**	**(582)**
Depreciation and amortisation	**(548)**	**(498)**
Change in finished goods	**(453)**	**347**
Other costs	**(655)**	**(379)**
Third parties	*(502)*	*(196)*
Related parties – companies related through parent company	*(30)*	*(35)*
Related parties – associates and joint ventures	*(123)*	*(148)*
	(8,113)	**(7,446)**

(b) Distribution, administrative and other operating expenses, and impairment of non-current assets

	Year ended 31 December	
	2019	2018
	USD million	USD million
Transportation expenses	(438)	(373)
Personnel costs	(325)	(330)
Impairment of non-current assets	(291)	(157)
Consulting and legal expenses	(79)	(79)
Packaging materials	(43)	(36)
Security	(31)	(24)
Charitable donations	(31)	(22)
Taxes other than on income	(30)	(31)
Repair and other services	(24)	(19)
Loss on disposal of property, plant and equipment	(22)	(12)
Depreciation and amortisation	(18)	(15)
Short-term lease and variable lease payments	(17)	(24)
Provision for legal claims	(14)	–
Auditors' remuneration	(6)	(6)
Reversal/(impairment) of trade and other receivables	12	(36)
Other expenses	(154)	(189)
	(1,511)	**(1,353)**

(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	
	2019	2018
	USD million	USD million
Contributions to defined contribution retirement plans	176	173
Contributions to defined benefit retirement plans	3	–
Total retirement costs	179	173
Wages and salaries	645	739
	824	912

(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	
	2019	2018
	USD million	USD million
Results from operating activities	87	1,481
Add:		
Amortisation and depreciation	566	513
Impairment of non-current assets	291	157
Loss on disposal of property, plant and equipment	22	12
Adjusted EBITDA	**966**	**2,163**

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.

Foreign exchange loss on loans and borrowing for the year ended 31 December 2019 equaled to USD213 million.

Disclosures

	Year ended 31 December	
	2019 USD million	2018 USD million
Finance income		
Interest income on third party loans and deposits	44	31
Interest income on loans to related parties – *companies related through parent company*	1	1
Change in fair value of derivative financial instruments (refer to note 21)	–	171
	45	**203**
Finance expenses		
Interest expense on bank loans and bonds wholly repayable within 5 years and other bank charges	(576)	(239)
Interest expense on bank loans and bonds wholly repayable after 5 years	–	(259)
Other finance costs	(13)	(2)
Change in fair value of derivative financial instruments (refer to note 21)	(21)	–
Net foreign exchange loss	(124)	(183)
Interest expense on provisions	(8)	(3)
Leases interest costs	(5)	–
	(747)	**(686)**

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	
	2019	2018
	USD million	USD million
Current tax		
Current tax for the year	162	305
Deferred tax		
Origination and reversal of temporary differences	(68)	(50)
Actual tax expense	**94**	**255**

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 21.4% 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 are 9.55% and 14.35% for different subsidiaries. For the Group's significant trading companies, the applicable tax rate is 0%. The applicable tax rates for the period ended 31 December 2018 were the same as for the period ended 31 December 2019 except for tax rates for subsidiaries domiciled in Sweden which amounted to 22% and tax rates for subsidiaries domiciled in Switzerland which amounted to 9.6% and 14.51% accordingly.

	Year ended 31 December			
	2019		2018	
	USD million	%	USD million	%
Profit before taxation	**1,054**	**100**	**1,953**	**100**
Income tax at tax rate applicable to the tax residence of the Company	132	13	244	13
Effect of different income tax rates	25	2	(50)	(3)
Effect of changes in investment in Norilsk Nickel	(154)	(15)	(63)	(3)
Change in unrecognised deferred tax assets	31	3	11	1
Effect of reversal/accrual of impairment	79	7	(35)	(2)
Other non-deductible taxable items	(21)	(1)	31	2
Income tax related to prior periods, including provision	2	–	117	6
Actual tax expense	**94**	**9**	**255**	**14**

(b) Recognised deferred tax assets and liabilities

Deferred tax assets and liabilities are attributable to the following temporary differences:

	Assets		Liabilities		Net	
	31 December	31 December	31 December	31 December	31 December	31 December
USD million	2019	2018	2019	2018	2019	2018
Property, plant and equipment	77	55	(580)	(574)	(503)	(519)
Inventories	97	54	(13)	(14)	84	40
Trade and other receivables	26	17	(19)	(9)	7	8
Derivative financial assets/(liabilities)	7	6	(8)	(8)	(1)	(2)
Tax loss carry-forwards	66	41	–	–	66	41
Others	328	224	(316)	(201)	12	23
Deferred tax assets/(liabilities)	601	397	(936)	(806)	(335)	(409)
Set-off of deferred taxation	(471)	(304)	471	304	–	–
Net deferred tax assets/(liabilities)	**130**	**93**	**(465)**	**(502)**	**(335)**	**(409)**

(c) Movement in deferred tax assets/(liabilities) during the year

	1 January 2018	Recognised in profit or loss	Foreign currency translation	31 December 2018
	USD million	USD million	USD million	USD million
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)**

	1 January 2019	Recognised in profit or loss	Foreign currency translation	31 December 2019
	USD million	USD million	USD million	USD million
Property, plant and equipment	(519)	10	6	(503)
Inventories	40	44	–	84
Trade and other receivables	8	(1)	–	7
Derivative financial assets/(liabilities)	(2)	1	–	(1)
Tax loss carry-forwards	41	25	–	66
Others	23	(11)	–	12
Total	**(409)**	**68**	**6**	**(335)**

Recognised tax losses expire in the following years:

	31 December	31 December
	2019	2018
Year of expiry	USD million	USD million
Without expiry	66	41
	66	**41**

(d) Unrecognised deferred tax assets

Deferred tax assets have not been recognised in respect of the following items:

	31 December	31 December
	2019	2018
	USD million	USD million
Deductible temporary differences	834	789
Tax loss carry-forwards	212	232
	1,046	**1,021**

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:

	31 December	31 December
	2019	2018
Year of expiry	USD million	USD million
Without expiry	210	231
From 2 to 5 years	2	1
	212	**232**

(e) Unrecognised deferred tax liabilities

Retained earnings of the Group's subsidiaries where dividend distributions are subject to taxation included USD1,361 million and USD1,778 million as at 31 December 2019 and 31 December 2018, 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 2019 USD million	31 December 2018 USD million
Net income tax (payable)/receivable at the beginning of the year	(105)	16
Income tax for the year	(162)	(305)
Income tax paid	220	124
Dividend withholding tax	57	47
Income tax provision (note 20)	–	20
Translation difference	(5)	(7)
	5	**(105)**
Represented by:		
Income tax payable (note 17)	(16)	(127)
Prepaid income tax (note 17)	21	22
Net income tax receivable/(payable)	**5**	**(105)**

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 2019			
	Directors' fees	Salaries, allowances, benefits in kind	Discretionary bonuses	Total
	USD thousand	USD thousand	USD thousand	USD thousand
Executive Directors				
Evgenii Nikitin (a)	–	1,221	1,104	2,325
Evgenii Vavilov (a)	–	51	7	58
Evgeny Kuryanov (b)	–	353	13	366
Sergei Popov (c)	–	7	–	7
Non-executive Directors				
Marco Musetti	217	–	–	217
Vyacheslav Solomin (d)	196	–	–	196
Vladimir Kolmogorov(e)	104	–	–	104
Timur Valiev (f)	70	–	–	70
Independent Non-executive Directors				
Bernard Zonneveld (Chairman)	675	–	–	675
Christopher Burnham (g)	243	–	–	243
Nicholas Jordan (g)	181	–	–	181
Elsie Leung Oi-Sie	202	–	–	202
Kevin Parker (g)	185			185
Maksim Poletaev (g)	180	–	–	180
Randolph Reynolds (g)	267	–	–	267
Dmitry Vasiliev	224	–	–	224
Philippe Bernard Henri Mailfait (h)	12	–	–	12
Jean-Pierre Thomas (h)	36	–	–	36
	2,792	**1,632**	**1,124**	**5,548**

	Year ended 31 December 2018			
	Directors' fees	Salaries, allowances, benefits in kind	Discretionary bonuses	Total
	USD thousand	USD thousand	USD thousand	USD thousand
Executive Directors				
Evgenii Nikitin (a)	–	591	616	1,207
Sergei Popov (c)	–	54	86	140
Evgenii Vavilov (a)	–	20	7	27
Oleg Deripaska (i)	–	400	4,280	4,680
Vladislav Soloviev (j)	–	1,631	3,939	5,570
Siegfried Wolf (j)	–	911	–	911
Non-executive Directors				
Marco Musetti	186	–	–	186
Vyacheslav Solomin (d)	82	–	–	82
Timur Valiev (f)	88	–	–	88
Maksim Goldman (k)	58	–	–	58
Dmitry Afanasiev (j)	89	–	–	89
Ivan Glasenberg (k)	58	–	–	58
Gulzhan Moldazhanova (j)	93	–	–	93
Ekaterina Nikitina (j)	96	–	–	96
Olga Mashkovskaya (j)	89	–	–	89
Daniel Lesin Wolfe (k)	58	–	–	58
Maksim Sokov (j)	96	–	–	96
Independent Non-executive Directors				
Matthias Warnig (Chairman) (l)	452	–	–	452
Philippe Bernard Henri Mailfait (h)	82	–	–	82
Jean-Pierre Thomas (h)	95	–	–	95
Bernard Zonneveld	230	–	–	230
Philip Lader (k)	97	–	–	97
Elsie Leung Oi-Sie	203	–	–	203
Mark Garber (j)	114	–	–	114
Dmitry Vasiliev	193	–	–	193
	2,459	**3,607**	**8,928**	**14,994**

a. Evgenii Nikitin and Evgenii Vavilov were appointed as Executive Directors in June 2018.

b. Evgeny Kuryanov was appointed as Executive Director in February 2019.

c. Sergei Popov was appointed as Executive Director in June 2018 and resigned from his position in February 2019.

d. Vyacheslav Solomin was appointed as Non-executive Director in June 2018.

e. Vladimir Kolmogorov was appointed as Non-executive Directors in May 2019.

f. Timur Valiev was appointed as Non-executive Directors in June 2018 and resigned from his position in May 2019.

g. Christopher Burnham, Nicholas Jordan, Kevin Parker, Maksim Poletaev and Randolph Reynolds were appointed as Independent Non-executive Directors in February 2019.

h. Philippe Bernard Henri Mailfait and Jean-Pierre Thomas were appointed as Independent Non-executive Directors in June 2018 and resigned from their positions in January 2019.

i. Oleg Deripaska resigned from his position as member of the Board of Directors in May 2018

j. 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.

k. Maksim Goldman, Ivan Glasenberg, Philip Lader and Daniel Lesin Wolfe resigned from their positions as members of the Board of Directors in April 2018.

l. Matthias Warnig resigned from his position as an independent non-executive director of the Company and the Chairman of the Company with effect from 31 December 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 2019, whose emolument is disclosed in note 9. The aggregate of the emoluments in respect of the other individuals are as follows:

	Year ended 31 December	
	2019	2018
	USD thousand	USD thousand
Salaries	19,291	11,449
Discretionary bonuses	14,406	11,238
	33,697	**22,687**

The emoluments of the other individuals with the highest emoluments are within the following bands:

	Year ended 31 December	
	2019	2018
	Number of individuals	Number of individuals
HK$29,500,001-HK$30,000,000 (US$3,750,001 – US$3,850,000)	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$48,000,001-HK$48,500,000 (US$6,100,001 – US$6,200,000)	1	–
HK$51,000,001-HK$51,500,000 (US$6,500,001 – US$6,600,000)	1	–
HK$51,500,001-HK$52,000,000 (US$6,600,001 – US$6,700,000)	1	–
HK$59,500,001-HK$60,000,000 (US$7,600,001 – US$7,700,000)	–	1
HK$83,000,001-HK$83,500,000 (US$10,600,001 – US$10,700,000)	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 2019 and the year ended 31 December 2018.

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 2019 and 31 December 2018. Weighted average number of shares:

	Year ended 31 December	
	2019	2018
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	**960**	**1,698**
Basic and diluted earnings per share, USD	**0.063**	**0.112**

There were no outstanding dilutive instruments during the years ended 31 December 2019 and 2018.

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 IFRS, 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	Electrolysers	Other	Mining assets	Construction in progress	Total
Cost/Deemed cost							
Balance at 1 January 2018	3,488	6,242	2,340	183	492	1,751	14,496
Additions	1	23	101	–	7	705	837
Acquired through business combination	–	–	–	16	–	–	16
Disposals	(6)	(63)	–	(2)	(4)	(86)	(161)
Transfers	106	280	118	5	8	(517)	–
Foreign currency translation	(80)	(108)	(15)	(1)	(60)	(67)	(331)
Balance at 31 December 2018	**3,509**	**6,374**	**2,544**	**201**	**443**	**1,786**	**14,857**
IFRS 16 application	19	19	–	–	–	–	38
Balance at 1 January 2019	**3,528**	**6,393**	**2,544**	**201**	**443**	**1,786**	**14,895**
Additions	10	44	131	1	13	688	887
Acquired through business combination	4	–	–	–	–	2	6
Disposals	(10)	(140)	(8)	(51)	(2)	(21)	(232)
Transfers	110	275	42	8	4	(439)	–
Foreign currency translation	40	50	4	–	35	43	172
Balance at 31 December 2019	**3,682**	**6,622**	**2,713**	**159**	**493**	**2,059**	**15,728**
Accumulated depreciation and impairment losses							
Balance at 1 January 2018	1,942	4,541	2,025	148	427	1,090	10,173
Depreciation charge	85	296	151	5	2	–	539
Impairment loss/(reversal) of impairment loss	(53)	16	–	2	6	76	47
Disposals	(2)	(53)	–	(2)	–	(7)	(64)
Transfers	14	(60)	46	1	–	(1)	–
Foreign currency translation	(68)	(87)	(12)	(1)	(58)	(33)	(259)
Balance at 31 December 2018	**1,918**	**4,653**	**2,210**	**153**	**377**	**1,125**	**10,436**
Balance at 1 January 2019	1,918	4,653	2,210	153	377	1,125	10,436
Depreciation charge	89	320	144	3	2	–	558
Impairment loss/(reversal) of impairment loss	106	76	32	(5)	39	(17)	231
Disposals	(3)	(99)	(5)	(4)	(1)	–	(112)
Transfers							
Foreign currency translation	27	35	4	–	34	16	116
Balance at 31 December 2019	**2,137**	**4,985**	**2,385**	**147**	**451**	**1,124**	**11,229**
Net book value							
At 31 December 2018	**1,591**	**1,721**	**334**	**48**	**66**	**661**	**4,421**
At 31 December 2019	**1,545**	**1,637**	**328**	**12**	**42**	**935**	**4,499**

Depreciation expense of USD544 million (2018: USD496 million) has been charged to cost of goods sold, USD4 million (2018: USD3 million) to distribution expenses and USD14 million (2018: USD12 million) to administrative expenses.

During the year ended 31 December 2019 interest expense of USD26 million was capitalised following commencement of active construction at several projects (2018: USD20 million).

Included into construction in progress at 31 December 2019 and 2018 are advances to suppliers of property, plant and equipment of USD124 million and USD32 million, respectively.

The carrying value of property, plant and equipment subject to lien under loan agreements was USD44 million as at 31 December 2019 (31 December 2018: 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 decrease of aluminium and alumina prices during the year as result of LME and overall market instability. In aluminium production, the Group benefited from decrease in cash cost due to decrease in alumina and energy resources costs. For alumina cash generating units, major influence was on the part of decrease in alumina prices, favourable dynamics in prices of energy resources being a significant part of cash cost. Bauxite cash generating units incurred more or less stable sale price and cash cost 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 2019, 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 Aughinish and Cobad cash generating units in the amount of USD363 million. Additionally, management has concluded that an impairment loss in respect of KAZ, VgAZ, BAZ and UAZ, Kubal, Kremny and Windalco cash generating units, in the amount of USD545 million should be recognised in these consolidated financial statements.

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.

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	
	2019	2018
Kubikenborg Aluminium (Kubal)	11.1%	11.1%
Windalco	18.6%	21.0%
BAZ and UAZ (Bogoslovsk and Ural aluminium smelters)	12.5%	19.2%
KAZ (Kandalaksha aluminium smelter)	12.5%	14.0%
VgAZ (Volgograd aluminium smelter)	12.0%	13.0%
Compagnie de Bauxites de Dian-Dian (Cobad)	20.0%	22.0%
Kremny	13.0%	13.0%
Aughinish Alumina	12.0%	13.4%

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 USD49 million at 31 December 2019 (2018: USD146 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.

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 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**
Balance at 1 January 2019	2,750	573	3,323
Additions	–	41	41
Disposals	–	(23)	(23)
Foreign currency translation	127	7	134
Balance at 31 December 2019	**2,877**	**598**	**3,475**
Amortisation and impairment losses			
Balance at 1 January 2018	(449)	(463)	(912)
Amortisation charge	–	(2)	(2)
Balance at 31 December 2018	**(449)**	**(465)**	**(914)**
Balance at 1 January 2019	(449)	(465)	(914)
Amortisation charge	–	(4)	(4)
Balance at 31 December 2019	**(449)**	**(469)**	**(918)**
Net book value			
At 31 December 2018	**2,301**	**108**	**2,409**
At 31 December 2019	**2,428**	**129**	**2,557**

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 2019, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2018 and performed an impairment test for goodwill at 31 December 2019 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 8.2 million metric tonnes of alumina and of 15.4 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;

- Aluminium sales prices were based on the long-term aluminium price outlook derived from available industry and market sources at USD1,802 per tonne for primary aluminium in 2020, USD1,860 in 2021, USD1,952 in 2022, USD2,028 in 2023, USD2,099 in 2024. Alumina prices were derived from the same sources as aluminium prices at USD301 per tonne for alumina in 2020, USD311 in 2021, USD322 in 2022, USD341 in 2023, USD349 in 2024. 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 RUB65.8 for one USD in 2020, RUB65.4 in 2021, RUB63.9 in 2022, RUB63.0 in 2023, RUB63.6 in 2024. Inflation of 4.0% – 4.6% in RUB and 1.7% – 2.1% 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 11.3%;

- 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 and alumina price levels would result in a decrease in the recoverable amount by 44% and would lead to an impairment in amount USD1,241 million;

- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 21% decrease in the recoverable amount but would not lead to an impairment;

- A 1% increase in the discount rate would have resulted in a 11% 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 2019.

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.

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	
	2019	2018
	USD million	USD million
Balance at the beginning of the year	3,698	4,448
Group's share of profits, impairment and reversal of impairment	1,669	955
(Return of prepayment)/prepayment for shares	(41)	41
Acquisition of investments	75	–
Dividends	(1,609)	(946)
Group's share of other comprehensive income of associates	–	10
Foreign currency translation	448	(810)
Balance at the end of the year	**4,240**	**3,698**
Goodwill included in interests in associates	2,428	2,163

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	Ownership interest		Principal activity
			Group's effective interest	Group's nominal interest	
PJSC MMC Norilsk Nickel	Russian Federation	158,245,476 shares, RUB1 par value	27.82%	27.82%	Nickel and other metals production
Queensland Alumina Limited	Australia	2,212,000 shares, AUD2 par value	20%	20%	Production of alumina under a tolling agreement
BEMO project	Cyprus, Russian Federation	BOGES Limited, BALP Limited – 10,000 shares EUR1.71 each	50%	50%	Energy/Aluminium production

The summary of the consolidated financial statements of associates and joint ventures for the year ended 31 December 2019 is presented below:

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other joint ventures	
	Group share	100%	Group share	100%	Group share	100%	Group share	100%
Non-current assets	5,868	12,899	163	535	1,528	2,942	252	464
Current assets	1,829	6,575	33	169	151	302	44	87
Non-current liabilities	(2,726)	(9,765)	(64)	(202)	(1,012)	(2,024)	(69)	(139)
Current liabilities	(1,509)	(5,422)	(132)	(373)	(83)	(166)	(33)	(67)
Net assets	**3,462**	**4,287**	**–**	**129**	**584**	**1,054**	**194**	**345**

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other joint ventures	
	Group share	100%	Group share	100%	Group share	100%	Group share	100%
Revenue	3,774	13,563	124	620	365	729	165	330
Profit from continuing operations	1,587	5,966	–	4	49	(128)	33	62
Other comprehensive income	383	484	–	(1)	61	123	4	2
Total comprehensive income	**1,970**	**6,450**	**–**	**3**	**110**	**(5)**	**37**	**64**

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		BEMO project		Other joint ventures	
	Group share	100%	Group share	100%	Group share	100%	Group share	100%
Non-current assets	5,123	10,697	104	503	1,366	2,849	146	293
Current assets	1,267	4,554	38	196	126	252	104	287
Non-current liabilities	(2,633)	(9,420)	(67)	(194)	(986)	(1,972)	(37)	(74)
Current liabilities	(656)	(2,358)	(75)	(379)	(37)	(75)	(85)	(230)
Net assets	**3,101**	**3,473**	**–**	**126**	**469**	**1,054**	**128**	**276**

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other joint ventures	
	Group share	100%	Group share	100%	Group share	100%	Group share	100%
Revenue	3,247	11,670	140	701	288	575	969	2,704
Profit from continuing operations	885	3,085	–	(1)	41	69	29	58
Other comprehensive income	(693)	(853)	–	(13)	(92)	(184)	(15)	(30)
Total comprehensive income	**192**	**2,232**	**–**	**(14)**	**(51)**	**(115)**	**14**	**28**

(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 2019 and 31 December 2018 amounted USD3,462 million and USD3,101 million, respectively. The market value amounted USD13,586 million and USD8,286 million as at 31 December 2019 and 31 December 2018, 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 2019 and 31 December 2018 amounted to USD nil million. At 31 December 2019 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.

(c) BEMO project

The carrying value of the Group's investment in BEMO project as at 31 December 2019 and 31 December 2018 amounted USD584 million and USD469 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 Boguchanskaya Hydro Power Plant ("BoGES"). The recoverable amount was determined by discounting the expected future net cash flows of each cash generating unit.

At 31 December 2019 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 2019, accumulated losses of USD651 million (2018: USD639 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 2019 and 31 December 2018 is presented below (all in USD million):

	31 December 2019 USD million	31 December 2018 USD million
Cash and cash equivalents	60	51
Current financial liabilities	(41)	(12)
Non-current financial liabilities	(929)	(947)
Depreciation and amortisation	(17)	(19)
Interest income	3	2
Interest expense	(18)	(19)
Income tax expense	(12)	(11)

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 2019 USD million	31 December 2018 USD million
Raw materials and consumables	1,134	1,211
Work in progress	672	711
Finished goods and goods held for resale	792	1,245
	2,598	3,167
Provision for inventory obsolescence	(138)	(161)
	2,460	**3,006**

Inventories at 31 December 2019 and 31 December 2018 are stated at cost.

Inventory with a carrying value of USD383 million was pledged under existing trading contracts at 31 December 2019 (31 December 2018: nil).

The analysis of the amount of inventories recognised as an expense is as follows:

	Year ended 31 December	
	2019	2018
	USD million	USD million
Carrying amount of inventories sold	7,006	7,414
Write off of inventories	16	20
	7,022	**7,434**

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.

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. The details of significant accounting policies are set out below.

Classification and measurement of financial assets and financial liabilities

IFRS 9 contains such 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. 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.

The Group's financial assets most fall within category of financial assets measured at amortised cost. The only exception is derivative financial assets measured at fair value through profit or loss and cash flow hedges accounted through other comprehensive income (note 21). The same applies to the Group's financial liabilities.

Disclosures

(a) Trade and other receivables

	31 December 2019 USD million	31 December 2018 USD million
Trade receivables from third parties	502	384
Impairment loss on trade receivables	(30)	(33)
Net trade receivables from third parties	**472**	**351**
Trade receivables from related parties, including:	**124**	**87**
Related parties – companies capable of exerting significant influence	*82*	*76*
Impairment loss on trade receivables from related parties – companies capable of exerting significant influence	*(1)*	*(6)*
Net trade receivables to related parties – companies capable of exerting significant influence	*81*	*70*
Related parties – companies related through parent company	*16*	*13*
Related parties – associates and joint ventures	*27*	*4*
VAT recoverable	402	305
Impairment loss on VAT recoverable	(28)	(33)
Net VAT recoverable	**374**	**272**
Advances paid to third parties	121	185
Impairment loss on advances paid	(2)	(1)
Net advances paid to third parties	**119**	**184**
Advances paid to related parties, including:	**47**	**51**
Related parties – companies capable of exerting significant influence	–	*1*
Related parties – companies related through parent company	*1*	*1*
Related parties – associates and joint ventures	*46*	*49*
Prepaid expenses	**5**	**4**
Prepaid income tax	**21**	**22**
Prepaid other taxes	**26**	**22**
Other receivables from third parties	158	112
Impairment loss on other receivables	(10)	(10)
Net other receivables from third parties	**148**	**102**
Other receivables from related parties, including:	**15**	**7**
Related parties – companies related through parent company	*15*	*10*
Impairment loss on other receivables from related parties – companies related through parent company	–	*(3)*
Net other receivables to related parties – companies related through parent company	*15*	*7*
	1,351	**1,102**

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 2019 USD million	31 December 2018 USD million
Current (not past due)	463	358
1-30 days past due	99	62
31-60 days past due	30	6
61-90 days past due	–	2
More than 90 days past due	4	10
Amounts past due	133	80
	596	**438**

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) Impairment of trade receivables

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.

The following analysis provides further detail about the calculation of ECLs related to trade receivables. 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.

The following table provides information about determined ECLs rates for trade receivables both as at 1 January 2019 and 31 December 2019.

	Weighted-average loss rate		
	1 January	31 December	Credit-impaired
	2019	2019	
Current (not past due)	2%	1%	No
1-30 days past due	10%	4%	No
31-60 days past due	40%	11%	No
61-90 days past due	50%	80%	No
More than 90 days past due	85%	92%	Yes

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.

Impairment losses in respect of trade receivables are recorded using an allowance account unless the Group is satisfied that recovery of the amount is remote, in which case the impairment loss is written off against trade receivables directly.

The movement in the allowance for doubtful debts during the period is as follows:

	Year ended 31 December	
	2019	2018
	USD million	USD million
Balance at the beginning of the year	(39)	(16)
Reversal of impairment/(Impairment loss) recognised	8	(23)
Balance at the end of the year	**(31)**	**(39)**

The Group does not hold any collateral over these balances.

(b) Trade and other payables

	31 December	31 December
	2019	2018
	USD million	USD million
Accounts payable to third parties	**474**	**520**
Accounts payable to related parties, including:	**92**	**64**
Related parties – companies capable of exerting significant influence	*3*	*5*
Related parties – companies related through parent company	*43*	*35*
Related parties – associates and joint ventures	*46*	*24*
Advances received	**518**	**32**
Advances received from related parties, including:	**392**	**259**
Related parties – companies capable of exerting significant influence	*392*	*259*
Other payables and accrued liabilities to third parties	**147**	**176**
Other payables and accrued liabilities to related parties, including:	**4**	**–**
Related parties – companies related through parent company	4	–
Current tax liabilities	**16**	**127**
Other taxes payable	**127**	**96**
	1,770	**1,274**

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 2019 USD million	31 December 2018 USD million
Current	497	502
Past due 0-90 days	58	50
Past due 91-120 days	1	8
Past due over 120 days	10	24
Amounts past due	69	82
	566	**584**

(c) Cash and cash equivalents

	31 December 2019 USD million	31 December 2018 USD million
Bank balances, USD	1,310	50
Bank balances, RUB	83	238
Bank balances, EUR	116	290
Bank balances, other currencies	20	27
Cash in transit	–	16
Short-term bank deposits	228	169
Securities	11	11
Cash and cash equivalents in the consolidated statement of cash flows	**1,768**	**801**
Restricted cash	13	43
	1,781	**844**

As at 31 December 2019 and 31 December 2018 included in cash and cash equivalents was restricted cash of USD13 million and USD43 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 2019		31 December 2018	
	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 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**
Balance at 1 January 2019	**152**	**14,152**	**14,304**
Profit for the year	–	1,594	1,594
Other comprehensive income	–	(3)	(3)
Balance at 31 December 2019	**152**	**15,743**	**15,895**

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 2019 USD million	31 December 2018 USD million
Non-current liabilities		
Secured bank loans	4,951	5,566
Unsecured bank loans	202	226
Bonds	2,546	1,580
	7,699	**7,372**
Current liabilities		
Secured bank loans	223	476
Unsecured bank loans	202	12
Bonds	55	377
Accrued interest	68	49
	548	**914**

(a) Loans and borrowings

Terms and debt repayment schedule as at 31 December 2019

	TOTAL USD million	2020 USD million	2021 USD million	2022 USD million	2023 USD million	2024 USD million
Secured bank loans						
Variable						
USD – 3M Libor + 3.75%	2,089	–	332	396	556	805
USD – 3M Libor + 2.25%	1,070	–	–	356	357	357
USD3M Libor + 1.65%	210	210	–	–	–	–
Fixed						
RUB – 9.15%	1,780	–	–	289	610	881
RUB 8.75%	25	13	12	–	–	–
	5,174	**223**	**344**	**1,041**	**1,523**	**2,043**
Unsecured bank loans						
Variable						
USD – 1M Libor + 2.4%	200	–	200	–	–	–
Fixed						
USD3.6%	200	200	–	–	–	–
RUB 5%	4	2	2	–	–	–
Total	**404**	**202**	**202**	**–**	**–**	**–**
Accrued interest	68	68	–	–	–	–
Total	**5,646**	**493**	**546**	**1,041**	**1,523**	**2,043**

The secured bank loans are secured by pledges of shares of the following Group companies as at 31 December 2019:

- 100% of International limited liability company "GERSHVIN";
- 100% of International limited liability company "AKTIVIUM"

The secured bank loans are also secured by pledges of shares of associate as at 31 December 2019:

- 25% +1 share of Norilsk Nickel.

The secured bank loans are also secured by the property, plant and equipment with a carrying amount of USD44 million (31 December 2018: USD3 million).

As at 31 December 2019 and 31 December 2018 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 25 October 2019 (31 December 2018: the syndicated Pre-Export Finance Term Facility Agreement (PXF) 24 May 2017).

On 25 October 2019 the Group entered into new five-year sustainability-linked pre-export finance facility for USD1,085,000,000. The interest rate is subject to a sustainability discount or premium depending on the Company's fulfilment of the sustainability key performance indicators (KPI). The proceeds were used to partly refinance the principal outstanding under the existing up to USD2 billion pre-export finance facility.

As at 31 December 2019 the Group through its subsidiaries has outstanding REPO loans backed by Norilsk Nickel shares in number of 1,017,000, in the amount of USD210 million and maturing in June 2020.

During the year ended 31 December 2019 the Group made a principal repayment in total amounts of USD1,700 million and RUB32,769 million (USD512 million) under the syndicated Pre-Export Finance Term Facility Agreement (PXF) and credit facilities with Sberbank and Gazprombank, respectively.

The nominal value of the Group's loans and borrowings was USD5,612 million at 31 December 2019 (31 December 2018: USD6,332 million).

Terms and debt repayment schedule as at 31 December 2018

	TOTAL USD million	2019 USD million	2020 USD million	2021 USD million	2022 USD million	2023 USD million	Later years USD million
Secured bank loans							
Variable							
USD – 3M Libor + 3.75%	3,328	–	–	537	635	890	1,266
USD – 3M Libor + 2.5%	1,683	278	562	562	281	–	–
Fixed							
RUB – 9.25%	194	194	–	–	–	–	–
RUB – 9.15%	833	–	–	134	158	221	320
RUB – 5%	4	4	–	–	–	–	–
	6,042	**476**	**562**	**1,233**	**1,074**	**1,111**	**1,586**
Unsecured bank loans							
Variable							
USD – 1M Libor + 2.4%	200	–	–	200	–	–	–
Fixed							
RUB 8.75%	33	11	11	11	–	–	–
RUB 5%	5	1	2	2	–	–	–
Total	**6,280**	**488**	**575**	**1,446**	**1,074**	**1,111**	**1,586**
Accrued interest	49	49	–	–	–	–	–
Total	**6,329**	**537**	**575**	**1,446**	**1,074**	**1,111**	**1,586**

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 as at 31 December 2018:

– 25% +1 share of Norilsk Nickel.

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 1/2 of the principal outstanding amount of the loan into rubles 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 31 December 2018 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 RUB18 million (USD3 million) under credit facilities with Gazprombank, VTB Capital and Credit Bank of Moscow.

(b) Bonds

As at 31 December 2019 27,751 series 08 bonds, 397,347 series BO-01 bonds, 15,000,000 series BO-001P-01 bonds, 15,000,000 series BO-001P-02 bonds, 15,000,000 series BO-001P-03 bonds, 15,000,000 series BO-001P-04 bonds were outstanding (traded in the market).

The closing market price at 31 December 2019 was RUB 917, RUB 982, RUB 1,030, RUB 1,047, RUB 1,026 and RUB 1,003 per bond for the six tranches, respectively.

On 20 March 2019 the Group executed the put option under Panda bonds issuance (the first tranche) and redeemed bonds with notional value CNY680 million (USD101 million).

On 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 and redeemed the bonds with notional value of RUB23.8 million.

On 04 April 2019 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 and redeemed the bonds with notional value of RUB 3.8 billion.

On 29 April 2019 placement of the exchange-traded ruble bonds of PJSC RUSAL Bratsk series BO-001P-01 in the amount of RUB15 billion with a coupon rate 9.0% was completed and the exchange-traded ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years subject to bondholders' put option exercisable in April 2022. In addition to the placement, the Group entered into a cross-currency interest rate swap, which resulted in the exchange-traded ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3 years and the interest rate of 4.69%.

On 11 July 2019 placement of the exchange-traded ruble bonds of PJSC RUSAL Bratsk series BO-001P-02 in the amount of RUB15 billion with a coupon rate 8.60% was completed and the exchange-traded ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years subject to bondholders' put option exercisable in January 2023. In addition to the placement, the Group entered into a cross-currency interest rate swap, which resulted in the exchange-traded ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3.5 years and the interest rate of 4.45%.

On 04 September 2019 the Group executed the put option under Panda bonds issuance (the second tranche) and redeemed bonds with notional value CNY480 million (USD67 million).

On 12 September 2019 placement of the exchange-traded ruble bonds of PJSC RUSAL Bratsk series BO-001P-03 in the amount of RUB15 billion with a coupon rate 8.25% was completed and the exchange-traded ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years subject to bondholders' put option exercisable in September 2022. In addition to the placement, the Group entered into 2 cross-currency interest rate swaps, which resulted in the exchange-traded ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3 years for both swaps and the interest rates of 3.82% and 3.85%.

On 14 November 2019 placement of the exchange-traded ruble bonds of PJSC RUSAL Bratsk series BO-001P-04 in the amount of RUB15 billion with a coupon rate 7.45% was completed and the exchange-traded ruble bonds commenced trading on the Moscow Exchange. Maturity of the bonds is ten years subject to bondholders' put option exercisable in November 2022. In addition to the placement, the Group entered into a cross-currency interest rate swap, which resulted in the exchange-traded ruble bonds exposure being translated in full amount into US-dollar exposure with the maturity of 3 years and the interest rate of 3.65%.

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 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**
Balance at 1 January 2019	54	348	3	20	425
Provisions made during the year	7	43	14	–	64
Provisions reversed during the year	(10)	(25)	–	–	(35)
Actuarial loss	9	–	–	–	9
Provisions utilised during the year	(4)	(2)	–	(20)	(26)
Foreign currency translation	4	7	–	–	11
Balance at 31 December 2019	**60**	**371**	**17**	**–**	**448**
Non-current	**56**	**347**	**–**	**–**	**403**
Current	**4**	**24**	**17**	**–**	**45**

(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 2019 and 2018 was 46,581 and 58,089, respectively. The number of pensioners in all jurisdictions as at 31 December 2019 and 2018 was 41,699 and 44,966, 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 2020.

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 2019, 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	31 December
	2019	2018
	% per annum	% per annum
Discount rate	6.4	7.9
Expected return on plan assets	N/A	N/A
Future salary increases	8.4	7.8
Future pension increases	5.1	4.6
Staff turnover	4.7	4.7
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 2019 and 31 December 2018 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 2019	31 December 2018
Timing of inflated cash outflows	2020: USD23 million	2019: USD31 million
	2021-2025: USD209 million	2020-2024: USD203 million
	2026-2035: USD99 million	2025-2034: USD95 million
	after 2035: USD161 million	after 2034: USD168 million
Risk free discount rate after adjusting for inflation (a)	1.96%	3.10%

(a) the risk free rate for the year 2018-2019 represents an effective rate, which comprises rates differentiated by years of obligation settlement and by currencies in which the provisions were calculated

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 2019, 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 USD17 million (31 December 2018: USD3 million). The amount of claims, where management assesses outflow as possible approximates USD21 million (31 December 2018: USD31 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 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 2019 USD million		31 December 2018 USD million	
	Derivative assets	Derivative liabilities	Derivative assets	Derivative liabilities
Petroleum coke supply contracts and other raw materials	39	36	42	31
Forward contracts for aluminium and other instruments	21	18	–	–
Cross currency swap (note 19(b))	48	–	–	–
Total	**108**	**54**	**42**	**31**

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:

	2020	2021	2022	2023	2024	2025
LME Al Cash, USD per tonne	1,831	1,908	1,991	2,078	2,166	2,222
Platts FOB Brent, USD per barrel	64	59	57	57	57	–

The movement in the balance of Level 3 fair value measurements of derivatives is as follows:

	31 December	
	2019	2018
	USD million	USD million
Balance at the beginning of the year	11	(50)
Unrealised changes in fair value recognised in statement of income (finance (expense)/income) during the period	(21)	171
Unrealised changes in fair value recognised in other comprehensive income (cash flow hedge) during the period	34	–
Realised portion of electricity, coke and raw material contracts and cross currency swap	30	(110)
Balance at the end of the year	**54**	**11**

During the year 2019 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 2019

	Note	Carrying amount				Fair value			
		Derivatives	Loans and receivables	Other financial liabilities	Total	Level 1	Level 2	Level 3	Total
		USD million	USD million	USD million	USD million	USD million	USD million	USD million	USD million
Financial assets measured at fair value									
Petroleum coke supply contracts and other raw materials	21	39	–	–	**39**	–	–	39	**39**
Forward contracts for aluminium and other instruments	21	21	–	–	**21**	–	–	21	**21**
Cross currency swaps	21	48	–	–	**48**	–	–	48	**48**
		108	**–**	**–**	**108**	**–**	**–**	**108**	**108**
Financial assets not measured at fair value*									
Trade and other receivables	17	–	1,133	–	**1,133**	–	1,133	–	**1,133**
Dividends receivable		–	430	–	**430**	–	430	–	**430**
Short-term investments		–	171	–	**171**	–	171	–	**171**
Cash and cash equivalents	17	–	1,781	–	**1,781**	–	1,781	–	**1,781**
		–	**3,515**	**–**	**3,515**	**–**	**3,515**	**–**	**3,515**
Financial liabilities measured at fair value									
Petroleum coke supply contracts and other raw materials	21	(36)	–	–	**(36)**	–	–	(36)	**(36)**
Forward contracts for aluminium and other instruments	21	(18)	–	–	**(18)**	–	–	(18)	**(18)**
		(54)	**–**	**–**	**(54)**	**–**	**–**	**(54)**	**(54)**
Financial liabilities not measured at fair value*									
Secured bank loans and company loans	19	–	–	(5,242)	**(5,242)**	–	(5,396)	–	**(5,396)**
Unsecured bank loans	19	–	–	(404)	**(404)**	–	(407)	–	**(407)**
Unsecured bond issue	19	–	–	(2,601)	**(2,601)**	(1,002)	(1,700)	–	**(2,702)**
Trade and other payables	17	–	–	(860)	**(860)**	–	(860)	–	**(860)**
		–	**–**	**(9,107)**	**(9,107)**	**(1,002)**	**(8,363)**	**–**	**(9,365)**

* The Group considers that the carrying amounts of short-term trade receivables and payables are a reasonable approximation of fair values.

The Group as at 31 December 2018

	Note	Carrying amount				Fair value			
		Derivatives	Loans and receivables	Other financial liabilities	Total	Level 1	Level 2	Level 3	Total
		USD million	USD million	USD million	USD million	USD million	USD million	USD million	USD million
Financial assets measured at fair value									
Petroleum coke supply contracts and other raw materials	21	42	–	–	**42**	–	–	42	**42**
Forward contracts for aluminium and other instruments	21	–	–	–	**–**	–	–	–	**–**
		42	**–**	**–**	**42**	**–**	**–**	**42**	**42**
Financial assets not measured at fair value[*]									
Trade and other receivables	17	–	819	–	**819**	–	819	–	**819**
Short-term investments		–	105	–	**105**	–	105	–	**105**
Cash and cash equivalents	17	–	844	–	**844**	–	844	–	**844**
		–	**1,768**	**–**	**1,768**	**–**	**1,768**	**–**	**1,768**
Financial liabilities measured at fair value									
Petroleum coke supply contracts and other raw materials	21	(31)	–	–	**(31)**	–	–	(31)	**(31)**
Forward contracts for aluminium and other instruments	21	–	–	–	**–**	–	–	–	**–**
		(31)	**–**	**–**	**(31)**	**–**	**–**	**(31)**	**(31)**
Financial liabilities not measured at fair value[*]									
Secured bank loans and company loans	19	–	–	(6,091)	**(6,091)**	–	(6,164)	–	**(6,164)**
Unsecured bank loans	19	–	–	(238)	**(238)**	–	(236)	–	**(236)**
Unsecured bond issue	19	–	–	(1,957)	**(1,957)**	(161)	(1,813)	–	**(1,974)**
Trade and other payables	17	–	–	(983)	**(983)**	–	(983)	–	**(983)**
		–	**–**	**(9,269)**	**(9,269)**	**(161)**	**(9,196)**	**–**	**(9,357)**

[*] The Group considers that the carrying amounts of short-term trade receivables and payables are a reasonable approximation of fair values.

(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 2019 and 2018, 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 reporting date.

	31 December 2019		31 December 2018	
	Effective interest rate %	USD million	Effective interest rate %	USD million
Fixed rate loans and borrowings				
Loans and borrowings	0.01%-9.15%	4,610	4.85%-12.85%	3,026
		4,610		**3,026**
Variable rate loans and borrowings				
Loans and borrowings	3.58%-5.86%	3,569	4.91%-6.72%	5,211
		3,569		**5,211**
		8,179		**8,237**

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 2019			
Basis percentage points	+100	(36)	(35)
Basis percentage points	-100	36	35
As at 31 December 2018			
Basis percentage points	+100	(52)	(52)
Basis percentage points	-100	52	52

(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 Ruble 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 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-denominated vs. RUB functional currency		RUB-denominated vs. USD functional currency		EUR-denominated vs. USD functional currency		Denominated in other currencies vs. USD functional currency	
As at 31 December	2019 USD million	2018 USD million	2019 USD million	2018 USD million	2019 USD million	2018 USD million	2019 USD million	2018 USD million
Non-current assets	–	–	3	3	–	1	8	–
Trade and other receivables	1	1	662	640	55	91	43	28
Cash and cash equivalents	26	–	84	415	124	305	35	42
Derivative financial assets	–	–	40	42	–	–	–	–
Loans and borrowings	–	–	(1,980)	(1,030)	–	–	–	–
Provisions	–	–	(66)	(102)	(26)	(26)	(14)	(10)
Derivative financial liabilities	–	–	(11)	(11)	–	–	–	–
Non-current liabilities	–	–	(1)	–	(6)	(6)	–	–
Income taxation	–	–	(2)	(15)	–	–	(8)	(11)
Short-term bonds	–	–	(7)	(161)	–	–	(49)	(216)
Trade and other payables	–	–	(351)	(393)	(42)	(61)	(74)	(54)
Net exposure arising from recognised assets and liabilities	**27**	**1**	**(1,629)**	**(612)**	**105**	**304**	**(59)**	**(221)**

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 2019		
		USD million	USD million
	Change in exchange rates	Effect on profit before taxation for the year	Effect on equity for the year
Depreciation of USD vs. RUB	15%	(248)	(248)
Depreciation of USD vs. EUR	10%	11	11
Depreciation of USD vs. other currencies	5%	(3)	(3)

	Year ended 31 December 2018		
		USD million	USD million
	Change in exchange rates	Effect on profit before taxation for the year	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)

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 2019 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	764	–	–	–	764	764
Trade and other payables to related parties	96	–	–	–	96	96
Bonds, including interest payable	219	161	2,720	–	3,100	2,601
Loans and borrowings, incl. interest payable	775	878	5,215	–	6,868	5,646
Guarantees	69	67	–	–	136	–
	1,923	**1,106**	**7,935**	**–**	**10,964**	**9,107**

	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, including 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**

At 31 December 2019 and 31 December 2018 the Group's guarantee in respect of credit arrangement between BoAZ and VEB (note 24(d)) 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 2019 and 2018, the Group has no concentration of credit risk within any single larger customer but 19.3% and 6.7% 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 2019 and 31 December 2018.

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 2019 and 31 December 2018 approximated USD337 million and USD255 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 2020-2034 under supply agreements are estimated from USD3,257 million to USD4,135 million at 31 December 2019 (31 December 2018: USD2,932 million to USD3,527 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 2020-2030 under supply agreements are estimated from USD5,134 million to USD8,636 million at 31 December 2019 (31 December 2018: USD6,375 million to USD10,019 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 2020-2034 are estimated from USD962 million to USD1,292 million at 31 December 2019 (31 December 2018: from USD509 million to USD2,344 million) and will be settled at market prices at the date of delivery. Commitments with related parties for sales of alumina in 2020-2024 approximated from USD413 million to USD771 million at 31 December 2019 (31 December 2018: from USD227 million to USD363 million).

Commitments with related parties for sales of primary aluminium and alloys in 2020-2021 are estimated from USD567 million to USD797 million at 31 December 2019 (31 December 2018: from USD889 million to USD1,223 million). Commitments with third parties for sales of primary aluminium and alloys in 2020-2022 are estimated to range from USD1,720 million to USD2,559 million at 31 December 2019 (31 December 2018: from USD832 million to USD1,155 million).

(d) 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 2019 is USD nil million (31 December 2018: USD nil 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 2019 the amount of claims, where management assesses outflow as possible approximates USD21 million (31 December 2018: USD31 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 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 State Corporation 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 2019 and 2018 USD272 million and USD242 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	
	2019	2018
	USD million	USD million
Salaries and bonuses	61	67
	61	**67**

(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 companies related through parent company or under the control of SUAL Partners Limited or its controlling shareholders or Glencore International Plc or entities under its control.

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	
	2019	2018
	USD million	USD million
Related parties – companies capable of exerting significant influence	1	4
Related parties – companies related through parent company	11	18
Related parties – associates and joint ventures	3	1
	15	**23**

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	2020	2021	2022	2023	2024	2025	2026
Mln kWh	37,700	37,598	37,598	37,598	37,700	37,598	25,194
Mln USD	449	447	447	447	449	447	293

(d) Related parties balances

At 31 December 2019, included in non-current assets are balances of related parties - companies related through parent company of nil and balances of related parties – associates and joint ventures of USD2 million (31 December 2018: USD46 million and USD2 million, respectively). At 31 December 2019, included in non-current liabilities are balances of related parties – associates and joint ventures of USD11 million (31 December 2018: USD10 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 Director's Report section of the Annual Report of the Company for the year ended 31 December 2019.

26. PARTICULARS OF SUBSIDIARIES

As at 31 December 2019 and 2018, 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 SA.	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
Mykolaiv Alumina Refinery Company 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 LLC	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
CJSC RUSAL ARMENAL	Armenia	17 May 2000	36,699,295 shares of AMD 1,000 each	100.0%	Foil
RUS-Engineering LLC	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	978,492,901 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

Name	Place of incorporation and operation	Date of incorporation	Particulars of issued and paid up capital	Attributable equity interest	Principal activities
JSC Komi Aluminii	Russian Federation	13 February 2003	4,303,000,000 shares of RUB1 each	100.0%	Alumina
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 and aluminium production
SUAL-PM LLC	Russian Federation	20 October 1998	charter fund of RUB56,300,959	100.0%	Aluminium powders production
JSC Kremniy	Russian Federation	3 August 1998	320,644 shares of RUB1,000 each	100.0%	Silicon production
RUSAL-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
International LLC AKTIVIUM	Russian Federation	06 December 2019	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
Limerick Alumina Refining Ltd.	Ireland	30 March 1995	54,019,819 shares of USD1 each	100.0%	Alumina
JSC RUSAL Management	Russian Federation	26 December 2018	1,000,000 shares of RUB1 each	100.0%	Management company
RUSAL Taishet LLC	Russian Federation	11 September 2006	Charter fund of RUB12,158,878,747.58	100.0%	Smelting
UC RUSAL Anode Plant LLC	Russian Federation	09 April 2008	Charter fund of RUB1,064,280,000	100.0%	Anodes

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 2019

	31 December	31 December
	2019	2018
	USD million	USD million
ASSETS		
Non-current assets		
Investments in subsidiaries	19,449	20,468
Loans to related parties	1,346	1,845
Total non-current assets	**20,795**	**22,313**
Current assets		
Loans to related parties	1,050	1,416
Other receivables	343	911
Cash and cash equivalents	23	186
Total current assets	**1,416**	**2,513**
Total assets	**22,211**	**24,826**
EQUITY AND LIABILITIES		
Equity		
Share capital	152	152
Reserves	15,743	14,152
Total equity	**15,895**	**14,304**
Non-current liabilities		
Loans and borrowings	6,188	6,816
Total non-current liabilities	**6,188**	**6,816**
Current liabilities		
Loans and borrowings	92	2,355
Trade and other payables	36	1,322
Other current liabilities	–	29
Total current liabilities	**128**	**3,706**
Total liabilities	**6,316**	**10,522**
Total equity and liabilities	**22,211**	**24,826**
Net current assets/(liabilities)	**1,288**	**(1,193)**
Total assets less current liabilities	**22,083**	**21,120**

28. EVENTS SUBSEQUENT TO THE REPORTING DATE

The first months of 2020 have seen significant global market turmoil triggered by the outbreak of the coronavirus. Together with other factors, this has resulted in a sharp decrease in the oil price and the stock market indices, as well as a depreciation of the Russian Ruble. At the moment the Group is assessing the impact of these market developments for its financial position, financial performance and future cash flows.

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 V. Nikitin
Chief Executive Officer
31 March 2020

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 licenses 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 and other stakeholders should specifically consider the factors identified in this Annual Report, which could cause actual results to differ, before making any investment or other decision. Subject to the requirements under the Listing Rules and such other requirements under applicable laws and regulations, 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.

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.

"Adjusted EBITDA" for any period means the results from operating activities adjusted for amortisation 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 between Major Shareholders only.

"Alpart" means Alumina Partners of Jamaica.

"ALSCON" means Aluminium Smelter Company of Nigeria Plc, 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 amortisation and depreciation, divided by sales volume of aluminium segment.

"Amokenga Holdings" means Amokenga Holdings Limited, a company incorporated in Bermuda and which is a wholly owned subsidiary of Glencore.

"Annual Report" means this annual report dated 31 March 2020.

"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.

"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 23 and 26 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 23 and 26 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 Company.

"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 corporate governance 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).

"CEO" or **"Chief Executive Officer"** means the 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 **"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 affiliated with Mr. Roman Abramovich.

"Directors" means the directors of the Company.

"EBITDA" means earnings before interest, taxes, depreciation, and amortisation.

"ECD" means the Engineering and Construction Division of the Company.

"En+" means EN+ GROUP International public joint-stock company (formerly En+ Group Plc, a company initially registered in Jersey that continued as legal entity in Russia in 2019), a company registered in accordance with the procedure established by the laws of the Russian Federation, in accordance with the Federal Law of the Russian Federation "On International Companies", 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 2019.

"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 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 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+. As announced by the Company on 3 February 2020, the aforementioned share swap was completed and the indirect shareholding of Glencore in the Shares reduced 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 gigawatt hours.

"Group" or **"RUSAL Group"** means 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.

"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 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 'RUSAL TH', "RUSAL TH" or **"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.

"K&K" means Limited liability company "K&K" (LLC "K&K") a wholly-owned subsidiary of the Company.

"Latest Practicable Date" means 19 March 2020, 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).

"LLP Bogatyr Komir" or **"Bogatyr Coal" Limited Liability Partnership** means the joint venture described at page 27 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 (until it ceased to be a Shareholder on 3 February 2020) and Onexim (until it ceased to be a Shareholder on 16 January 2018).

"Major Shareholders' Shares" means 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 organization 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 to the Listing Rules (as amended from to time).

"mt" means million tonnes.

"MW" means megawatt.

"Net Debt" is calculated as Total Debt less cash and cash equivalents as at 31 December 2019.

"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+. As announced by the Company on 3 February 2020, the aforementioned share swap was completed and the indirect shareholding of Glencore in the Shares reduced 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 standardising 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 USD1,085,000,000 Aluminium Pre-Export Finance Term Facility Agreement dated 25 October 2019, among inter alias, RUSAL as Borrower and ING Bank N.V. as Facility Agent and Security Agent 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 2019 and ending on 31 December 2019.

"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 Centres 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) (as amended from time to time).

"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 between Major Shareholders only" means the shareholders' agreement dated 22 January 2010 between 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:

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 En+ announced on 1 February 2019 that approximately 2% has been transferred, and En+ announced on 3 February 2020 that the remaining 6.75% has been transferred) 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.

Based on the disclosure of interests notice filed with the Company, the interests of En+ increased to approximately 56.88% in the issued share capital of the Company on 3 February 2020.

"Shareholding Changes in 2018" means the following change to the shareholding in the Company which has been notified to the Company:

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 substantial shareholder (as the term is defined under the Listing Rules) of the Company.

"Substantial shareholder(s)" has the meaning ascribed to such expression under the Listing Rules.

"SUAL – PM" or **"LLC '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 those 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 then the trigger price is USD1 billion and if it is between these two prices then the trigger price is prorated 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

Under the Shareholders' Agreement, 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.

EFFECT OF SHAREHOLDING CHANGES

As a result of the Shareholding Changes in 2018 and Shareholding Changes during the Year, Onexim and Glencore ceased to have any rights under the Shareholders' Agreement with the Company.

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 between 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 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+ 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+ and SUAL Partners described above (if relevant) and, to the extent required, by the Corporate Governance and Nomination Committee; 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.

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 SUAL Partners, for as long as in each case 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).
- 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 SUAL Partners, 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).

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. 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, and a standing committee that shall have authority to take certain decisions in relation to the Group without further approval of the Board of 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+ and SUAL Partners is given a right of veto in relation to any related party transaction (or amendment to or renewal of an existing related party transaction).

  - Each of En+ and SUAL Partners is given a 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 BETWEEN 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 between 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, a group of 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.

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.

TERMINATION FOR PARTICULAR SHAREHOLDERS

The Shareholders' Agreement between Major Shareholders only shall terminate in respect of the relevant Major Shareholder in the following circumstances:

- Upon 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) 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 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 between Major Shareholders only.

EFFECT OF SHAREHOLDING CHANGES

As a result of the Shareholding Changes in 2018, 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.

Starting 3 February 2020, upon completion of the share swap contemplated by the securities exchange agreement entered into between En+ and Glencore on 28 January 2019, Glencore ceased to have any rights under the Shareholders' Agreement between Major Shareholders only.

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. Evgeny Kuryanov

Mr. Evgenii Vavilov

Non-executive Directors

Mr. Marco Musetti

Mr. Vyacheslav Solomin

Mr. Vladimir Kolmogorov

Independent non-executive Directors

Dr. Elsie Leung Oi-sie

Mr. Dmitry Vasiliev

Mr. Bernard Zonneveld (Chairman of the Board)

Mr. Maxim Poletaev

Mr. Randolph N. Reynolds

Mr. Kevin Parker

Mr. Christopher Burnham

Mr. Nick Jordan

REGISTERED OFFICE IN JERSEY

3rd Floor

44 Esplanade,

St Helier,

JE4 9WG.

PRINCIPAL PLACE OF BUSINESS

28th Oktovriou, 249

LOPHITIS BUSINESS CENTRE, 7th floor

3035 Limassol

Cyprus

PLACE OF BUSINESS IN HONG KONG

3806 Central Plaza

18 Harbour Road

Wanchai Hong Kong

JERSEY COMPANY SECRETARY

Ogier Global Company Secretary (Jersey) Limited

3rd Floor,

44 Esplanade,

St Helier,

JE4 9WG

HONG KONG COMPANY SECRETARY

Ms. Aby Wong Po Ying

3806 Central Plaza

18 Harbour Road

Wanchai Hong Kong

AUDITORS

JSC KPMG

Public Interest Entity Auditor recognised in accordance with the Financial Reporting Council Ordinance

10 Presnenskaya Naberezhnaya

Moscow, 123112

Russia

AUTHORIZED REPRESENTATIVES

Mr. Evgenii Nikitin

Ms. Aby Wong Po Ying

Mr. Eugene Choi

PRINCIPAL SHARE REGISTRAR

Computershare Investor Services (Jersey) Limited

Queensway House

Hilgrove Street, St Helier

Jersey,

JE1 1ES

HONG KONG BRANCH SHARE REGISTRAR

Link Market Services (Hong Kong) Pty Limited

Suite 1601, 16/F.

Central Tower 28 Queen's Road Central

Hong Kong

AUDIT COMMITTEE MEMBERS

Mr. Maxim Poletaev (Chairman)

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. Randolph N. Reynolds

Mr. Nick Jordan

PRINCIPAL BANKERS

Sberbank

ING N.V.

INVESTOR RELATIONS CONTACT

Moscow

Oleg Mukhamedshin

Vasilisy Kozhinoy str., 1,

Moscow 121096

Russian Federation

InvestorRelations@rusal.com

Hong Kong

Karen Li Wai-Yin

Suite 3301, 33rd Floor,

Jardine House

1 Connaught Place

Central

Hong Kong

Karen.Li@rusal.com

COMPANY WEBSITE

www.rusal.com

RUSAL