



United Company RUSAL Plc
Consolidated Financial Statements
for the year ended
31 December 2018

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Statement of Directors' Responsibilities

The Directors acknowledge that it is their responsibility to prepare the consolidated financial statements for the year ended 31 December 2018, in accordance with applicable law and regulations.

Company law requires the Directors to prepare consolidated financial statements for each financial year. Under that law the Directors have elected to prepare the consolidated financial statements in accordance with International Financial Reporting Standards and applicable law.

Under company law the Directors must not approve the consolidated financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Company and of the profit or loss of the Company for that period. In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- assess the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- use the going concern basis of accounting unless they either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with Companies (Jersey) Law 1991. They 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 2018, the consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) as issued by IASB, and have been prepared in accordance with the requirements of the Companies (Jersey) Law 1991 and the disclosure requirements of the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs) 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 Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants* (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to Note 1(d) of the consolidated financial statements, which describes the inclusion of the Company, its ultimate beneficial owner and certain companies under common control in the Specially Designated Nationals List issued by the Office of Foreign Assets Control of the Department of the Treasury of the United States of America in April 2018 with further removal of the Company from the above-mentioned List in January 2019. Our opinion is not modified in respect of this matter.

Audited entity: United Company RUSAL Plc

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-regulated organization of auditors "Russian Union of auditors" (Association). The Principal Registration Number of the Entry in the Register of Auditors and Audit Organisations: No. 11603053203.



Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of property, plant and equipment

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

The key audit matter	How the matter was addressed in our audit
<p>The Group has significant property, plant and equipment balance which is material to the financial statements as at 31 December 2018.</p> <p>Current global market conditions, including fluctuations in LME aluminium prices, market premiums and alumina purchase prices, may indicate that some property, plant and equipment items may be subject to either impairment loss or reversal of previously recognised impairment loss. This is in particular related to such cash generating units (CGUs) as alumina plants and bauxite mines.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>We used our own valuation specialists to assist us in evaluating the assumptions and methodology used by the Group.</p> <p>In particular, we challenged:</p> <ul style="list-style-type: none">- aluminium and alumina smelters and bauxite mines costs projections by comparing them with historical results and industry peers;- the key assumptions for long term revenue growth rates in the forecasts by comparing them with historical results, economic and industry forecasts; and- the discount rates used. Specifically, we recalculated the Group's weighted average cost of capital using market comparable information. <p>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</p>



	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.
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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 Artybek

For and on behalf of JSC "KPMG"
Recognized Auditors

Moscow, Russia

6 March 2019

		Year ended 31 December	
		2018	2017
	Note	USD million	USD million
Revenue	5	10,280	9,969
Cost of sales	6(a)	(7,446)	(7,183)
Gross profit		2,834	2,786
Distribution expenses	6(b)	(462)	(446)
Administrative expenses	6(b)	(629)	(632)
Impairment of non-current assets	6(b)	(157)	(84)
Net other operating expenses	6(b)	(105)	(101)
Results from operating activities		1,481	1,523
Finance income	7	203	21
Finance expenses	7	(686)	(876)
Share of profits of associates and joint ventures	15	955	620
Profit before taxation		1,953	1,288
Income tax	8	(255)	(66)
Profit for the year		1,698	1,222
Attributable to Shareholders of the Company		1,698	1,222
Profit for the year		1,698	1,222
Earnings per share			
Basic and diluted earnings per share (USD)	12	0.112	0.080
Adjusted EBITDA	6(d)	2,163	2,120

	Note	Year ended 31 December	
		2018	2017
		USD million	USD million
Profit for the year		1,698	1,222
Other comprehensive income			
<i>Items that will never be reclassified subsequently to profit or loss:</i>			
Actuarial gain/(loss) on post retirement benefit plans	20	6	(7)
		6	(7)
<i>Items that are or may be reclassified subsequently to profit or loss:</i>			
Share of other comprehensive income of associates	15	10	(28)
Foreign currency translation differences for equity-accounted investees	15	(810)	244
Foreign currency translation differences on foreign operations		(139)	13
		(939)	229
Other comprehensive (loss)/ income for the year, net of tax		(933)	222
Total comprehensive income for the year		765	1,444
Attributable to:			
Shareholders of the Company		765	1,444
Total comprehensive income for the year		765	1,444

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

		31 December	31 December
		2018	2017
	Note	USD million	USD million
ASSETS			
Non-current assets			
Property, plant and equipment	13	4,421	4,323
Intangible assets	14	2,409	2,552
Interests in associates and joint ventures	15	3,698	4,448
Deferred tax assets	8	93	63
Derivative financial assets	21	33	34
Other non-current assets		57	72
Total non-current assets		10,711	11,492
Current assets			
Inventories	16	3,006	2,414
Short-term investments		105	21
Trade and other receivables	17(a)	1,102	984
Dividends receivable		-	3
Derivative financial assets	21	9	29
Cash and cash equivalents	17(c)	844	831
Total current assets		5,066	4,282
Total assets		15,777	15,774



United Company RUSAL Plc
Consolidated Statement of Financial Position as at 31 December 2018

		<u>31 December</u>	<u>31 December</u>
		2018	2017
	Note	<u>USD million</u>	<u>USD million</u>
EQUITY AND LIABILITIES			
Equity	18		
Share capital		152	152
Share premium		15,786	15,786
Other reserves		2,863	2,847
Currency translation reserve		(9,750)	(8,801)
Accumulated losses		(3,842)	(5,540)
Total equity		<u>5,209</u>	<u>4,444</u>
Non-current liabilities			
Loans and borrowings	19	7,372	7,744
Provisions	20	366	427
Deferred tax liabilities	8	502	522
Derivative financial liabilities	21	24	61
Other non-current liabilities		50	104
Total non-current liabilities		<u>8,314</u>	<u>8,858</u>
Current liabilities			
Loans and borrowings	19	914	735
Trade and other payables	17(b)	1,274	1,658
Derivative financial liabilities	21	7	52
Provisions	20	59	27
Total current liabilities		<u>2,254</u>	<u>2,472</u>
Total liabilities		<u>10,568</u>	<u>11,330</u>
Total equity and liabilities		<u>15,777</u>	<u>15,774</u>
Net current assets		<u>2,812</u>	<u>1,810</u>
Total assets less current liabilities		<u>13,523</u>	<u>13,302</u>

Approved and authorised for issue by the board of directors on 6 March 2019.


Evgenii V. Nikitin
Chief Executive Officer


Alexandra Y. Bouriko
Chief Financial Officer

	Share capital	Share premium	Other reserves	Currency translation reserve	Accumulated losses	Total equity
Note	USD million	USD million	USD million	USD million	USD million	USD million
Balance at 1 January 2018	152	15,786	2,847	(8,801)	(5,540)	4,444
Profit for the year	-	-	-	-	1,698	1,698
Other comprehensive income for the year	-	-	16	(949)	-	(933)
Total comprehensive income for the year	-	-	16	(949)	1,698	765
Balance at 31 December 2018	152	15,786	2,863	(9,750)	(3,842)	5,209
Balance at 1 January 2017	152	15,786	2,882	(9,058)	(6,463)	3,299
Profit for the year	-	-	-	-	1,222	1,222
Other comprehensive income for the year	-	-	(35)	257	-	222
Total comprehensive income for the year	-	-	(35)	257	1,222	1,444
Dividends	-	-	-	-	(299)	(299)
Balance at 31 December 2017	152	15,786	2,847	(8,801)	(5,540)	4,444

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	Note	Year ended 31 December	
		2018	2017
		USD million	USD million
OPERATING ACTIVITIES			
Profit for the year		1,698	1,222
<i>Adjustments for:</i>			
Depreciation	6, 13	511	484
Amortisation	6, 14	2	4
Impairment of non-current assets	6(b)	157	84
Impairment of trade and other receivables	6(b)	36	6
(Reversal of) / impairment of inventories	16	(20)	2
(Reversal of)/ pension provision		(2)	2
Reversal of tax provision		-	(2)
Change in fair value of derivative financial instruments	7	(171)	287
Net foreign exchange loss/(gain)		80	(4)
Loss on disposal of property, plant and equipment	6(b)	12	25
Interest expense	7	503	589
Interest income	7	(32)	(17)
Income tax expense	8	255	66
Share of profits of associates and joint ventures	15	(955)	(620)
Cash from operating activities before changes in working capital and provisions		2,074	2,128
Increase in inventories		(498)	(462)
Increase in trade and other receivables		(154)	(167)
Increase in prepaid expenses and other assets		-	(1)
(Decrease)/ increase in trade and other payables		(608)	330
Decrease in provisions		(10)	(26)
Cash generated from operations before income tax paid		804	1,802
Income taxes paid	8	(124)	(100)
Net cash generated from operating activities		680	1,702

	Note	Year ended	
		31 December	
		2018	2017
		USD million	USD million
INVESTING ACTIVITIES			
Proceeds from disposal of property, plant and equipment		22	46
Interest received		29	8
Acquisition of property, plant and equipment		(812)	(822)
Dividends from associates and joint ventures		909	806
Acquisition of intangible assets		(22)	(20)
Other investments		(153)	(11)
Acquisition of a subsidiaries		(53)	(1)
Changes in restricted cash	17(c)	(26)	(4)
Net cash (used in)/generated from investing activities		(106)	2
FINANCING ACTIVITIES			
Proceeds from borrowings		1,996	5,928
Repayment of borrowings		(2,142)	(6,339)
Refinancing fees and other expenses		(6)	(36)
Interest paid		(490)	(493)
Settlement of derivative financial instruments		125	(182)
Dividends	11	-	(299)
Net cash used in financing activities		(517)	(1,421)
Net increase in cash and cash equivalents		57	283
Cash and cash equivalents at the beginning of the year	17(c)	814	531
Effect of exchange rate fluctuations on cash and cash equivalents		(70)	-
Cash and cash equivalents at the end of the year	17(c)	801	814

Restricted cash amounted to USD43 million and USD17 million at 31 December 2018 and 31 December 2017, respectively.

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 depository receipts (“GDSs”) with the Euronext Paris. The GDSs were delisted on 7 May 2018.

The Company’s registered office is 44 Esplanade, St Helier, Jersey, JE4 9WG, Channel Islands.

The Company directly or through its wholly owned subsidiaries controls a number of production and trading entities (refer to note 26) engaged in the aluminium business and other entities, which together with the Company are referred to as “the Group”.

The shareholding structure of the Company as at 31 December 2018 and 31 December 2017 was as follows:

	<u>31 December</u>	<u>31 December</u>
	<u>2018</u>	<u>2017</u>
En+ Group Plc (“En+”)	48.13%	48.13%
SUAL Partners Limited (“SUAL Partners”)	22.50%	15.80%
Zonoville Investments Limited (“Zonoville”)	4.00%	4.70%
Amokenga Holdings Limited (“Amokenga Holdings”)	8.75%	8.75%
Onexim Holdings Limited (“Onexim”)	-	6.00%
Held by Directors	-	0.01%
Mr. Oleg V. Deripaska	0.01%	0.01%
Publicly held	16.61%	16.60%
Total	100.00%	100.00%

At the date these consolidated financial statements were authorised for issue the shareholding structure of the Company was as follows:

En+ Group Plc (“En+”)	50.10%
SUAL Partners Limited (“SUAL Partners”)	22.50%
Zonoville Investments Limited (“Zonoville”)	4.00%
Amokenga Holdings Limited (“Amokenga Holdings”)	6.78%
Mr. Oleg V. Deripaska	0.01%
Publicly held	16.61%
Total	100.00%

According to the information disclosed at the Stock Exchange of Hong Kong Limited Zonoville Investments Limited and SUAL Partners Limited are associates. Amokenga Holdings is ultimately controlled by Glencore International Plc. As at reporting date ultimate beneficiary of En+ is Mr. Oleg Deripaska. Ultimate beneficiary of Onexim is Mr. Mikhail Prokhorov. Major ultimate beneficiaries of SUAL Partners are Mr. Victor Vekselberg and Mr. Len Blavatnik.

At 31 December 2018, 31 December 2017 and at the date of these financial statements the directors consider the immediate parent of the Group to be EN+, which is incorporated in Jersey with its registered office at 44 Esplanade, St Helier, Jersey, JE4 9WG, Channel Islands.

Based on publicly available information at the Company's disposal at the date of these financial statements there is no individual that has an indirect prevailing ownership interest in the Company exceeding 25% or has an opportunity to exercise control over the Company.

Related party transactions are disclosed in note 25.

(b) Operations

The Group operates in the aluminium industry primarily in the Russian Federation, Ukraine, Guinea, Jamaica, Ireland, Italy, Nigeria and Sweden and is principally engaged in the mining and refining of bauxite and nepheline ore into alumina, the smelting of primary aluminium from alumina and the fabrication of aluminium and aluminium alloys into semi-fabricated and finished products. The Group sells its products primarily in Europe, Russia, other countries of the Commonwealth of Independent States ("CIS"), Asia and North America.

(c) Business environment in emerging economies

The Russian Federation, Ukraine, Jamaica, Nigeria and Guinea have been experiencing political and economic changes that have affected, and may continue to affect, the activities of enterprises operating in these environments. Consequently, operations in these countries involve risks that typically do not exist in other markets, including reconsideration of privatisation terms in certain countries where the Group operates following changes in governing political powers.

The conflict in Ukraine and related events has increased the perceived risks of doing business in the Russian Federation. The imposition of economic sanctions on Russian individuals and legal entities by the European Union, the United States of America, Japan, Canada, Australia and others, as well as retaliatory sanctions imposed by the Russian government, has resulted in increased economic uncertainty including more volatile equity markets, a depreciation of the Russian Rouble, a reduction in both local and foreign direct investment inflows and a significant tightening in the availability of credit. In particular, some Russian entities may be experiencing difficulties in accessing international equity and debt markets and may become increasingly dependent on Russian state banks to finance their operations. The longer term effects of recently implemented sanctions, as well as the threat of additional future sanctions, are difficult to determine.

The consolidated financial statements reflect management's assessment of the impact of the Russian, Ukrainian, Jamaican, Nigerian and Guinean business environments on the operations and the financial position of the Group. The future business environment may differ from management's assessment.

(d) OFAC Sanctions

On 6 April 2018, the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC") designated, amongst others, the Company, as a Specially Designated National ("SDN") (the "OFAC Sanctions").

As a result, all property or interests in property of the Company and its subsidiaries located in the United States or in the possession of U.S. Persons were blocked, must have been frozen, and could not be transferred, paid, exported, withdrawn, or otherwise dealt in. Several general licenses were issued

at the time of the designation and later on authorizing certain transactions with the Company, its majority shareholder En+ Group Plc (“En+”), and with their respective debt and equity.

On 27 January 2019 OFAC announced removal of the Company and En+ from OFAC’s SDN List with immediate effect. The removal was subject to and conditional upon the satisfaction of a number of conditions including, but not limited to, corporate governance changes, including, inter alia, overhauling the composition of the Board to ensure that independent directors constitute the majority of the Board, stepping down of the Chairman of the Board, and ongoing reporting and certifications by the Company to OFAC concerning compliance with the conditions for removal.

2 Basis of preparation

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRSs”), which collective term includes all International Accounting Standards and related interpretations, promulgated by the International Accounting Standards Board (“IASB”), and the disclosure requirements of the Hong Kong Companies Ordinance.

These consolidated financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

This is the first set of the Group’s annual financial statements in which IFRS 15 *Revenue from Contracts with Customers* and IFRS 9 *Financial Instruments* have been applied. Changes to significant accounting policies are described in Note 3. A number of other new standards are also effective from 1 January 2018 but they do not have a material effect on the Group’s financial statements.

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

A number of new standards and amendments to standards are effective for annual periods beginning after 1 January 2019 and earlier application is permitted; however, the Group has not early adopted the following new or amended standards in preparing these consolidated financial statements.

The following amended standards and interpretations are not expected to have a significant impact on the Group’s consolidated financial statements.

- IFRIC 23 *Uncertainty over Tax Treatments*.
- *Prepayment Features with Negative Compensation (Amendments to IFRS 9)*.
- *Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)*.
- *Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)*.
- *Annual Improvements to IFRS Standards 2015–2017 Cycle* – various standards.
- *Amendments to References to Conceptual Framework in IFRS Standards*.
- *IFRS 17 Insurance Contracts*.

Of those standards that are not yet effective, based on the information collected to date and analysis performed by the Group, IFRS 16 *Leases* is expected to have a material impact on the Group’s financial statements in the period of initial application.

IFRS 16 replaces existing leases guidance including IAS 17 *Leases*, IFRIC 4 *Determining whether an Arrangement contains a Lease*, SIC-15 *Operating Leases—Incentives* and SIC-27 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

The standard is effective for annual periods beginning on or after 1 January 2019. The Group has not elected the early adoption option.

IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low value items. Lessor accounting remains similar to the current standard – i.e. lessors continue to classify leases as finance or operating leases.

As a lessee, the Group can either apply the standard using a:

- retrospective approach; or
- modified retrospective approach with optional practical expedients.

The lessee applies the election consistently to all of its leases.

The Group will apply IFRS 16 initially on 1 January 2019, using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognised as an adjustment to the opening balance of retained earnings at 1 January 2019, with no restatement of comparative information.

When applying the modified retrospective approach to leases previously classified as operating leases under IAS 17, the lessee can elect, on a lease-by-lease basis, whether to apply a number of practical expedients on transition. The Group is assessing the potential impact of using these practical expedients.

3 Significant accounting policies

(a) Changes in accounting policies

The Group has initially adopted IFRS 15 *Revenue from Contracts with Customers* and IFRS 9 *Financial Instruments* from 1 January 2018.

The effect of initially applying these standards is mainly attributed to the following:

- timing of recognition of revenue for the transportation services after the control for the related goods has been transferred to customer (revenue is to be recognised over time from goods control transfer till completion of the transportation);
- classification of revenue earned from the contracts which bear price finalisation options as other revenue instead of revenue from contracts with customers;
- an increase in impairment losses recognised on financial assets;
- disclosures to be presented as required by the new standards.

(i) IFRS 15 Revenue from Contracts with Customers

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. It replaced IAS 18 *Revenue*, IAS 11 *Construction Contracts* and related interpretations.

The Group has adopted IFRS 15 using the cumulative effect method (without practical expedients), with the effect of initially applying this standard recognised at the date of initial application (i.e. 1 January 2018). Accordingly, the information presented for 2017 has not been restated – i.e. it is presented, as previously reported, under IAS 18, IAS 11 and related interpretations.

The details of the new significant accounting policies and the nature of the changes to previous

accounting policies in relation to the Group's various goods and services are set out below.

	Nature, timing of satisfaction of performance obligations, significant payment terms	Nature of change in accounting policy
Sales of goods	Comprise sale of primary aluminium, alloys, alumina, bauxite and other products. Customers obtain control of the goods supplied when the goods are delivered to the point when risks are transferred based on Incoterms delivery terms stated in the contract. Invoices are generated and revenue is recognised at that point in time. Invoices are usually payable within 60 days or in advance. Under certain Group sale contracts the final price for the goods shipped is determined a few months later than the delivery took place. Under current requirements the Group determines the amount of revenue at the moment of recognition based on estimated selling price at the date of the invoice issued. At price finalisation the difference between estimated price and actual one is recognised as other revenue.	Under IAS 18 revenue was recognised when related risks and rewards of ownership were transferred under delivery terms of the contracts. Revenue was recognised at this point provided that the revenue and costs can be measured reliably, the recovery of the consideration is probable and there is no continuing management involvement with the goods. Under IFRS 15, revenue is recognised when a customer obtains control of the goods. It has not significantly impacted the Group's revenue recognition approach and the timing of revenue recognition. For the contract with revenue finalisation feature IFRS 15 also has not resulted in a significant change in the amount of revenue recognised and the moment of recognition. But IFRS 15 effected the classification of the revenue recognised: revenue initially recognised at the moment of control transfer to the customer is recognised as revenue from contract with customers. The amount of price adjustment on finalisation is recognised as other revenue.
Rendering of transportation services	As part of sales of goods the Group also performs transportation to the customer under contract terms. In certain cases the control for goods delivered is transferred to customer at earlier point than the transportation is completed. The fee for the transportation services is included in the amount invoiced for the goods supplied (refer to the above caption).	Under IAS 18 revenue was recognised both for goods and transportation services at the point in time when the risks and rewards of goods ownership transfer to customer. Under IFRS 15 the transportation revenue is recognised over time from goods control transfer till completion of the transportation. This has resulted in certain deferral of revenue recognition, but did not have a significant impact.
Rendering of electricity supply services	The Group is involved in sales of energy to 3 rd and related parties. Invoices are issued once a month at the end of month and paid within 30 days.	Under previously effective accounting policies revenue was recognised on the last day of the month. Under IFRS 15 revenue is recognised over time. Effectively it has not impacted either total amount of revenue recognized, or its classification.

The impact of transition to IFRS 15 on retained earnings is not significant. Thus no transitional adjustments were made by the Group.

(ii) IFRS 9 Financial Instruments

IFRS 9 *Financial Instruments* sets out requirements for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces IAS 39 *Financial Instruments: Recognition and Measurement*.

The details of new significant accounting policies and the nature and effects of the changes to previous accounting policies are set out below.

Classification and measurement of financial assets and financial liabilities

IFRS 9 contains a new classification and measurement approach for financial assets that reflects the business model in which assets are managed and their cash flow characteristics.

IFRS 9 contains three principal classification categories for financial assets: measured at amortised cost, fair value through other comprehensive income (“FVOCI”) and fair value through profit or loss (“FVTPL”). The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. The standard eliminates the existing IAS 39 categories of held to maturity, loans and receivables and available for sale. Under IFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification of financial liabilities.

The Group’s financial assets most fall within category of financial assets measured at amortised cost both under IAS 39 and IFRS 9 requirements. The only exception is derivative financial assets measured at fair value through profit or loss. The same applies to the Group’s financial liabilities. Thus the adoption of IFRS 9 has not had a significant effect on the Group’s accounting policies related to classification and measurement of financial assets and financial liabilities as well as derivative financial instruments. The impact of IFRS 9 on the impairment of financial assets is set out below.

Impairment of financial assets

IFRS 9 replaces the ‘incurred loss’ model in IAS 39 with an ‘expected credit loss’ (ECL) model. The new impairment model applies inter alia to financial assets measured at amortised cost. Under IFRS 9, credit losses are recognised earlier than under IAS 39. The Group’s financial assets at amortised cost consist of trade and other receivables and cash and cash equivalents.

Under IFRS 9, loss allowances are measured on either of the following bases:

- *12-month ECLs*: these are ECLs that result from possible default events within the 12 months after the reporting date; and
- *lifetime ECLs*: these are ECLs that result from all possible default events over the expected life of a financial instrument.

The Group measures loss allowances at an amount equal to lifetime ECLs, except for bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition. The Group measures loss allowances for trade receivables at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group’s historical experience and informed credit assessment and including forward-looking information.

The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when:

- the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising security (if any is held); or
- the financial asset is more than 90 days past due, but additional analysis is conducted for each such receivable and assessment is updated accordingly.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial asset in case of long-term assets.

At each reporting date, the Group assesses whether financial assets carried at amortised cost are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Loss allowances for financial assets measured at amortised cost are deducted from the gross carrying amount of the assets. Impairment losses related to trade and other receivables are presented as part of net other operating expenses.

For assets in the scope of the IFRS 9 impairment model, impairment losses are generally expected to increase and become more volatile. The Group has determined that the application of IFRS 9's impairment requirements at 1 January 2018 does not result in significant additional impairment allowance and thus has not recognized any additional allowance as part of transition to the new standards.

The following analysis provides further detail about the calculation of ECLs related to trade receivables on the adoption of IFRS 9. The Group uses an allowance matrix to measure the ECLs of trade receivables from the customers. Loss rates are calculated using a 'roll rate' method based on the probability of a receivable progressing through successive stages of delinquency to write-off. The ECLs were calculated based on actual credit loss experience over the past two years. The Group performed the calculation of ECL rates separately for the customers of each key trading company of the Group. Exposures within each trading company were not further segmented except for individually significant customers which bear specific credit risk depending on the repayment history of the customer and relationship with the Group. Actual credit loss experience was not further adjusted as at 1 January 2018 as the Group has not expected significant adverse changes in economic conditions during the period over which the historical data was collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables. Potential impact of the sanctions described in Note 1(d) on further expected credit losses assessment was not considered as could not be reliably estimated during the reporting period and is not expected to have a significant impact after 31 December 2018 due to sanctions lifting in January 2019 (note 1(d)).

The following table provides information about determined ECLs rates for trade receivables both as at 1 January 2018 and 31 December 2018.

	Weighted-average loss rate		Credit-impaired
	1 January 2018	31 December 2018	
Current (not past due)	1%	2%	No
1–30 days past due	11%	10%	No
31–60 days past due	28%	40%	No
61–90 days past due	64%	50%	No
More than 90 days past due	90%	85%	Yes

There were no changes during the period to the Group's exposure to credit risk that may impact the above loss rates calculation. Fluctuations reflect differences between economic conditions during the period over which the historical data has been collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables.

Hedge accounting

When initially applying IFRS 9, the Group may choose as its accounting policy to continue to apply the hedge accounting requirements of IAS 39 instead of the requirements in IFRS 9. The Group has chosen to apply the hedge accounting requirements of IAS 39.

Transition

Changes in accounting policies resulting from the adoption of IFRS 9 have been applied retrospectively, except as described below.

The Group has taken an exemption not to restate comparative information for prior periods with respect to classification and measurement (including impairment) requirements. Accordingly, the information presented for 2017 does not generally reflect the requirements of IFRS 9 but rather those of IAS 39.

The determination of the business model within which a financial asset is held has been made on the basis of the facts and circumstances that existed at the date of initial application.

(b) Basis of measurement

The consolidated financial statements have been prepared in accordance with the historical cost basis except as set out in the significant accounting policies in the related notes below.

(c) Functional and presentation currency

The Company's functional currency is the United States Dollar ("USD") because it reflects the economic substance of the underlying events and circumstances of the Company. The functional currencies of the Group's significant subsidiaries are the currencies of the primary economic environment and key business processes of these subsidiaries and include USD, Russian Roubles ("RUB"), Ukrainian Hryvna and Euros ("EUR"). The consolidated financial statements are presented in USD, rounded to the nearest million, except as otherwise stated herein.

(d) Use of judgements, estimates and assumptions

The preparation of consolidated financial statements in conformity with IFRSs requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the consolidated financial statements, and the reported revenue and costs during the relevant period.

Management bases its judgements and estimates on historical experience and various other factors that are believed to be appropriate and reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRSs that have a significant effect on the consolidated financial statements and estimates with a significant risk of material adjustment in the next year relate to:

- measurement of recoverable amount of property, plant and equipment (note 13) and goodwill (note 14);
- measurement of net realizable value of inventories (note 16);

- measurement of recoverable amount of investments in associates and joint ventures (note 15);
- estimates in respect of legal proceedings, restoration and exploration, taxation and pension reserve (note 20).

(e) Basis of consolidation

(i) Subsidiaries

Subsidiaries are entities controlled by the group. The Group controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. When assessing whether the Group has power, only substantive rights (held by the Group and other parties) are considered.

An investment in a subsidiary is consolidated into the consolidated financial statements from the date that control commences until the date that control ceases. Intra-group balances, transactions and cash flows and any unrealised profits arising from intra-group transactions are eliminated in full in preparing the consolidated financial statements. Unrealised losses resulting from intra-group transactions are eliminated in the same way as unrealised gains but only to the extent that there is no evidence of impairment.

When the group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset or, when appropriate, the cost on initial recognition of an investment in an associate or joint venture.

(ii) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

(f) Foreign currencies

(i) Foreign currency transactions

Transactions in foreign currencies are translated into the respective functional currencies of Group entities at the exchange rates ruling at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between the amortised cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortised cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary items in a foreign currency are measured based on historical cost and translated using the exchange rate at the date of transaction. Foreign currency differences arising on retranslation are recognised in the statement of income, except for differences arising on the retranslation of qualifying cash flow hedges to the extent the hedge is effective, which is recognised in the other comprehensive income.

(ii) Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated from their functional currencies to USD at the exchange rates ruling at

the reporting date. The income and expenses of foreign operations are translated to USD at exchange rates approximating exchange rates at the dates of the transactions.

Foreign currency differences arising on translation are recognised in the statement of comprehensive income and presented in the currency translation reserve in equity. For the purposes of foreign currency translation, the net investment in a foreign operation includes foreign currency intra-group balances for which settlement is neither planned nor likely in the foreseeable future and foreign currency differences arising from such a monetary item are recognised in the statement of comprehensive income.

When a foreign operation is disposed of, such that control, significant influence or joint control is lost, the cumulative amount of the currency translation reserve is transferred to the statement of income as part of the gain or loss on disposal. When the Group disposes of only part of its interest in a subsidiary that includes a foreign operation while retaining control, the relevant proportion of the cumulative amount is reattributed to non-controlling interests. When the Group disposes of only part of its investment in an associate or joint venture that includes a foreign operation while retaining significant influence or joint control, the relevant proportion of the cumulative amount is reclassified to the statement of income.

4 Segment reporting

(a) Reportable segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenue and incur expenses, including revenue and expenses that relate to transactions with any of the Group's other components. All operating segments' operating results are reviewed regularly by the Group's CEO to make decisions about resources to be allocated to the segment and assess its performance and for which discrete consolidated financial information or statements are available.

Individually material operating segments are not aggregated for financial reporting purposes unless the segments have similar economic characteristics and are similar in respect of the nature of products and services, the nature of production processes, the type or class of customers, the methods used to distribute the products or provide the services and the nature of the regulatory environment. Operating segments which are not individually material may be aggregated if they share a majority of these criteria.

The Group has four reportable segments, as described below, which are the Group's strategic business units. These business units are managed separately and the results of their operations are reviewed by the CEO on a regular basis.

Aluminium. The Aluminium segment is involved in the production and sale of primary aluminium and related products.

Alumina. The Alumina segment is involved in the mining and refining of bauxite into alumina and the sale of alumina.

Energy. The Energy segment includes the Group companies and projects engaged in the mining and sale of coal and the generation and transmission of electricity produced from various sources. Where the generating facility is solely a part of an alumina or aluminium production facility it is included in the respective reportable segment.

Mining and Metals. The Mining and Metals segment includes the equity investment in PJSC MMC Norilsk Nickel ("Norilsk Nickel").

Other operations include manufacturing of semi-finished products from primary aluminium for the transportation, packaging, building and construction, consumer goods and technology industries; and

the activities of the Group's administrative centres. None of these segments meet any of the quantitative thresholds for determining reportable segments in 2018 and 2017.

The Aluminium and Alumina segments are vertically integrated whereby the Alumina segment supplies alumina to the Aluminium segment for further refining and smelting with limited sales of alumina outside the Group. Integration between the Aluminium, Alumina and Energy segments also includes shared servicing and distribution.

(b) Segment results, assets and liabilities

For the purposes of assessing segment performance and allocating resources between segments, the Group's senior executive management monitor the results, assets and liabilities attributable to each reportable segment on the following bases:

Segment assets include all tangible, intangible assets and current assets with the exception of income tax assets and corporate assets. Segment liabilities include trade and other payables attributable to the production and sales activities of the individual segments. Loans and borrowings are not allocated to individual segments as they are centrally managed by the head office.

Revenue and expenses are allocated to the reportable segments with reference to sales generated by those segments and the expenses incurred by those segments or which otherwise arise from the depreciation or amortisation of assets attributable to those segments excluding impairment.

The measure used for reporting segment results is the statement of income before income tax adjusted for items not specifically attributed to individual segments, such as finance income, costs of loans and borrowings and other head office or corporate administration costs. The segment profit or loss is included in the internal management reports that are reviewed by the Group's CEO. Segment profit or loss is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

In addition to receiving segment information concerning segment results, management is provided with segment information concerning revenue (including inter-segment revenue), the carrying value of investments and share of profits/(losses) of associates and joint ventures, depreciation, amortisation, impairment and additions of non-current segment assets used by the segments in their operations. Inter-segment pricing is determined on a consistent basis using market benchmarks.

Segment capital expenditure is the total cost incurred during the year to acquire property, plant and equipment and intangible assets other than goodwill.

(i) **Reportable segments**

Year ended 31 December 2018

	Aluminium	Alumina	Energy	Mining and Metals	Total segment result
	USD million	USD million	USD million	USD million	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)
	Aluminium	Alumina	Energy	Mining and Metals	Total segment result
	USD million	USD million	USD million	USD million	USD million
Segment assets	6,864	2,656	-	-	9,520
Interests in associates and joint ventures	-	-	594	3,101	3,695
Total segment assets					13,215
Segment liabilities	(634)	(568)	(10)	-	(1,212)
Total segment liabilities					(1,212)

Year ended 31 December 2017

	<u>Aluminium</u>	<u>Alumina</u>	<u>Energy</u>	<u>Mining and Metals</u>	<u>Total segment result</u>
	<u>USD million</u>	<u>USD million</u>	<u>USD million</u>	<u>USD million</u>	<u>USD million</u>
Revenue from external customers	8,378	1,084	-	-	9,462
Inter-segment revenue	192	2,373	-	-	2,565
Total segment revenue	8,570	3,457	-	-	12,027
Segment profit/(loss)	1,482	479	-	-	1,961
Impairment of non-current assets	(43)	(59)	-	-	(102)
Share of profits of associates and joint ventures	-	-	91	528	619
Depreciation/amortisation	(349)	(121)	-	-	(470)
Non-cash (expense)/income other than depreciation	(7)	6	-	-	(1)
Additions to non-current segment assets during the year	350	260	-	-	610
Non-cash additions/(disposals) to non-current segment assets related to site restoration	1	(2)	-	-	(1)
Segment assets	6,751	2,281	-	-	9,032
Interests in associates and joint ventures	-	-	646	3,796	4,442
Total segment assets					13,474
Segment liabilities	(1,137)	(671)	(9)	(1)	(1,818)
Total segment liabilities					(1,818)

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

	<u>Year ended 31 December</u>	
	<u>2018</u>	<u>2017</u>
	<u>USD million</u>	<u>USD million</u>
Revenue		
Reportable segment revenue	13,268	12,027
Elimination of inter-segment revenue	(3,609)	(2,565)
Unallocated revenue	621	507
Consolidated revenue	10,280	9,969

	Year ended 31 December	
	2018	2017
	USD million	USD million
Profit		
Reportable segment profit	2,012	1,961
Impairment of non-current assets	(157)	(84)
Share of profits of associates and joint ventures	955	620
Finance income	203	21
Finance expenses	(686)	(876)
Unallocated expenses	(374)	(354)
Consolidated profit before taxation	1,953	1,288
	31 December	31 December
	2018	2017
	USD million	USD million
Assets		
Reportable segment assets	13,215	13,474
Unallocated assets	2,562	2,300
Consolidated total assets	15,777	15,774
	31 December	31 December
	2018	2017
	USD million	USD million
Liabilities		
Reportable segment liabilities	(1,212)	(1,818)
Unallocated liabilities	(9,356)	(9,512)
Consolidated total liabilities	(10,568)	(11,330)

(iii) Geographic information

The Group's operating segments are managed on a worldwide basis, but operate in four principal geographical areas: the CIS, Europe, Africa and the Americas. In the CIS, production facilities operate in Russia and Ukraine. In Europe, production facilities are located in Italy, Ireland and Sweden. African production facilities are represented by bauxite mines and an alumina refinery in Guinea and an aluminium plant in Nigeria. In the Americas the Group operates one production facility in Jamaica, one in Guyana and a trading subsidiary in the United States of America.

The following table sets out information about the geographical location of (i) the Group's revenue from external customers and (ii) the Group's property, plant and equipment, intangible assets and interests in associates and joint ventures ("specified non-current assets"). The geographical location of customers is based on the location at which the services were provided or the goods were delivered. The geographical location of the specified non-current assets is based on the physical location of the asset. Unallocated specified non-current assets comprise mainly goodwill and interests in associates and joint ventures.

	Revenue from external customers	
	Year ended 31 December	
	2018	2017
	USD million	USD million
Russia	2,485	2,052
Netherlands	1,121	728
USA	887	1,440
Japan	800	872
Turkey	750	657
Norway	372	295
Italy	359	255
Poland	333	409
Sweden	333	247
France	311	277
South Korea	282	380
Greece	262	450
Germany	227	235
China	53	52
Other countries	1,705	1,620
	10,280	9,969

	Specified non-current assets	
	31 December 2018	31 December 2017
	USD million	USD million
Russia	7,031	7,588
Ireland	376	407
Guinea	152	200
Ukraine	158	183
Sweden	126	153
Unallocated	2,868	2,961
	10,711	11,492

5 Revenue

Accounting policies

The effect of initially applying IFRS 15 on the Group's revenue from contracts with customers and key accounting policies applied are described in Note 3. Due to the transition method chosen in applying IFRS 15, comparative information has not been restated to reflect the new requirements.

Disclosures

	Year ended 31 December	
	2018	2017
	USD million	USD million
Revenue from contracts with customers	10,280	9,969
Sales of products	10,073	9,804
Sales of primary aluminium and alloys	8,293	8,324
Sales of alumina and bauxite	984	778
Sales of foil and other aluminium products	346	323
Sales of other products	450	379
Provision of services	207	165
Supply of energy	143	121
Provision of transportation services	8	6
Provision of other services	56	38
Total revenue by types of customers	10,280	9,969
Third parties	6,150	6,727
Related parties – companies capable of exerting significant influence	3,671	2,859
Related parties – companies under common control	166	190
Related parties – associates and joint ventures	293	193
Total revenue by primary regions	10,280	9,969
Europe	4,804	4,212
CIS	2,944	2,400
America	1,076	1,660
Asia	1,400	1,603
Other	56	94

The Group's customer base is diversified and includes only one major customer - Glencore International AG (a member of Glencore International Plc which is a shareholder of the Company with a 8.75% share – refer to note 1(a)) - with whom transactions have exceeded 10% of the Group's revenue. In 2018 revenues from sales of primary aluminium and alloys to this customer amounted to USD3,115 million (2017: USD2,431 million).

Revenue from sale of primary aluminium and alloys relates to aluminium segment (Note 4). Revenue from sales of alumina and bauxite relates to alumina segment which also includes sale of other products. Revenue from sale of foil and other aluminium products and other products and services relates mostly to the revenue of non-reportable segments.

6 Cost of sales and operating expenses

(a) Cost of sales

	Year ended 31 December	
	2018	2017
	USD million	USD million
Cost of alumina, bauxite and other materials	(3,720)	(3,138)
<i>Third parties</i>	(3,588)	(2,964)
<i>Related parties – companies capable of exerting significant influence</i>	(78)	(113)
<i>Related parties – companies under common control</i>	(54)	(61)
Purchases of primary aluminium	(467)	(686)
<i>Third parties</i>	(145)	(384)
<i>Related parties – companies capable of exerting significant influence</i>	-	(10)
<i>Related parties – companies under common control</i>	(15)	(13)
<i>Related parties – associates and joint ventures</i>	(307)	(279)
Energy costs	(2,147)	(2,149)
<i>Third parties</i>	(1,267)	(1,258)
<i>Related parties – companies capable of exerting significant influence</i>	(4)	(10)
<i>Related parties – companies under common control</i>	(839)	(864)
<i>Related parties – associates and joint ventures</i>	(37)	(17)
Personnel costs	(582)	(582)
Depreciation and amortisation	(498)	(472)
Change in finished goods	347	184
Other costs	(379)	(340)
<i>Third parties</i>	(196)	(169)
<i>Related parties – companies capable of exerting significant influence</i>	-	(1)
<i>Related parties – companies under common control</i>	(35)	(35)
<i>Related parties – associates and joint ventures</i>	(148)	(135)
	(7,446)	(7,183)

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

	Year ended 31 December	
	2018	2017
	USD million	USD million
Transportation expenses	(373)	(368)
Personnel costs	(330)	(333)
Impairment of non-current assets	(157)	(84)
Consulting and legal expenses	(79)	(76)
Lease and security	(48)	(54)
Impairment of trade and other receivables	(36)	(6)
Packaging materials	(36)	(33)
Taxes other than on income	(31)	(40)
Charitable donations	(22)	(24)
Repair and other services	(19)	(31)
Depreciation and amortisation	(15)	(16)
Loss on disposal of property, plant and equipment	(12)	(25)
Auditors' remuneration	(6)	(6)
Other expenses	(189)	(167)
	(1,353)	(1,263)

(c) Personnel costs

Accounting policies

Personnel costs comprise salaries, annual bonuses, annual leave and cost of non-monetary benefits. Salaries, annual bonuses, paid annual leave and cost of non-monetary benefits are accrued in the year in which the associated services are rendered by employees. Where payment or settlement is deferred and the effect would be material, these amounts are stated at their present values.

The employees of the Group are also members of retirement schemes operated by local authorities. The Group is required to contribute a certain percentage of their payroll to these schemes to fund the benefits. The Group's total contribution to those schemes charged to the statement of income during the years presented is shown below.

The Group's net obligation in respect of defined benefit pension and other post-retirement plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any plan assets are deducted. The discount rate is the yield at the reporting date on government bonds that have maturity dates approximating the terms of the Group's obligations. The calculation is performed using the projected unit credit method. When the calculation results in a benefit to the Group, the recognised asset is limited to the net total of any unrecognised past service costs and the present value of any future refunds from the plan or reductions in future contributions to the plan.

Where there is a change in actuarial assumptions, the resulting actuarial gains and losses are recognised directly in other comprehensive income.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognised in the statement of income on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognised immediately.

The Group recognises gains and losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs.

The gain or loss on curtailment comprises any resulting change in the fair value of plan assets, any change in the present value of the defined benefit obligation, any related actuarial gains and losses.

Disclosures

	Year ended 31 December	
	2018	2017
	USD million	USD million
Contributions to defined contribution retirement plans	173	194
Contributions to defined benefit retirement plans	-	3
Total retirement costs	173	197
Wages and salaries	739	718
	912	915

(d) EBITDA and operating effectiveness measures

Adjusted EBITDA is the key non-IFRS financial measure used by the Group as reference for assessing operating effectiveness.

	Year ended 31 December	
	2018	2017
	USD million	USD million
Results from operating activities	1,481	1,523
<i>Add:</i>		
Amortisation and depreciation	513	488
Impairment of non-current assets	157	84
Loss on disposal of property, plant and equipment	12	25
Adjusted EBITDA	2,163	2,120

7 Finance income and expenses

Accounting policies

Finance income comprises interest income on funds invested, changes in the fair value of financial assets at fair value through profit or loss and foreign currency gains. Interest income is recognised as it accrues, using the effective interest method.

Finance expenses comprise interest expense on borrowings, unwinding of the discount on provisions, foreign currency losses and changes in the fair value of financial assets at fair value through profit or loss. All borrowing costs are recognised in the statement of income using the effective interest method, except for borrowing costs related to the acquisition, construction and production of qualifying assets which are recognised as part of the cost of such assets.

Foreign currency gains and losses are reported on a net basis.

Disclosures

	Year ended 31 December	
	2018	2017
	USD million	USD million
Finance income		
Interest income on third party loans and deposits	31	16
Interest income on loans to related parties – <i>companies under common control</i>	1	1
Change in fair value of derivative financial instruments (refer to note 21)	171	-
Net foreign exchange gain	-	4
	203	21
Finance expenses		
Interest expense on bank loans and bonds wholly repayable within 5 years and other bank charges	(239)	(306)
Interest expense on bank loans and bonds wholly repayable after 5 years	(259)	(275)
Interest expense on company loans from related parties – <i>companies exerting significant influence</i>	(2)	(2)
Change in fair value of derivative financial instruments (refer to note 21)	-	(287)
Net foreign exchange loss	(183)	-
Interest expense on provisions	(3)	(6)
	(686)	(876)

8 Income tax

Accounting policies

Income tax expense comprises current and deferred tax. Income tax expense is recognised in the statement of income and other comprehensive income except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of goodwill, the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit, and differences relating to investments in subsidiaries to the extent that they probably will not reverse in the foreseeable future. New information may become available that causes the Company to change its judgement regarding the adequacy of existing tax liability. Such changes to tax liabilities will impact tax expenses in the period that such a determination is made. Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset when they relate to income taxes levied by the same taxation authority and the Group has both the right and the intention to settle its current tax assets and liabilities on a net or simultaneous basis.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which temporary differences can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividends is recognised.

Disclosures

(a) Income tax expense

	Year ended 31 December	
	2018	2017
	USD million	USD million
<i>Current tax</i>		
Current tax for the year	305	140
<i>Deferred tax</i>		
Origination and reversal of temporary differences	(50)	(74)
Actual tax expense	255	66

The Company is a tax resident of Cyprus with an applicable corporate tax rate of 12.5%. Subsidiaries pay income taxes in accordance with the legislative requirements of their respective tax jurisdictions. For subsidiaries domiciled in Russia, the applicable tax rate is 20%; in Ukraine of 18%; Guinea of 0%; China of 25%; Kazakhstan of 20%; Australia of 30%; Jamaica of 25%; Ireland of 12.5%; Sweden of 22% and Italy of 27.9%. For the Group's subsidiaries domiciled in Switzerland the applicable tax rate for the period is the corporate income tax rate in the Canton of Zug, Switzerland, which may vary depending on the subsidiary's tax status. The rate consists of a federal income tax and cantonal/communal income and capital taxes. The latter includes a base rate and a multiplier, which may change from year to year. Applicable income tax rates for 2017 are 9.27% and 14.60% for different subsidiaries. For the Group's significant trading companies, the applicable tax rate is 0%. The applicable tax rates for the year ended 31 December 2018 were the same as for the year ended 31 December 2017 except for tax rates for subsidiaries domiciled in Switzerland which amounted to 9.6% and 14.51% accordingly.

	Year ended 31 December			
	2018		2017	
	USD million	%	USD million	%
Profit before taxation	1,953	100	1,288	100
Income tax at tax rate applicable to the tax residence of the Company	244	13	161	13
Effect of different income tax rates	(50)	(3)	(56)	(4)
Effect of changes in investment in Norilsk Nickel	(63)	(3)	(35)	(3)
Change in unrecognised deferred tax assets	11	1	14	1
Change in recognised temporary differences	-	-	(22)	(2)
Effect of reversal of impairment	(35)	(2)	-	-
Other non-deductible taxable items	31	2	4	-
Income tax related to prior periods, including provision	117	6	-	-
Actual tax expense	255	14	66	5

(b) Recognised deferred tax assets and liabilities

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

	Assets		Liabilities		Net	
	31 December 2018	31 December 2017	31 December 2018	31 December 2017	31 December 2018	31 December 2017
USD million						
Property, plant and equipment	55	48	(574)	(595)	(519)	(547)
Inventories	54	45	(14)	(13)	40	32
Trade and other receivables	17	12	(9)	(6)	8	6
Derivative financial assets/(liabilities)	6	16	(8)	(7)	(2)	9
Tax loss carry-forwards	41	19	-	-	41	19
Others	224	162	(201)	(140)	23	22
Deferred tax assets/(liabilities)	397	302	(806)	(761)	(409)	(459)
Set-off of deferred taxation	(304)	(239)	304	239	-	-
Net deferred tax assets/(liabilities)	93	63	(502)	(522)	(409)	(459)

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

USD million	1 January 2017	Recognised in profit or loss	Foreign currency translation	31 December 2017
Property, plant and equipment	(533)	(14)	-	(547)
Inventories	39	(7)	-	32
Trade and other receivables	8	(2)	-	6
Derivative financial assets/(liabilities)	(11)	20	-	9
Tax loss carry-forwards	9	10	-	19
Others	(46)	67	1	22
Total	(534)	74	1	(459)

USD million	1 January 2018	Recognised in profit or loss	Foreign currency translation	31 December 2018
Property, plant and equipment	(547)	28	-	(519)
Inventories	32	8	-	40
Trade and other receivables	6	2	-	8
Derivative financial assets/(liabilities)	9	(11)	-	(2)
Tax loss carry-forwards	19	22	-	41
Others	22	1	-	23
Total	(459)	50	-	(409)

Recognised tax losses expire in the following years:

Year of expiry	31 December 2018	31 December 2017
	USD million	USD million
Without expiry	41	19
	41	19

(d) Unrecognised deferred tax assets

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

	31 December 2018	31 December 2017
	USD million	USD million
Deductible temporary differences	789	691
Tax loss carry-forwards	232	322
	1,021	1,013

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profits will be available against which the Group can utilise the benefits therefrom. Tax losses expire in the following years:

Year of expiry	31 December	31 December
	2018	2017
	USD million	USD million
Without expiry	231	316
From 2 to 5 years	1	4
Up to 1 year	-	2
	232	322

(e) Unrecognised deferred tax liabilities

Retained earnings of the Group's subsidiaries where dividend distributions are subject to taxation included USD1,778 million and USD1,387 million as at 31 December 2018 and 31 December 2017, respectively, for which deferred taxation has not been provided because remittance of the earnings has been indefinitely postponed through reinvestment and, as a result, such amounts are considered to be permanently invested. It was not practicable to determine the amount of temporary differences relating to investments in subsidiaries where the Group is able to control the timing of reversal of the difference. Reversal is not expected in the foreseeable future. For other subsidiaries in the Group, including the significant trading companies, the distribution of dividends does not give rise to taxes.

(f) Current taxation in the consolidated statement of financial position represents:

	31 December	31 December
	2018	2017
	USD million	USD million
Net income tax receivable at the beginning of the year	16	19
Income tax for the year	(305)	(140)
Income tax paid	124	100
Dividend withholding tax	47	26
Income tax provision (note 20)	20	-
Translation difference	(7)	11
	(105)	16
Represented by:		
Income tax payable (note 17)	(127)	(16)
Prepaid income tax (note 17)	22	32
Net income tax recoverable	(105)	16

9 Directors' remuneration

Directors' remuneration disclosed pursuant to section 383(1) of the Hong Kong Companies Ordinance and Part 2 of the Companies (Disclosure of information about Benefits of Directors) Regulations are as follows:

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

Year ended 31 December 2017

	Directors' fees	Salaries, allowances, benefits in kind	Discretionary bonuses	Total
	USD thousand	USD thousand	USD thousand	USD thousand
Executive Directors				
Oleg Deripaska (d)	-	1,804	4,000	5,804
Vladislav Soloviev(e)	-	3,957	4,220	8,177
Siegfried Wolf (e)	-	1,711	-	1,711
Non-executive Directors				
Maksim Goldman (f)	195	-	-	195
Dmitry Afanasiev (e)	184	-	-	184
Ivan Glasenberg (f)	195	-	-	195
Gulzhan Moldazhanova (e)	176	-	-	176
Ekaterina Nikitina(e)	182	-	-	182
Olga Mashkovskaya(e)	169	-	-	169
Daniel Lesin Wolfe (f)	195	-	-	195
Maksim Sokov(e)	182	-	-	182
Marco Musetti	181	-	-	181
Independent Non-executive Directors				
Matthias Warnig (Chairman)	462	-	-	462
Bernard Zonneveld	215	-	-	215
Philip Lader (f)	314	-	-	314
Elsie Leung Oi-Sie	202	-	-	202
Mark Garber (e)	215	-	-	215
Dmitry Vasiliev	183	-	-	183
	3,250	7,472	8,220	18,942

- a. Evgenii Nikitin, Sergei Popov and Evgenii Vavilov were appointed as Executive Directors in June 2018.
- b. Vyacheslav Solomin and Timur Valiev were appointed as Non-executive Directors in June 2018.
- c. Philippe Bernard Henri Mailfait and Jean-Pierre Thomas were appointed as Independent Non-executive Directors in June 2018.
- d. Oleg Deripaska resigned from his position as member of the Board of Directors in May 2018.
- e. Vladislav Soloviev, Siegfried Wolf, Gulzhan Moldazhanova, Ekaterina Nikitina, Olga Mashkovskaya, Maksim Sokov, Dmitry Afanasiev and Mark Garber resigned from their positions as members of the Board of Directors in June 2018.
- f. Maksim Goldman, Ivan Glasenberg, Philip Lader and Daniel Lesin Wolfe resigned from their positions as members of the Board of Directors in April 2018.

The remuneration of the executive directors disclosed above includes compensation received starting from the date of the appointment and/or for the period until their termination as a member of the Board of Directors.

Retirement scheme contributions for the directors, who are members of management, are not disclosed as the amount is considered not significant for either year presented. There are no retirement scheme contributions for non-executive directors.

10 Individuals with highest emoluments

Of the five individuals with the highest emoluments, one was director in the year ended 31 December 2018 and two were directors in the year ended 31 December 2017, whose emoluments are disclosed in note 9. The aggregate of the emoluments in respect of the other individuals are as follows:

	Year ended 31 December	
	2018	2017
	USD thousand	USD thousand
Salaries	11,449	8,990
Discretionary bonuses	11,238	9,041
	22,687	18,031

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

	Year ended 31 December	
	2018	2017
	Number of individuals	Number of individuals
HK\$36,000,001-HK\$36,500,000 (US\$4,600,001 – US\$4,700,000)	-	1
HK\$37,000,001-HK\$37,500,000 (US\$4,700,001 – US\$4,800,000)	1	-
HK\$39,000,001-HK\$39,500,000 (US\$4,900,001 – US\$5,000,000)	1	-
HK\$41,000,001-HK\$41,500,000 (US\$5,200,001 – US\$5,300,000)	1	-
HK\$43,500,001-HK\$44,000,000 (US\$5,500,001 – US\$5,600,000)	-	1
HK\$59,500,001-HK\$60,000,000 (US\$7,600,001 – US\$7,700,000)	1	-
HK\$61,000,001-HK\$61,500,000 (US\$7,800,001 – US\$7,900,000)	-	1

No emoluments have been paid to these individuals as an inducement to join or upon joining the Group or as compensation for loss of office during the years presented.

Retirement scheme contributions to individuals with highest emoluments are not disclosed as the amount is considered not significant for either year presented.

11 Dividends

No dividends were declared and paid by the Company during the year ended 31 December 2018.

On 24 August 2017 the Board of Directors of the Company approved an interim dividend of USD299.3 million (USD0.0197 per ordinary share) for 2017. The interim dividend was paid on 10 October 2017.

The Company is subject to external capital requirements (refer to note 22(f)).

12 Earnings per share

The calculation of earnings per share is based on the profit attributable to ordinary equity shareholders of the Company and the weighted average number of shares in issue during the years ended 31 December 2018 and 31 December 2017. Weighted average number of shares:

	Year ended 31 December	
	2018	2017
Issued ordinary shares at beginning of the year	15,193,014,862	15,193,014,862
Effect of treasury shares	-	-
Weighted average number of shares at end of the year	15,193,014,862	15,193,014,862
Profit for the year, USD million	1,698	1,222
Basic and diluted earnings per share, USD	0.112	0.080

There were no outstanding dilutive instruments during the years ended 31 December 2018 and 2017.

13 Property, plant and equipment

Accounting policies

(i) Recognition and measurement

Items of property, plant and equipment, are measured at cost less accumulated depreciation and impairment losses. The cost of property, plant and equipment at 1 January 2004, the date of transition to IFRSs, was determined by reference to its fair value at that date.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, the costs of dismantling and removing the items and restoring the site on which they are located and capitalised borrowing costs. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

The cost of periodic relining of electrolyzers 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	Electro- lyzers	Other	Mining assets	Construct ion in progress	Total
<i>Cost/Deemed cost</i>							
Balance at 1 January 2017	3,394	5,852	2,217	169	510	1,511	13,653
Acquisition through business combination	-	-	-	10	-	-	10
Additions	-	17	109	5	17	704	852
Disposals	(18)	(44)	(13)	(3)	(74)	(18)	(170)
Transfers	65	359	24	1	14	(463)	-
Foreign currency translation	47	58	3	1	25	17	151
Balance at 31 December 2017	3,488	6,242	2,340	183	492	1,751	14,496
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
<i>Accumulated depreciation and impairment losses</i>							
Balance at 1 January 2017	1,824	4,290	1,879	143	455	997	9,588
Depreciation charge	80	269	149	7	1	-	506
Impairment loss/ (reversal) of impairment loss	(1)	(33)	5	(2)	(29)	80	20
Disposals	(4)	(30)	(11)	(1)	(23)	-	(69)
Foreign currency translation	43	45	3	1	23	13	128
Balance at 31 December 2017	1,942	4,541	2,025	148	427	1,090	10,173
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
Net book value							
At 31 December 2017	1,546	1,701	315	35	65	661	4,323
At 31 December 2018	1,591	1,721	334	48	66	661	4,421

Depreciation expense of USD496 million (2017: USD468 million) has been charged to cost of goods sold, USD3 million (2017: USD3 million) to distribution expenses and USD12 million (2017: USD13 million) to administrative expenses.

During the year ended 31 December 2018 interest expense of USD20 million was capitalised following commencement of active construction at several projects (2017: USD16 million) .

Included into construction in progress at 31 December 2018 and 2017 are advances to suppliers of property, plant and equipment of USD32 million and USD134 million, respectively.

The carrying value of property, plant and equipment subject to lien under loan agreements was USD3 million as at 31 December 2018 (31 December 2017: USD3 million), refer to note 19.

(a) Impairment

In accordance with the Group's accounting policies, each asset or cash generating unit is evaluated every reporting period to determine whether there are any indications of impairment. If any such indication exists, a formal estimate of recoverable amount is performed and an impairment loss recognised to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an asset or cash generating group of assets is measured at the higher of fair value less costs to sell and value in use.

Fair value is determined as the amount that would be obtained from the sale of the asset in an arm's length transaction between knowledgeable and willing parties and is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal.

Value in use is also generally determined as the present value of the estimated future cash flows, but only those expected to arise from the continued use of the asset in its present form and its eventual disposal. Present values are determined using a risk-adjusted pre-tax discount rate appropriate to the risks inherent in the asset. Future cash flow estimates are based on expected production and sales volumes, commodity prices (considering current and historical prices, price trends and related factors), bauxite reserve estimate, operating costs, restoration and rehabilitation costs and future capital expenditure.

Bauxite reserves are estimates of the amount of product that can be economically and legally extracted from the Group's properties. In order to calculate reserves, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. The Group determines ore reserves under the Australasian Code for Reporting of Mineral Resources and Ore Reserves September 1999, known as the JORC Code. The JORC Code requires the use of reasonable investment assumptions to calculate reserves.

Management identified several factors that indicated that for a number of Group's cash-generating units previously recognised impairment loss may require reversal and for a number of cash-generating units impairment loss shall be recognised. These include significant fluctuations of aluminium and alumina prices during the year as result of LME and overall market instability. In aluminium production, the Group faced increase in cash cost due to increase in alumina costs partially counterbalanced by application of cash cost control measures. For alumina cash generating units, major influence was on the part of recovery in alumina prices, increase in prices of energy resources being a significant part of cash cost and unbalanced change in alumina and bauxite prices. Bauxite cash generating units incurred more or less stable sale price of bauxite.

For the purposes of impairment testing the recoverable amount of each cash generating unit was determined by discounting expected future net cash flows of the cash generating unit.

Based on results of impairment testing as at 31 December 2018, management has concluded that a reversal of previously recognised impairment loss relating to property, plant and equipment should be

recognised in these consolidated financial statements in respect BAZ and UAZ cash generating unit in the amount of USD177 million. Additionally, management has concluded that an impairment loss in respect of Cobad cash generating unit in the amount of USD78 million should be recognised in these consolidated financial statements.

Based on results of impairment testing as at 31 December 2017, management has concluded that a reversal of previously recognised impairment loss relating to property, plant and equipment should be recognised in these consolidated financial statements in respect of the Windalco cash generating unit in the amount of USD63 million.

For the purposes of impairment testing the recoverable amount of each cash generating unit was determined by discounting expected future net cash flows of the cash generating unit. The pre-tax discount rates applied to the above mentioned cash generating units, estimated in nominal terms based on an industry weighted average cost of capital, are presented in the table below.

	Year ended 31 December	
	2018	2017
Kubikenborg Aluminium	11.1%	14.4%
Windalco	21.0%	22.7%
BAZ and UAZ (Bogoslovsk and Ural aluminium smelters)	19.2%	-
Compagnie de Bauxites de Dian-Dian (Cobad)	22.0%	-
Aughinish Alumina	13.4%	14.3%

The recoverable amount of a number of the cash generating units tested for impairment are particularly sensitive to changes in forecast aluminium and alumina prices, foreign exchange rates and applicable discount rates.

Additionally, management identified specific items of property, plant and equipment that are no longer in use and therefore are not considered to be recoverable amounting to USD146 million at 31 December 2018 (2017: USD83 million). These assets have been impaired in full. No further impairment of property, plant and equipment or reversal of previously recorded impairment was identified by management.

(b) Leased assets

Leases under the terms of which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Upon initial recognition the leased asset is measured at an amount equal to the lower of its fair value and the present value of the minimum lease payments. Subsequent to initial recognition, the asset is accounted for in accordance with the accounting policy applicable to that asset.

The corresponding finance lease obligation is included within interest bearing liabilities. The interest element is allocated to accounting periods during the lease term to reflect a constant rate of interest on the remaining balance of the obligation for each accounting period.

Assets held under other leases (operating leases) are not recognised in the statement of financial position. Payments made under the lease are charged to the statement of income in equal instalments over the accounting periods covered by the lease term, except where an alternative basis is more representative of the pattern of benefits to be derived from the leased assets. Lease incentives received are recognised in the statement of income as an integral part of the aggregate net lease payments made. Contingent rentals are charged to the statement of income in the accounting period in which they are incurred.

	31 December 2018	31 December 2017
	USD million	USD million
Owned and leased properties		
In the Russian Federation		
Freehold	1,400	1,380
short-term leases	18	18
medium-term leases	7	7
Outside the Russian Federation		
Freehold	166	141
	1,591	1,546
Representing		
Land and buildings	1,591	1,546

Included in the above mentioned amounts is the land held on long lease in the Russian Federation that comprised USD25 million and USD25 million at 31 December 2018 and 31 December 2017, respectively. The Group does not hold land in Hong Kong.

14 Intangible assets

Accounting policies

(i) Goodwill

On the acquisition of a subsidiary, an interest in a joint venture or an associate or an interest in a joint arrangement that comprises a business, the identifiable assets, liabilities and contingent liabilities of the acquired business (or interest in a business) are recognised at their fair values unless the fair values cannot be measured reliably. Where the fair values of assumed contingent liabilities cannot be measured reliably, no liability is recognised but the contingent liability is disclosed in the same manner as for other contingent liabilities.

Goodwill arises when the cost of acquisition exceeds the fair value of the Group's interest in the net fair value of identifiable net assets acquired. Goodwill is not amortised but is tested for impairment annually. For this purpose, goodwill arising on a business combination is allocated to the cash-generating units expected to benefit from the acquisition and any impairment loss recognised is not reversed even where circumstances indicate a recovery in value.

When the fair value of the Group's share of identifiable net assets acquired exceeds the cost of acquisition, the difference is recognised immediately in the statement of income.

In respect of associates or joint ventures, the carrying amount of goodwill is included in the carrying amount of the interest in the associate and joint venture and the investment as a whole is tested for impairment whenever there is objective evidence of impairment. Any impairment loss is allocated to the carrying amount of the interest in the associate and joint venture.

(ii) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the statement of income when incurred.

Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditure is capitalised only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalised includes the cost of materials, direct labour and overhead costs that are directly attributable to preparing the asset for its intended use and capitalised borrowing costs. Other development expenditure is recognised in the statement of income when incurred.

Capitalised development expenditure is measured at cost less accumulated amortisation and accumulated impairment losses.

(iii) *Other intangible assets*

Other intangible assets that are acquired by the Group, which have finite useful lives, are measured at cost less accumulated amortisation and accumulated impairment losses.

(iv) *Subsequent expenditure*

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognised in the statement of income when incurred.

(v) *Amortisation*

Amortisation is recognised in the statement of income on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use. The estimated useful lives are as follows:

- software 5 years;
- other 2-8 years.

The amortisation method, useful lives and residual values are reviewed at each financial year end and adjusted if appropriate.

Disclosures

	Goodwill	Other intangible assets	Total
	USD million	USD million	USD million
Cost			
Balance at 1 January 2017	2,837	541	3,378
Additions	17	20	37
Disposals	-	(15)	(15)
Foreign currency translation	63	1	64
Balance at 31 December 2017	2,917	547	3,464
Balance at 1 January 2018	2,917	547	3,464
Additions	48	39	87
Disposals	-	(8)	(8)
Foreign currency translation	(215)	(5)	(220)
Balance at 31 December 2018	2,750	573	3,323
Amortisation and impairment losses			
Balance at 1 January 2017	(449)	(459)	(908)
Amortisation charge	-	(4)	(4)
Balance at 31 December 2017	(449)	(463)	(912)
Balance at 1 January 2018	(449)	(463)	(912)
Amortisation charge	-	(2)	(2)
Balance at 31 December 2018	(449)	(465)	(914)
Net book value			
At 31 December 2017	2,468	84	2,552
At 31 December 2018	2,301	108	2,409

The amortisation charge is included in cost of sales in the consolidated statement of income.

Goodwill recognised in these consolidated financial statements initially arose on the formation of the Group in 2000 and the acquisition of a 25% additional interest in the Group by its controlling shareholder in 2003. The amount of goodwill was principally increased in 2007 as a result of the acquisition of certain businesses of SUAL Partners and Glencore.

(a) Impairment testing of goodwill and other intangible assets

For the purposes of impairment testing, the entire amount of goodwill is allocated to the aluminium segment of the Group's operations. The aluminium segment represents the lowest level within the Group at which the goodwill is monitored for internal management purposes. The recoverable amount

represents value in use as determined by discounting the future cash flows generated from the continuing use of the plants within the Group's aluminium segment.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to goodwill.

At 31 December 2018, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2017 and performed an impairment test for goodwill at 31 December 2018 using the following assumptions to determine the recoverable amount of the segment:

- Total production was estimated based on average sustainable production levels of 3.8 million metric tonnes of primary aluminium, of 8.1 million metric tonnes of alumina and of 16.5 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;
- Sales prices were based on the long-term aluminium price outlook derived from available industry and market sources at USD2,117 per tonne for primary aluminium in 2019, USD2,159 in 2020, USD2,193 in 2021, USD2,193 in 2022, USD2,216 in 2023. Operating costs were projected based on the historical performance adjusted for inflation;
- Nominal foreign currency exchange rates applied to convert operating costs of the Group denominated in RUB into USD were RUB66.8 for one USD in 2019, RUB68.3 in 2020, RUB66.7 in 2021, RUB65.1 in 2022, RUB65.0 in 2023. Inflation of 4.0% – 4.5% in RUB and 1.6% - 2.4% in USD was assumed in determining recoverable amounts;
- The pre-tax discount rate was estimated in nominal terms based on the weighted average cost of capital basis and was 15.9%;
- A terminal value was derived following the forecast period assuming a 1.7% annual growth rate.

Values assigned to key assumptions and estimates used to measure the units' recoverable amount was based on external sources of information and historic data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results were particularly sensitive to the following key assumptions:

- A 5% reduction in the projected aluminium price level would have resulted in a decrease in the recoverable amount by 22% but would not lead to an impairment;
- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 14% decrease in the recoverable amount but would not lead to an impairment;
- A 1% increase in the discount rate would have resulted in a 8% decrease in the recoverable amount but would not lead to an impairment.

Based on results of impairment testing of goodwill, management concluded that no impairment should be recorded in the consolidated financial statements as at 31 December 2018.

At 31 December 2017, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2016 and performed an impairment test for goodwill at 31 December 2017 using the following assumptions to determine the recoverable amount of the segment:

- Total production was estimated based on average sustainable production levels of 3.8 million metric tonnes of primary aluminium, of 8.0 million metric tonnes of alumina and of 12.3 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;

- Sales prices were based on the long-term aluminium price outlook derived from available industry and market sources at USD2,058 per tonne for primary aluminium in 2018, USD2,043 in 2019, USD2,035 in 2020, USD2,037 in 2021, USD2,053 in 2022. Operating costs were projected based on the historical performance adjusted for inflation;
- Nominal foreign currency exchange rates applied to convert operating costs of the Group denominated in RUB into USD were RUB62.3 for one USD in 2018, RUB61.4 in 2019, RUB62.2 in 2020, RUB60.5 in 2021, RUB59.5 in 2022. Inflation of 3.9% – 4.9% in RUB and 1.3% - 2.3% in USD was assumed in determining recoverable amounts;
- The pre-tax discount rate was estimated in nominal terms based on the weighted average cost of capital basis and was 13.1%;
- A terminal value was derived following the forecast period assuming a 1.7% annual growth rate.

Values assigned to key assumptions and estimates used to measure the units' recoverable amount was based on external sources of information and historic data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results were particularly sensitive to the following key assumptions:

- A 5% reduction in the projected aluminium price level would have resulted in a decrease in the recoverable amount by 26% but would not lead to an impairment;
- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 17% decrease in the recoverable amount but would not lead to an impairment;
- A 1% increase in the discount rate would have resulted in a 7% decrease in the recoverable amount but would not lead to an impairment.

Based on results of impairment testing of goodwill, management concluded that no impairment should be recorded in the consolidated financial statements as at 31 December 2017.

15 Interests in associates and joint ventures

Accounting policies

An associate is an entity in which the Group or Company has significant influence, but not control or joint control, over its management, including participation in the financial and operating policy decisions.

A joint venture is an arrangement whereby the Group or Company and other parties contractually agree to share control of the arrangement, and have rights to the net assets of the arrangement.

An investment in an associate or a joint venture is accounted for in the consolidated financial statements under the equity method, unless it is classified as held for sale (or included in a disposal group that is classified as held for sale). Under the equity method, the investment is initially recorded at cost, adjusted for any excess of the Group's share of the acquisition-date fair values of the investee's identifiable net assets over the cost of the investment (if any). Thereafter, the investment is adjusted for the post acquisition change in the Group's share of the investee's net assets and any impairment loss relating to the investment. Any acquisition-date excess over cost, the Group's share of the post-acquisition, post-tax results of the investees and any impairment losses for the year are recognised in the consolidated statement of income, whereas the Group's share of the post-acquisition post-tax items of the investees' other comprehensive income is recognised in the consolidated statement of other comprehensive income.

When the Group's share of losses exceeds its interest in the associate or the joint venture, the Group's interest is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the investee.

Unrealised profits and losses resulting from transactions between the Group and its associates and joint venture are eliminated to the extent of the group's interest in the investee, except where unrealised losses provide evidence of an impairment of the asset transferred, in which case they are recognised immediately in profit or loss.

In accordance with the Group's accounting policies, each investment in an associate or joint venture is evaluated every reporting period to determine whether there are any indications of impairment after application of the equity method of accounting. If any such indication exists, a formal estimate of recoverable amount is performed and an impairment loss recognised to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an investment in an associate or joint venture is measured at the higher of fair value less costs to sell and value in use.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to investments in associates or joint venture. In addition to the considerations described above the Group may also assess the estimated future cash flows expected to arise from dividends to be received from the investment, if such information is available and considered reliable.

Disclosures

	31 December	
	2018	2017
	USD million	USD million
Balance at the beginning of the year	4,448	4,147
Group's share of profits, impairment and reversal of impairment	955	620
Prepayment for shares	41	-
Dividends	(946)	(535)
Group's share of other comprehensive income of associates	10	(28)
Foreign currency translation	(810)	244
Balance at the end of the year	3,698	4,448
Goodwill included in interests in associates	2,163	2,609

The following list contains only the particulars of associates and joint ventures, all of which are corporate entities, which principally affected the results or assets of the Group.

Name of associate/ joint venture	Place of incorporation and operation	Particulars of issued and paid up capital	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 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

The summary of the consolidated financial statements of associates and joint ventures for the year ended 31 December 2017 is presented below:

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other joint ventures	
	Group share	100%	Group share	100%	Group share	100%	Group share	100%
Non-current assets	5,889	12,109	119	552	1,422	2,970	170	328
Current assets	1,259	4,526	29	153	100	200	107	301
Non-current liabilities	(2,698)	(9,625)	(76)	(207)	(960)	(1,920)	(40)	(81)
Current liabilities	(654)	(2,352)	(72)	(358)	(39)	(78)	(108)	(280)
Net assets	3,796	4,658	-	140	523	1,172	129	268

	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	2,545	9,146	134	670	273	546	859	2,377
Profit/(loss) from continuing operations	528	2,129	-	14	58	(17)	34	64
Other comprehensive income	188	223	-	9	25	51	(1)	8
Total comprehensive income	716	2,352	-	23	83	34	33	72

(a) PJSC MMC Norilsk Nickel

The Group's investment in Norilsk Nickel is accounted for using equity method and the carrying value as at 31 December 2018 and 31 December 2017 amounted USD3,101 million and USD3,796 million, respectively. The market value amounted USD8,286 million and USD8,294 million as at 31 December 2018 and 31 December 2017, respectively, and is determined by multiplying the quoted bid price per share on the Moscow Exchange on the year-end date by the number of shares held by the Group.

(b) Queensland Alumina Limited ("QAL")

The carrying value of the Group's investment in Queensland Alumina Limited as at both 31 December 2018 and 31 December 2017 amounted to USD nil million. At 31 December 2018 management has not identified any impairment reversal indicators relating to the Group's investment in QAL and as a result no detailed impairment testing was performed in relation to this investment.

(c) BEMO project

The carrying value of the Group's investment in BEMO project as at 31 December 2018 and 31 December 2017 amounted USD469 million and USD523 million, respectively.

For the purposes of impairment testing, the BEMO project was separated into two cash generating units – the Boguchansky Aluminium Smelter ("BoAZ") and the Boguchansky 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 2018 management has not identified any impairment indicators relating to the Group's investment in BoGES as well as any impairment reversal indicators relating to investments in BoAZ and as a result no detailed impairment testing was performed in relation to this investment.

At 31 December 2018, accumulated losses of USD639 million (2017: USD573 million) related to impairment charges at BoAZ have not been recognised because the Group's investment has already been fully written down to USD nil million.

Summary of the additional financial information of the Group's effective interest in BEMO project for the year ended 31 December 2018 and 31 December 2017 is presented below (all in USD million):

	<u>31 December 2018</u>	<u>31 December 2017</u>
	<u>USD million</u>	<u>USD million</u>
Cash and cash equivalents	51	21
Current financial liabilities	(12)	(11)
Non-current financial liabilities	(947)	(920)
Depreciation and amortisation	(19)	(18)
Interest income	2	1
Interest expense	(19)	(25)
Income tax expense	(11)	(4)

16 Inventories

Accounting policies

Inventories are measured at the lower of cost or net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

The cost of inventories is determined under the weighted average cost method, and includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. In the case of manufactured

inventories and work in progress, cost includes an appropriate share of production overheads based on normal operating capacity.

The production costs include mining and concentrating costs, smelting, treatment and refining costs, other cash costs and depreciation and amortisation of operating assets.

The Group recognises write-downs of inventories based on an assessment of the net realisable value of the inventories. A write-down is applied to the inventories where events or changes in circumstances indicate that the net realisable value is less than cost. The determination of net realisable value requires the use of judgement and estimates. Where the expectation is different from the original estimates, such difference will impact the carrying value of the inventories and the write-down of inventories charged to the statement of income in the periods in which such estimate has been changed.

Disclosures

	<u>31 December</u> <u>2018</u> <u>USD million</u>	<u>31 December</u> <u>2017</u> <u>USD million</u>
Raw materials and consumables	1,158	1,001
Work in progress	711	682
Finished goods and goods held for resale	1,245	898
	<u>3,114</u>	<u>2,581</u>
Provision for inventory obsolescence	(108)	(167)
	<u>3,006</u>	<u>2,414</u>

Inventories at 31 December 2018 and 31 December 2017 are stated at cost.

Inventory with a carrying value of USD367 million was pledged under existing secured bank loans at 31 December 2017, refer to note 19.

Inventory with a carrying value of USD314 million was pledged under existing trading contracts at 31 December 2017.

No inventory is pledged as security as at 31 December 2018.

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

	<u>Year ended 31 December</u>	
	<u>2018</u> <u>USD million</u>	<u>2017</u> <u>USD million</u>
Carrying amount of inventories sold	7,414	7,027
Reversal/(write-down) of inventories	20	(2)
	<u>7,434</u>	<u>7,025</u>

17 Non-derivative financial instruments

Accounting policies

Non-derivative financial instruments comprise investments in securities, trade and other receivables (excluding prepayments and tax assets), cash and cash equivalents, loans and borrowings and trade and other payables (excluding advances received and tax liabilities).

Non-derivative financial instruments except for trade and other receivables are recognised initially at fair value plus any directly attributable transaction costs. Trade and other receivables are recognised at transaction price.

A financial instrument is recognised when the Group becomes a party to the contractual provisions of the instrument. Financial assets are derecognised if the Group's contractual rights to the cash flows from the financial assets expire or if the Group transfers the financial asset to another party without retaining control or substantially all risks and rewards of the asset. Financial liabilities are derecognised if the Group's obligations specified in the contract expire or are discharged or cancelled.

The effect of initially applying IFRS 9 on the Group's financial assets and liabilities and key accounting policies applied are described in Note 3. Due to the transition method chosen in applying IFRS 9, comparative information has not been restated to reflect the new requirements.

Disclosures

(a) Trade and other receivables

	31 December	31 December
	2018	2017
	USD million	USD million
Trade receivables from third parties	384	358
Impairment loss on trade receivables	(33)	(16)
Net trade receivables from third parties	351	342
Trade receivables from related parties, including:	87	54
<i>Related parties – companies capable of exerting significant influence</i>	76	31
<i>Impairment loss on trade receivables from related parties - companies capable of exerting significant influence</i>	(6)	-
<i>Net trade receivables to related parties - companies capable of exerting significant influence</i>	70	31
<i>Related parties – companies under common control</i>	13	11
<i>Related parties – associates and joint ventures</i>	4	12
VAT recoverable	305	333
Impairment loss on VAT recoverable	(33)	(28)
Net VAT recoverable	272	305
Advances paid to third parties	185	98
Impairment loss on advances paid	(1)	(1)
Net advances paid to third parties	184	97
Advances paid to related parties, including:	51	46
<i>Related parties – companies capable of exerting significant influence</i>	1	-
<i>Related parties – companies under common control</i>	1	6
<i>Related parties – associates and joint ventures</i>	49	40
Prepaid expenses	4	3
Prepaid income tax	22	32
Prepaid other taxes	22	28
Other receivables from third parties	112	83
Impairment loss on other receivables	(10)	(8)
Net other receivables from third parties	102	75
Other receivables from related parties, including:	7	2
<i>Related parties – companies under common control</i>	10	4
<i>Impairment loss on other receivables from related parties - companies under common control</i>	(3)	(3)
<i>Net other receivables to related parties - companies under common control</i>	7	1
<i>Related parties – associates and joint ventures</i>	-	1
	1,102	984

All of the trade and other receivables are expected to be settled within one year or are repayable on demand.

(i) Ageing analysis

Included in trade and other receivables are trade receivables (net of allowance for doubtful debts) with the following ageing analysis as of the reporting dates:

	31 December	31 December
	2018	2017
	USD million	USD million
Current (not past due)	358	319
1–30 days past due	62	61
31–60 days past due	6	4
61–90 days past due	2	2
More than 90 days past due	10	10
Amounts past due	80	77
	438	396

Ageing analysis is performed based on number of days receivable is overdue. Trade receivables are on average due within 60 days from the date of billing. The receivables that are neither past due nor impaired (i.e. current) relate to a wide range of customers for whom there was no recent history of default.

Receivables that were past due but not impaired relate to a number of customers that have a good track record with the Group. Based on past experience, management believes that no impairment allowance is necessary in respect of these balances as there has not been a significant change in credit quality and the balances are still considered fully recoverable. The Group does not hold any collateral over these balances. Further details of the Group's credit policy are set out in note 22(e).

(ii) Loss allowance over trade receivables

The effect of initially applying IFRS 9 on the Group's financial assets in respect of loss allowances and key accounting policies applied are described in Note 3. Due to the transition method chosen in applying IFRS 9, comparative information has not been restated to reflect the new requirements.

Loss allowance in respect of trade receivables are recorded using an allowance account.

The movement in the allowance for doubtful debts during the year, including both specific and collective loss components, is as follows:

	Year ended 31 December	
	2018	2017
	USD million	USD million
Balance at the beginning of the year	(16)	(14)
Impairment loss	(23)	(2)
Balance at the end of the year	(39)	(16)

As at 31 December 2017, the Group's trade receivables of USD16 million were individually determined to be impaired.

The Group does not hold any collateral over these balances.

(b) Trade and other payables

	31 December	31 December
	2018	2017
	USD million	USD million
Accounts payable to third parties	520	605
Accounts payable to related parties, including:	64	96
<i>Related parties – companies capable of exerting significant influence</i>	5	14
<i>Related parties – companies under common control</i>	35	53
<i>Related parties – associates and joint ventures</i>	24	29
Advances received	32	390
Advances received from related parties, including:	259	308
<i>Related parties – companies capable of exerting significant influence</i>	259	288
<i>Related parties – associates and joint ventures</i>	-	20
Other payables and accrued liabilities	176	174
Current tax liabilities	127	16
Other taxes payable	96	69
	1,274	1,658

All of the trade and other payables are expected to be settled or recognised as income within one year or are repayable on demand.

Included in trade and other payables are trade payables with the following ageing analysis as at the reporting date. Ageing analysis is performed based on number of days payable is overdue.

	31 December	31 December
	2018	2017
	USD million	USD million
Current	502	639
Past due 0-90 days	50	51
Past due 91-120 days	8	1
Past due over 120 days	24	10
Amounts past due	82	62
	584	701

(c) **Cash and cash equivalents**

	31 December	31 December
	2018	2017
	USD million	USD million
Bank balances, USD	50	559
Bank balances, RUB	238	31
Bank balances, EUR	290	90
Bank balances, other currencies	27	11
Cash in transit	16	30
Short-term bank deposits	169	93
Securities	11	-
Cash and cash equivalents in the consolidated statement of cash flows	801	814
Restricted cash	43	17
	844	831

As at 31 December 2018 and 31 December 2017 included in cash and cash equivalents was restricted cash of USD43 million and USD17 million, respectively, pledged under a Swiss Law Pledged Agreement with BNP Paribas (Suisse) SA and Allied Irish Bank.

18 Equity

(a) **Share capital**

	31 December 2018		31 December 2017	
	USD	Number of shares	USD	Number of shares
Ordinary shares at the end of the year, authorised	200 million	20 billion	200 million	20 billion
Ordinary shares at 1 January	151,930,148	15,193,014,862	151,930,148	15,193,014,862
Ordinary shares at the end of the year of USD0.01 each, issued and paid	151,930,148	15,193,014,862	151,930,148	15,193,014,862

(b) **Other reserves**

The acquisition of RUSAL Limited by the Company has been accounted for as a non-substantive acquisition. The consolidated share capital and share premium represent only the share capital and share premium of the Company and the share capital and other paid in capital of RUSAL Limited prior to the acquisition has been included in other reserves.

In addition, other reserves include the cumulative unrealised actuarial gains and losses on the Group's defined post retirement benefit plans, the effective portion of the accumulative net change in fair value of cash flow hedges and the Group's share of other comprehensive income of associates.

(c) **Distributions**

In accordance with the Companies (Jersey) Law 1991 (the "Law"), the Company may make distributions at any time in such amounts as are determined by the Company out of the assets of the Company other than the capital redemption reserves and nominal capital accounts, provided that the directors of the Company make a solvency statement in accordance with that Law of Jersey at the time the distributions are proposed. Dividend pay-outs are restricted in accordance with the credit facilities.

(d) Currency translation reserve

The currency translation reserve comprises all foreign exchange differences arising from the translation of the consolidated financial statements of foreign operations and equity accounted investees. The reserve is dealt with in accordance with the accounting policies set out in note 3(f).

(e) Movement in components of equity within the Company

USD million	Share capital	Reserves	Total
Balance at 1 January 2017	152	9,529	9,681
Profit for the year	-	3,787	3,787
Dividends	-	(299)	(299)
Balance at 31 December 2017	152	13,017	13,169
Balance at 1 January 2018	152	13,017	13,169
Profit for the year	-	1,132	1,132
Other comprehensive income	-	3	3
Balance at 31 December 2018	152	14,152	14,304

19 Loans and borrowings

This note provides information about the contractual terms of the Group's loans and borrowings. For more information about the Group's exposure to interest rate and foreign currency risk refer to notes 22(c)(ii) and 22(c)(iii), respectively.

	31 December 2018	31 December 2017
	USD million	USD million
<i>Non-current liabilities</i>		
Secured bank loans	5,566	6,200
Unsecured bank loans	226	145
Bonds	1,580	1,399
	7,372	7,744
<i>Current liabilities</i>		
Secured bank loans	476	662
Unsecured bank loans	12	3
Bonds	377	22
Accrued interest	49	48
	914	735

(a) Loans and borrowings

Terms and debt repayment schedule as at 31 December 2018

	TOTAL	2019	2020	2021	2022	2023	Later years
	USD	USD	USD	USD	USD	USD	USD
	million	million	million	million	million	million	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 both as at 31 December 2018 and 31 December 2017:

- 25% +1 share of Norilsk Nickel.

The secured bank loans are also secured by the following:

- property, plant and equipment with a carrying amount of USD3 million (31 December 2017: USD3 million);
- inventory with a carrying value of USD nil (31 December 2017: USD367 million).

As at 31 December 2018 and 31 December 2017 rights, including all monies and claims, arising out of certain sales contracts between the Group's trading subsidiaries and its ultimate customers, were assigned to secure the syndicated Pre-Export Finance Term Facility Agreement (PXF) dated 24 May 2017.

The nominal value of the Group's loans and borrowings was USD6,332 million at 31 December 2018 (31 December 2017: USD7,072 million).

In January 2018 the Company entered into a bilateral facility agreement with Nordea Bank AB with the following key terms: principal amount of USD200 million, tenor of 3 years, interest rate of 1M

Libor + 2.4% per annum with a bullet repayment. The proceeds were applied for partial prepayment of Group's existing debt.

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

As at the date of this report the Group through its subsidiaries has outstanding REPO loan backed by Norilsk Nickel shares in number of 1,413,379, in the amount equal to USD 194 million and maturing in June 2019.

During 2018 the Group made a principal repayment in total amounts of USD579 million, EUR55 million (USD68 million) and RUR18 million (USD3 million) under credit facilities with Gazprombank, VTB Capital and Credit Bank of Moscow.

Fair value of the Group's liabilities measured at amortised cost approximates their fair values as at 31 December 2018.

Terms and debt repayment schedule as at 31 December 2017

	TOTAL	2018	2019	2020	2021	2022	Later years
	USD	USD	USD	USD	USD	USD	USD
	million	million	million	million	million	million	million
Secured bank loans							
Variable							
USD – 3M Libor + 3.75%	4,161	-	-	-	670	792	2,699
USD – 3M Libor + 2.5%	1,678	-	278	562	562	276	-
USD – 3M Libor + 3.5%*	385	82	81	81	81	60	-
EUR – 3M Libor + 3.5%*	66	13	14	14	14	11	-
USD – 3M Libor + 4.8%	95	95	-	-	-	-	-
USD – 2.15% + cost of funds	100	100	-	-	-	-	-
USD – 2.25% + cost of funds	25	25	-	-	-	-	-
EUR – 2.25% + cost of funds	14	14	-	-	-	-	-
USD – 2.05% + cost of funds	9	9	-	-	-	-	-
EUR – 2.05% + cost of funds	24	24	-	-	-	-	-
USD – 1M Libor + 2.2%	117	117	-	-	-	-	-
EUR – 1M Libor + 2.2%	28	28	-	-	-	-	-
Fixed							
RUB – 5%	9	4	5	-	-	-	-
USD – 4%	31	31	-	-	-	-	-
EUR – 2.6%	120	120	-	-	-	-	-
	6,862	662	378	657	1,327	1,139	2,699
Unsecured bank loans							
Variable							
USD – 3M Libor + 3.0%*	100	-	100	-	-	-	-
Fixed							
RUB 8.75%	43	3	13	13	14	-	-
RUB 5%	5	-	1	2	2	-	-
Total	7,010	665	492	672	1,343	1,139	2,699
Accrued interest	48	48	-	-	-	-	-
Total	7,058	713	492	672	1,343	1,139	2,699

The secured bank loans are secured by pledges of shares of the following Group companies as at 31 December 2017:

- 11% of RUSAL Ural
- 25% + 1 shares of RUSAL Sayanogorsk
- 25% + 1 shares of RUSAL Bratsk
- 100% of Gershvin Investments Corp. Limited
- 100% of Aktivium Holding B.V.
- 50% interest in RUSAL Taishet

On 17 March 2017 the Group executed amendments to the existing credit facilities with Sberbank. Under USD credit agreements the interest rate decreased from 3M Libor + 5.75% p.a. (incl. 1.05% PIK) to 3M Libor + 4.75% p.a. (subject to min 3M Libor at the level of 1%), effective from 29 December 2016. Under RUB credit facility outstanding exposure was converted into USD (at the rate of Central Bank of Russia as of the date of conversion). The interest rate of 3M Libor + 4.75% p.a. (subject to min 3M Libor at the level of 1%), is effective from 18 March 2017. On 31 August 2017 the Group has agreed with Sberbank to extend final maturity under loans secured by Norilsk Nickel shares to 2024, decrease interest margin from 4.75% to 3.75% and adjust covenants mostly in line with PXF.

On 28 March 2017 the Group through its subsidiaries entered into the REPO transaction backed by bonds issued by RUSAL Bratsk – in number of 7,527,646 series 08 bonds. As a result of the transactions the Group raised funding in the amount of EUR100 million (USD107 million) with fifteen months maturity at an effective rate of 2.6% p.a.

On 24 May 2017 the Group entered into a new syndicated Pre-Export Finance Term Facility Agreement (PXF) in the amount of USD1.7 billion, interest rate 3M LIBOR+3% per annum, maturity 5 years (repayment starting in 2 years). The proceeds of the facility were used for the purpose of refinancing the Group's current debt. In December 2017, the margin was reduced to 2.5 per cent per annum.

On 22 August 2017 the Group executed amendments to Gazprombank facilities, reducing interest margin from 4.5% to 3.5%, extending final maturity and adjusting covenants in line with PXF. As at the date of these financial statements Gazprombank facilities were repaid in full out of proceeds of the third Eurobond placement in February 2018.

During 2017 the Group made principal repayments in the total amounts of USD3,211 million and EUR79 million (USD104 million) under the Combined PXF Facility, credit facilities with Sberbank, Gazprombank, VTB Capital, Sovcombank and Credit Bank of Moscow.

(b) Bonds

As at 31 December 2018 6,877,652 series 08 bonds and 4,221,951 series BO-01 bonds were outstanding (traded in the market).

The closing market price at 31 December 2018 for series 08 bonds was RUB1,008 per bond and RUB1,013 per bond for series BO-01 bonds.

As at 31 December 2018 three tranches of Eurobonds and the first and the second tranches of Panda Bonds were outstanding.

In February 2018 the Group completed its third offering of Eurobonds with the following key terms: principal amount of USD500 million, tenor of 5 years, coupon rate of 4.85% per annum. The bonds proceeds were applied for partial prepayment of Group's existing debt.

In February 2018 the Group has fully redeemed 1,289,314 series 07 bonds for USD23 million.

20 Provisions

Accounting policies

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as finance costs.

Disclosures

USD million	Pension liabilities	Site restoration	Provisions for legal claims	Tax provisions	Total
Balance at 1 January 2017	57	381	-	25	463
Provisions made during the year	7	6	3	-	16
Provisions reversed during the year	-	(41)	-	(10)	(51)
Actuarial loss	7	-	-	-	7
Provisions utilised during the year	(4)	-	-	(13)	(17)
Foreign currency translation	2	36	-	(2)	36
Balance at 31 December 2017	69	382	3	-	454
<i>Non-current</i>	64	363	-	-	427
<i>Current</i>	5	19	3	-	27
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
<i>Non-current</i>	50	316	-	-	366
<i>Current</i>	4	32	3	20	59

(a) Pension liabilities

Group subsidiaries in the Russian Federation

The Group voluntarily provides long-term and post-employment benefits to its former and existing employees including death-in-service, jubilee, lump sum upon retirement, material support for pensioners and death-in-pension benefits. Furthermore, the Group provides regular social support payments to some of its veterans of World War II.

The above employee benefit programs are of a defined benefit nature. The Group finances these programs on a pay-as-you-go basis, so plan assets are equal to zero.

Group subsidiaries in Ukraine

Due to legal requirements, the Ukrainian subsidiaries are responsible for partial financing of the state hardship pensions for those of its employees who worked, or still work, under severe and hazardous labour conditions (hardship early retirement pensions). These pensions are paid until the recipient reaches the age of entitlement to the State old age pension (55-60 years for female (dependent on year of birth) and 60 years for male employees). In Ukraine, the Group also voluntarily provides long-term and post-employment benefits to its employees including death-in-service, lump sum benefits upon retirement and death-in-pension benefits.

The above employee benefit programs are of a defined benefit nature. The Group finances these programs on a pay-as-you-go basis, so plan assets are equal to zero.

Group subsidiaries outside the Russian Federation and Ukraine

At its Guinean and Nigerian entities the Group provides a death-in-service benefit and lump-sum benefits upon disability and old-age retirement.

At its Guyana subsidiary, the Group provides a death-in-service benefit.

At its Italian subsidiary (Eurallumina) the Group only provides lump sum benefits upon retirement, which relate to service up to 1 January 2007.

In Sweden (Kubikenborg Aluminium AB), the Group provides defined benefit lifelong and temporary pension benefits. The lifelong benefits are dependent on the past service and average salary level of the employee, with an accrual rate that depends on the salary bracket the employee is in. The liability relates only to benefits accrued before 1 January 2004.

The number of employees in all jurisdictions eligible for the plans as at 31 December 2018 and 2017 was 58,089 and 57,423, respectively. The number of pensioners in all jurisdictions as at 31 December 2018 and 2017 was 44,966 and 45,044, respectively.

The Group expects to pay under the defined benefit retirement plans an amount of USD4 million during the 12 month period beginning on 1 January 2019.

Actuarial valuation of pension liabilities

The actuarial valuation of the Group and the portion of the Group funds specifically designated for the Group's employees were completed by a qualified actuary, Robert van Leeuwen AAG, as at 31 December 2018, using the projected unit credit method as stipulated by IAS 19.

The key actuarial assumptions (weighted average, weighted by DBO) are as follows:

	31 December 2018	31 December 2017
	% per annum	% per annum
Discount rate	7.9	7.2
Expected return on plan assets	N/A	N/A
Future salary increases	7.8	8.3
Future pension increases	4.6	4.6
Staff turnover	4.7	4.0
Mortality	USSR population table for 1985, Ukrainian population table for 2000	USSR population table for 1985, Ukrainian population table for 2000
Disability	70% Munich Re for Russia; 40% of death probability for Ukraine	70% Munich Re for Russia; 40% of death probability for Ukraine

As at 31 December 2018 and 31 December 2017 the Group's obligations were fully uncovered as the Group has only wholly unfunded plans.

(b) Site restoration

The mining, refining and smelting activities of the Group can give rise to obligations for site restoration and rehabilitation. Restoration and rehabilitation works can include facility decommissioning and dismantling, removal or treatment of waste materials, land rehabilitation, and site restoration. The extent of work required and the associated costs are dependent on the requirements of law and the interpretations of the relevant authorities.

The Group provides for site restoration obligations when there is a specific legal or constructive obligation for mine reclamation, landfill closure (primarily comprising red mud basin disposal sites) or specific lease restoration requirements. The Group does not record any obligations with respect to decommissioning of its refining or smelting facilities and restoration and rehabilitation of the surrounding areas unless there is a specific plan to discontinue operations at a facility. This is because any significant costs in connection with decommissioning of refining or smelting facilities and restoration and rehabilitation of the surrounding areas would be incurred no earlier than when the facility is closed and the facilities are currently expected to operate over a term in excess of 50-100 years due to the perpetual nature of the refineries and smelters and continuous maintenance and upgrade programs resulting in the fair values of any such liabilities being negligible.

Costs included in the provision encompass obligated and reasonably estimable restoration and rehabilitation activities expected to occur progressively over the life of the operation and at the time of closure in connection with disturbances at the reporting date. Routine operating costs that may impact the ultimate restoration and rehabilitation activities, such as waste material handling conducted as an integral part of a mining or production process, are not included in the provision. Costs arising from unforeseen circumstances, such as the contamination caused by unplanned discharges, are recognised as an expense and liability when the event gives rise to an obligation which is probable and capable of reliable estimation.

Restoration and rehabilitation provisions are measured at the expected value of future cash flows, discounted to their present value and determined according to the probability of alternative estimates of cash flows occurring for each operation. Discount rates used are specific to the country in which the operation is located. Significant judgements and estimates are involved in forming expectations of future activities and the amount and timing of the associated cash flows. Those expectations are formed based on existing environmental and regulatory requirements.

When provisions for restoration and rehabilitation are initially recognised, the corresponding cost is capitalised as an asset, representing part of the cost of acquiring the future economic benefits of the operation. The capitalised cost of restoration and rehabilitation activities is amortised over the estimated economic life of the operation on a units of production or straight-line basis. The value of the provision is progressively increased over time as the effect of discounting unwinds, creating an expense recognised as part of finance expenses.

Restoration and rehabilitation provisions are also adjusted for changes in estimates. Those adjustments are accounted for as a change in the corresponding capitalised cost, except where a reduction in the provision is greater than the unamortised capitalised cost, in which case the capitalised cost is reduced to nil and the remaining adjustment is recognised in the statement of income. Changes to the capitalised cost result in an adjustment to future amortisation charges. Adjustments to the estimated amount and timing of future restoration and rehabilitation cash flows are a normal occurrence in light of the significant judgements and estimates involved. Factors influencing those changes include revisions to estimated reserves, resources and lives of operations; developments in technology; regulatory requirements and environmental management strategies; changes in the estimated costs of anticipated activities, including the effects of inflation and movements in foreign exchange rates; and movements in general interest rates affecting the discount rate applied.

The site restoration provision recorded in these consolidated financial statements relates primarily to mine reclamation and red mud basin disposal sites at alumina refineries and is estimated by discounting the risk-adjusted expected expenditure to its present value based on the following key assumptions:

	31 December 2018	31 December 2017
Timing of inflated cash outflows	2019: USD31 million 2020-2024: USD203 million 2025-2034: USD95 million after 2034: USD168 million	2018: USD19 million 2019-2023: USD225 million 2024-2033: USD105 million after 2033: USD182 million
Risk free discount rate after adjusting for inflation ^(a)	3.10%	2.29%

(a) the risk free rate for the year 2017-2018 represents an effective rate, which comprises rates differentiated by years of obligation settlement and by currencies in which the provisions were calculated

At each reporting date the Directors have assessed the provisions for site restoration and environmental matters and concluded that the provisions and disclosures are adequate.

(c) Provisions for legal claims

In the normal course of business the Group may be involved in legal proceedings. Where management considers that it is more likely than not that proceedings will result in the Group compensating third parties a provision is recognised for the best estimate of the amount expected to be paid. Where management considers that it is more likely than not that proceedings will not result in the Group compensating third parties or where, in rare circumstances, it is not considered possible to provide a sufficiently reliable estimate of the amount expected to be paid, no provision is made for any potential liability under the litigation but the circumstances and uncertainties involved are disclosed as contingent liabilities. The assessment of the likely outcome of legal proceedings and the amount of any potential liability involves significant judgement. As law and regulations in many of the countries in which the Group operates are continuing to evolve, particularly in the areas of taxation, sub-soil rights and protection of the environment, uncertainties regarding litigation and regulation are greater than those typically found in countries with more developed legal and regulatory frameworks.

The Group's subsidiaries are subject to a variety of lawsuits and claims in the ordinary course of its business. As at 31 December 2018, there were several claims filed against the Group's subsidiaries contesting breaches of contract terms and non-payment of existing obligations. Management has reviewed the circumstances and estimated that the amount of probable outflow related to these claims should not exceed USD3 million (31 December 2017: USD 3 million). The amount of claims, where management assesses outflow as possible approximates USD31 million (31 December 2017: USD36 million).

At each reporting date the Directors have assessed the provisions for litigation and claims and concluded that the provisions and disclosures are adequate.

(d) Tax provisions

The Group's accounting policy for taxation requires management's judgement in assessing whether deferred tax assets and certain deferred tax liabilities are recognised in the statement of financial position. Deferred tax assets, including those arising from carried forward tax losses, capital losses and temporary differences, are recognised only where it is considered more likely than not that they will be recovered, which is dependent on the generation of sufficient future taxable profits. Deferred tax liabilities arising from temporary differences in investments, caused principally by retained

earnings held in foreign tax jurisdictions, are recognised unless repatriation of retained earnings can be controlled and is not expected to occur in the foreseeable future.

Assumptions about the generation of future taxable profits and repatriation of retained earnings depend on management's estimates of future cash flows. These depend on estimates of future production and sales volumes, commodity prices, reserves, operating costs, restoration and rehabilitation costs, capital expenditure, dividends and other capital management transactions. Assumptions are also required about the application of income tax legislation. These estimates and assumptions are subject to risk and uncertainty, hence there is a possibility that changes in circumstances will alter expectations, which may impact the amount of deferred tax assets and deferred tax liabilities recognised on the statement of financial position and the amount of other tax losses and temporary differences not yet recognised. In such circumstances, some or all of the carrying amount of recognised deferred tax assets and liabilities may require adjustment, resulting in a corresponding credit or charge to the statement of income.

The Group generally provides for current tax based on positions taken (or expected to be taken) in its tax returns. Where it is more likely than not that upon examination by the tax authorities of the positions taken by the Group additional tax will be payable, the Group provides for its best estimate of the amount expected to be paid (including any interest and/or penalties) as part of the tax charge.

At each reporting date the Directors have assessed the provisions for taxation and concluded that the provisions and disclosures are adequate.

21 Derivative financial assets/liabilities

Accounting policies

The Group enters, from time to time, into various derivative financial instruments to manage its exposure to commodity price risk, foreign currency risk and interest rate risk.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative and the combined instrument is not measured at fair value through profit or loss.

On initial designation of the derivative as a hedging instrument, the Group formally documents the relationship between the hedging instrument and hedged item, including the risk management objectives and strategy in undertaking the hedge transaction and the hedged risk, together with the methods that will be used to assess the effectiveness of the hedging relationship. The Group makes an assessment, both at the inception of the hedge relationship as well as on an ongoing basis, of whether the hedging instruments are expected to be highly effective in offsetting the changes in the fair value or cash flows of the respective hedged items attributable to the hedged risk, and whether the actual results of each hedge are within a range of 80% - 125%. For a cash flow hedge of a forecast transaction, the transaction should be highly probable to occur and should present an exposure to variation in cash flows that ultimately could affect reported profit or loss.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in the statement of income when incurred. Subsequent to initial recognition, derivatives are measured at fair value.

The measurement of fair value of derivative financial instruments, including embedded derivatives, is based on quoted market prices. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. Changes in the fair value therein are accounted for as described below.

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognised asset or liability or a highly probable forecast transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognised in the statement of comprehensive income and presented in the hedging reserve in equity. Any ineffective portion of changes in the fair value of a derivative is recognised in the statement of income.

When the hedged item is a non-financial asset, the amount accumulated in equity is included in the carrying amount of the asset when the asset is recognised. In other cases, the amount accumulated in equity is reclassified to the statement of income in the same period that the hedged item affects profit or loss. If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated or exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. If the forecast transaction is no longer expected to occur, then the balance in equity is reclassified to the statement of income.

Changes in the fair value of separated embedded derivatives and derivative financial instruments not designated for hedge accounting are recognised immediately in the statement of income.

Disclosures

	31 December 2018		31 December 2017	
	USD million		USD million	
	Derivative assets	Derivative liabilities	Derivative assets	Derivative liabilities
Petroleum coke supply contracts and other raw materials	42	31	36	82
Forward contracts for aluminium and other instruments	-	-	27	31
Total	42	31	63	113

Derivative financial instruments are recorded at their fair value at each reporting date. Fair value is estimated in accordance with Level 3 of the fair value hierarchy based on management estimates and consensus economic forecasts of relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. The Group's policy is to recognise transfers between levels of fair value hierarchy as at the date of the event or change in circumstances that caused the transfer. The following significant assumptions were used in estimating derivative instruments:

	2019	2020	2021	2022	2023	2024	2025
LME Al Cash, USD per tonne	1,871	1,954	2,024	2,093	2,149	2,196	2,244
Platt's FOB Brent, USD per barrel	54	56	57	58	-	-	-

The movement in the balance of Level 3 fair value measurements of derivatives is as follows:

	31 December	
	2018	2017
	USD million	USD million
Balance at the beginning of the year	(50)	32
Unrealised changes in fair value recognised in statement of income (finance expense) during the period	171	(287)
Realised portion during the year	(110)	205
Balance at the end of the year	11	(50)

During the year 2018 there have been no changes in valuation techniques used to calculate the derivative financial instruments compared to prior year.

Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results for the derivative instruments are not particularly sensitive to any factors other than the assumptions disclosed above.

Petroleum coke supply contracts and other raw materials

In May and September 2011, the Group entered into long-term petroleum coke supply contracts where the price of coke is determined with reference to the LME aluminium price and the Brent oil price. The strike price for aluminium is set at USD2,403.45 per tonne and USD1,735.03 per tonne, respectively, while the strike price for oil is set at USD61.10 per barrel and USD47.7 per barrel, respectively.

In May 2014, the Group entered into long-term petroleum coke supply contract where the price of coke is determined with reference to the LME aluminium price and average monthly aluminium quotations, namely of Aluminum MW US Transaction premium, MB Aluminium Premium Rotterdam Low - High» and Aluminum CIF Japan premium. The strike price for aluminium is set at USD1,809.65 per tonne while the strike aluminium premium quotations for US, Europe and Japan are set at USD403.96 per tonne, USD313.30 per tonne and USD366.00 per tonne, respectively.

In November 2015, the Group entered into long-term pitch supply contract where the price of pitch is determined with reference to the LME aluminium price. The strike price for aluminium is set at USD1,508 per tonne.

22 Financial risk management and fair values

(a) Fair values

Management believes that the fair values of short-term financial assets and liabilities approximate their carrying amounts.

The methods used to estimate the fair values of the financial instruments are as follows:

Trade and other receivables, cash and cash equivalents, current loans and borrowings and trade and other payables: the carrying amounts approximate fair value because of the short maturity period of the instruments.

Long-term loans and borrowings, other non-current liabilities: the fair values of other non-current liabilities are based on the present value of the anticipated cash flows and approximate carrying value, other than Eurobonds and RUSAL Bratsk bonds issued.

Derivatives: the fair value of derivative financial instruments, including embedded derivatives, is based on quoted market prices. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. Option-based derivatives are valued using Black-Scholes models and Monte-Carlo simulations. The derivative financial instruments are recorded at their fair value at each reporting date.

The following table presents the fair value of Group's financial instruments measured at the end of the reporting period on a recurring basis, categorised into the three-level fair value hierarchy as defined by IFRS 13, *Fair value measurement*. The level into which a fair value measurement is classified is determined with reference to the observability and significance of the inputs used in the valuation technique as follows:

- Level 1 valuations: Fair value measured using only Level 1 inputs i.e. unadjusted quoted prices in active markets for identical assets or liabilities at the measurement date

- Level 2 valuations: Fair value measured using Level 2 inputs i.e. observable inputs which fail to meet Level 1, and not using significant unobservable inputs. Unobservable inputs are inputs for which market data are not available
- Level 3 valuations: Fair value measured using significant unobservable inputs.

The Group as at 31 December 2018

Note	Carrying amount					Fair value				
	Derivatives	Fair value - hedging instrument	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	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.

The Group as at 31 December 2017

Note	Carrying amount					Fair value				
	Derivatives	Fair value - hedging instrument	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	USD million	
Financial assets 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	27	-	-	-	27	-	-	27	27
		63	-	-	-	63	-	-	63	63
Financial assets not measured at fair value*										
Trade and other receivables	17	-	-	778	-	778	-	778	-	778
Short-term investments		-	-	21	-	21	-	21	-	21
Cash and cash equivalents	17	-	-	831	-	831	-	831	-	831
		-	-	1,630	-	1,630	-	1,630	-	1,630
Financial liabilities measured at fair value										
Petroleum coke supply contracts and other raw materials	21	(82)	-	-	-	(82)	-	-	(82)	(82)
Forward contracts for aluminium and other instruments	21	(31)	-	-	-	(31)	-	-	(31)	(31)
		(113)	-	-	-	(113)	-	-	(113)	(113)
Financial liabilities not measured at fair value*										
Secured bank loans and company loans	19	-	-	-	(6,910)	(6,910)	-	(7,038)	-	(7,038)
Unsecured bank loans	19	-	-	-	(148)	(148)	-	(150)	-	(150)
Unsecured bond issue	19	-	-	-	(1,421)	(1,421)	(1,231)	(233)	-	(1,464)
Trade and other payables	17	-	-	-	(944)	(944)	-	(944)	-	(944)
		-	-	-	(9,423)	(9,423)	(1,231)	(8,365)	-	(9,596)

* 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 2018 and 2017, the Group has entered into certain long term electricity contracts and other commodity derivatives contracts in order to manage its exposure of commodity price risks. Details of the contracts are disclosed in notes 21 and 25(c).

(ii) Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates (refer to note 19). The Group's policy is to manage its interest costs by monitoring changes in interest rates with respect to its borrowings.

The following table details the interest rate profile of the Group's borrowings at the reporting date.

	31 December 2018		31 December 2017	
	Effective interest rate %	USD million	Effective interest rate %	USD million
Fixed rate loans and borrowings				
Loans and borrowings	4.85%-12.85%	3,026	2.60%-12.85%	1,629
		3,026		1,629
Variable rate loans and borrowings				
Loans and borrowings	4.91%-6.72%	5,211	1.55%-7.04%	6,802
		5,211		6,802
		8,237		8,431

The following table demonstrates the sensitivity to cash flows from interest rate risk arising from floating rate non-derivative instruments held by the Group at the reporting date in respect of a reasonably possible change in interest rates, with all other variables held constant. The impact on the Group's profit before taxation and equity and retained profits/accumulated losses is estimated as an annualised input on interest expense or income of such a change in interest rates. The analysis has been performed on the same basis for all years presented.

	Increase/decrease in basis points	Effect on profit before taxation for the year	Effect on equity for the year, excluding tax effect
		USD million	USD million
As at 31 December 2018			
Basis percentage points	+100	(52)	(52)
Basis percentage points	-100	52	52
As at 31 December 2017			
Basis percentage points	+100	(68)	(68)
Basis percentage points	-100	68	68

(iii) Foreign currency risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in a currency other than the respective functional currencies of group entities, primarily USD but also the Russian Rouble, Ukrainian Hryvna and Euros. The currencies in which these transactions primarily are denominated are RUB, USD and EUR.

Borrowings are primarily denominated in currencies that match the cash flows generated by the underlying operations of the Group, primarily USD but also RUB and EUR. This provides an economic hedge.

In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by 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	
	2018	2017	2018	2017	2018	2017	2018	2017
	USD	USD	USD	USD	USD	USD	USD	USD
	million	million	million	million	million	million	million	million
As at 31 December								
Non-current assets	-	-	3	3	1	1	-	-
Trade and other receivables	1	1	640	429	91	91	28	26
Cash and cash equivalents	-	1	415	68	305	106	42	19
Derivative financial assets	-	-	42	36	-	-	-	-
Loans and borrowings	-	-	(1,030)	(57)	-	(251)	-	-
Provisions	-	-	(102)	(100)	(26)	(41)	(10)	(11)
Derivative financial liabilities	-	-	(11)	(33)	-	-	-	-
Non-current liabilities	-	-	-	(9)	(6)	(8)	-	-
Income taxation	-	-	(15)	(2)	-	-	(11)	(7)
Short-term bonds	-	-	(161)	(22)	-	-	(216)	-
Trade and other payables	-	(3)	(393)	(381)	(61)	(63)	(54)	(50)
Net exposure arising from recognised assets and liabilities	1	(1)	(612)	(68)	304	(165)	(221)	(23)

Foreign currency sensitivity analysis

The following tables indicate the instantaneous change in the Group's profit before taxation (and accumulated losses) and other comprehensive income that could arise if foreign exchange rates to which the Group has significant exposure at the reporting date had changed at that date, assuming all other risk variables remained constant.

	Year ended 31 December 2018		
		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)

	Year ended 31 December 2017		
		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%	(10)	(10)
Depreciation of USD vs. EUR	5%	(8)	(8)
Depreciation of USD vs. other currencies	5%	(1)	(1)

Results of the analysis as presented in the above tables represent an aggregation of the instantaneous effects on the Group entities' profit before taxation and other comprehensive income measured in the respective functional currencies, translated into USD at the exchange rates ruling at the reporting date for presentation purposes.

The sensitivity analysis assumes that the change in foreign exchange rates had been applied to re-measure those financial instruments held by the Group which expose the Group to foreign currency risk at the reporting date. The analysis excludes differences that would result from the translation of other financial statements of foreign operations into the Group's presentation currency. The analysis has been performed on the same basis for all years presented.

(d) Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The group policy is to maintain sufficient cash and cash equivalents or have available funding through an adequate amount of committed credit facilities to meet its operating and financial commitments.

The following tables show the remaining contractual maturities at the reporting date of the Group's non-derivative financial liabilities, which are based on contractual undiscounted cash flows (including interest payment computed using contractual rates, or if floating, based on rates current at the reporting date) and the earliest the Group can be required to pay.

31 December 2018						
Contractual undiscounted cash outflow						
	Within 1 year or on demand	More than 1 year but less than 2 years	More than 2 years but less than 5 years	More than 5 years	TOTAL	Carrying amount
	USD million	USD million	USD million	USD million	USD million	USD million
Trade and other payables to third parties	919	-	-	-	919	919
Trade and other payables to related parties	64	-	-	-	64	64
Bonds, including interest payable	480	82	1,773	-	2,335	1,957
Loans and borrowings, incl. interest payable	897	948	4,364	1,681	7,890	6,329
Guarantees	62	59	-	-	121	-
	2,422	1,089	6,137	1,681	11,329	9,269

31 December 2017						
Contractual undiscounted cash outflow						
	Within 1 year or on demand	More than 1 year but less than 2 years	More than 2 years but less than 5 years	More than 5 years	TOTAL	Carrying amount
	USD million	USD million	USD million	USD million	USD million	USD million
Trade and other payables to third parties	848	-	-	-	848	848
Trade and other payables to related parties	96	-	-	-	96	96
Bonds, including interest payable	101	379	757	513	1,750	1,421
Loans and borrowings, including interest payable	997	813	3,909	2,916	8,635	7,058
Guarantees	75	71	-	-	146	-
	2,117	1,263	4,666	3,429	11,475	9,423

At 31 December 2018 and 31 December 2017 the Group's guarantee in respect of credit arrangement between BoAZ and VEB (note 24(e)) is presented as contingent liability and included at maximum exposure for the Group in the liquidity risk disclosure above.

(e) Credit risk

The Group trades only with recognised, creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. The majority of the Group's third party trade receivables represent balances with the world's leading international corporations operating in the metals industry. In addition, receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. Goods are normally sold subject to retention of title clauses, so that in the event of non-payment the Group may have a secured claim. The Group does not require collateral in respect of trade and other receivables. The details of impairment of trade and other receivables are disclosed in note 17. The extent of the Group's credit exposure is represented by the aggregate balance of financial assets and financial guarantees given.

At 31 December 2018 and 2017, the Group has certain concentrations of credit risk as 0% and 1.9% of the total trade receivables were due from the Group's largest customer and 6.7% and 9.5% of the total trade receivables were due from the Group's five largest customers, respectively (refer to note 5 for the disclosure on revenue from largest customer).

With respect to credit risk arising from guarantees, the Group's policy is to provide financial guarantees only to wholly-owned subsidiaries, associates and joint ventures.

(f) Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The Board's policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Group defines as net operating income divided by total shareholders' equity, excluding non-controlling interests. The Board of Directors also monitors the level of dividends to ordinary shareholders.

The Board seeks to maintain a balance between higher returns that might be possible with higher levels of borrowings and the advantages and security afforded by a sound capital position.

There were no changes in the Group's approach to capital management during the year.

The Company and its subsidiaries were subject to externally imposed capital requirements in the both years presented in these consolidated financial statements.

(g) Master netting or similar agreements

The Group may enter into sales and purchase agreements with the same counterparty in the normal course of business. The related amount receivable and payable do not always meet the criteria for offsetting in the statement of financial position. This is because the Group may not have any currently legally enforceable right to offset recognised amounts, because the right to offset may be enforceable only on the occurrence of future events.

There are no financial instruments that meet the offsetting criteria in the statement of financial position for the year ended 31 December 2018 and 31 December 2017.

23 Commitments

(a) Capital commitments

The Group has entered into contracts that result in contractual obligations primarily relating to various construction and capital repair works. The commitments at 31 December 2018 and 31 December 2017 approximated USD255 million and USD213 million, respectively. These commitments are due over a number of years.

(b) Purchase commitments

Commitments with third parties for purchases of alumina, bauxite, other raw materials and other purchases in 2019-2034 under supply agreements are estimated from USD2,932 million to USD3,527 million at 31 December 2018 (31 December 2017: USD3,593 million to USD4,381 million) depending on the actual purchase volumes and applicable prices.

Commitments with a related party - joint venture for purchases of primary aluminium and alloys in 2019-2030 under supply agreements are estimated from USD6,375 million to USD10,019 million (31 December 2017: USD6,837 million to USD 9,351 million) depending on the actual purchase volumes and applicable prices. Electricity purchase commitments are disclosed in note 25.

(c) Sale commitments

Commitments with third parties for sales of alumina and other raw materials in 2019-2034 are estimated from USD509 million to USD2,344 million at 31 December 2018 (31 December 2017: from USD815 million to USD1,041 million) and will be settled at market prices at the date of delivery. Commitments with related parties for sales of alumina in 2019-2020 approximated from USD227 million to USD363 million at 31 December 2018 (31 December 2017: from USD414 million to USD516 million).

Commitments with related parties for sales of primary aluminium and alloys in 2019-2021 are estimated from USD889 million to USD1,223 million at 31 December 2018 (31 December 2017: from USD4,358 million to USD4,770 million). Commitments with third parties for sales of primary aluminium and alloys in 2019-2021 are estimated to range from USD832 million to USD1,155 million at 31 December 2018 (31 December 2017: from USD1,266 million to USD1,654 million).

(d) Operating lease commitments

Non-cancellable operating lease rentals are payable as follows:

	<u>31 December</u>	<u>31 December</u>
	<u>2018</u>	<u>2017</u>
	<u>USD million</u>	<u>USD million</u>
Less than one year	16	18
Between one and five years	7	64
	<u>23</u>	<u>82</u>

(e) Social commitments

The Group contributes to the maintenance and upkeep of the local infrastructure and the welfare of its employees, including contributions toward the development and maintenance of housing, hospitals, transport services, recreation and other social needs of the regions of the Russian Federation where the Group's production entities are located. The funding of such assistance is periodically determined by management and is appropriately capitalised or expensed as incurred.

24 Contingencies

(a) Taxation

Russian tax, currency and customs legislation is subject to varying interpretations, and changes, which can occur frequently. Management's interpretation of such legislation as applied to the transactions and activities of the Group may be challenged by the relevant local, regional and federal authorities. Notably recent developments in the Russian environment suggest that the authorities in this country are becoming more active in seeking to enforce, through the Russian court system, interpretations of the tax legislation, in particular in relation to the use of certain commercial trading structures, which may be selective for particular tax payers and different to the authorities' previous interpretations or practices. Different and selective interpretations of tax regulations by various government authorities and inconsistent enforcement create further uncertainties in the taxation environment in the Russian Federation.

In addition to the amounts of income tax the Group has provided, there are certain tax positions taken by the Group where it is reasonably possible (though less than 50% likely) that additional tax may be payable upon examination by the tax authorities or in connection with ongoing disputes with tax authorities. The Group's best estimate of the aggregate maximum of additional amounts that it is reasonably possible may become payable if these tax positions were not sustained at 31 December 2018 is USD nil million (31 December 2017: USD30 million).

(b) Environmental contingencies

The Group and its predecessor entities have operated in the Russian Federation, Ukraine, Jamaica, Guyana, the Republic of Guinea and the European Union for many years and certain environmental problems have developed. Governmental authorities are continually considering environmental regulations and their enforcement and the Group periodically evaluates its obligations related thereto. As obligations are determined, they are recognised immediately. The outcome of environmental liabilities under proposed or any future legislation, or as a result of stricter enforcement of existing legislation, cannot reasonably be estimated. Under current levels of enforcement of existing legislation, management believes there are no possible liabilities, which will have a material adverse effect on the financial position or the operating results of the Group. However, the Group anticipates undertaking significant capital projects to improve its future environmental performance and to bring it into full compliance with current legislation.

(c) Legal contingencies

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

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

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

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

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

(d) Insurance and provision for guarantees

Where the Group enters into financial guarantee contracts to guarantee the indebtedness of other companies, controlled by the shareholder which is a beneficial owner of the Group at the reporting date, the Group considers these to be insurance arrangements and accounts for them as such. In this respect, the Group treats the guarantee contract as a contingent liability until such time as it becomes probable that the Group will be required to make a payment under the guarantee.

In September 2013 the Group entered into an agreement with OJSC RusHydro to provide funds to BoAZ, if the latter is unable to fulfil its obligations under its credit facility with GK Vnesheconombank ("VEB"). This agreement represents a surety for the increased credit limit obtained for the financing of BoAZ. The aggregate exposure under the agreement is limited to RUB16.8 billion (31 December 2018 and 2017 USD242 million and USD292 million, respectively) and is split between the Group and OJSC RusHydro in equal proportion.

25 Related party transactions

(a) Transactions with management and close family members

Management remuneration

Key management received the following remuneration, which is included in personnel costs (refer to note 6(c)):

	Year ended 31 December	
	2018	2017
	USD million	USD million
Salaries and bonuses	67	61
	67	61

(b) Transactions with associates and joint ventures

Sales to associates and joint ventures are disclosed in note 5, purchases from associates and joint ventures are disclosed in note 6, accounts receivable from associates and joint ventures as well as accounts payable to associates and joint ventures are disclosed in note 17.

(c) Transactions with other related parties

The Group transacts with other related parties, the majority of which are entities under common control with the Group or under the control of SUAL Partners Limited or its controlling shareholders or Glencore International Plc or entities under its control or Onexim Holdings Limited or its controlling shareholders.

Sales to related parties for the year are disclosed in note 5, purchases from related parties are disclosed in note 6, accounts receivable from related parties as well as accounts payable to related

parties are disclosed in note 17, commitments with related parties are disclosed in note 23, directors remuneration in notes 9 and 10 and other transactions with shareholders are disclosed in note 11.

Other purchases of assets and other non-operating expenses from related parties are the following:

	Year ended 31 December	
	2018	2017
	USD million	USD million
Related parties – companies capable of exerting significant influence	4	4
Related parties – companies under common control	18	17
Related parties – associates and joint ventures	1	0
	23	21

Electricity contracts

In November 2016, the Group entered into the new long-term electricity contracts to supply several Group's smelters from En+ subsidiaries over the years 2016-2026. Purchases will be made under a price formula close to market prices. The volumes committed under the long-term electricity contracts are as follows:

Year	2019	2020	2021	2022	2023	2024	2025	2026
Mln kWh	37,598	37,700	37,598	37,598	37,598	37,700	37,598	25,194
Mln USD	444	446	444	444	444	446	444	297

(d) Related parties balances

At 31 December 2018, included in non-current assets are balances of related parties — companies under common control of USD46 million and balances of related parties – associates and joint ventures of USD2 million (31 December 2017: USD43 million and USD 11 million, respectively). At 31 December 2018, included in non-current liabilities are balances of related parties – associates and joint ventures of USD10 million (31 December 2017: USD 9 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 2018.

26 Particulars of subsidiaries

As at 31 December 2018 and 2017, the Company has direct and indirect interests in the following subsidiaries, which principally affected the results, assets and liabilities of the Group:

Name	Place of incorporation and operation	Date of incorporation	Particulars of issued and paid up capital	Attributable equity interest	Principal activities
Compagnie Des Bauxites De Kindia S.A.	Guinea	29 November 2000	2,000 shares of GNF 25,000 each	100.0%	Bauxite mining
Friguia	Guinea	9 February 1957	758,966,200,000 GNF	100.0%	Alumina
JSC RUSAL Achinsk	Russian Federation	20 April 1994	4,188,531 shares of RUB1 each	100.0%	Alumina
RUSAL Mykolaev Ltd	Ukraine	16 September 2004	1,524,126,720 UAH	100.0%	Alumina
JSC RUSAL Boxitogorsk Alumina	Russian Federation	27 October 1992	1,012,350 shares of RUB1 each	100.0%	Alumina
Eurallumina SpA	Italy	21 March 2002	10,000,000 shares of EUR1.55 each	100.0%	Alumina
PJSC RUSAL Bratsk	Russian Federation	26 November 1992	5,505,305 shares of RUB0.2 each	100.0%	Smelting
JSC RUSAL Krasnoyarsk	Russian Federation	16 November 1992	85,478,536 shares of RUB20 each	100.0%	Smelting
JSC RUSAL Novokuznetsk	Russian Federation	26 June 1996	53,997,170 shares of RUB0.1 each	100.0%	Smelting
JSC RUSAL Sayanogorsk	Russian Federation	29 July 1999	208,102,580,438 shares of RUB0.068 each	100.0%	Smelting
RUSAL Resal Ltd	Russian Federation	15 November 1994	charter fund of RUB67,706,217.29	100.0%	Processing
JSC RUSAL SAYANAL	Russian Federation	29 December 2001	59,902,661,099 shares of RUB0.006 each	100.0%	Foil
CJSC RUSAL ARMENAL	Armenia	17 May 2000	36,699,295 shares of AMD 1,000 each	100.0%	Foil
RUS-Engineering Ltd	Russian Federation	18 August 2005	charter fund of RUB 1,751,832,184	100.0%	Repairs and maintenance
JSC Russian Aluminium	Russian Federation	25 December 2000	23,124,000,000 shares of RUB1 each	100.0%	Holding company
Rusal Global Management B.V.	Netherlands	8 March 2001	charter fund of EUR25,000	100.0%	Management company
JSC United Company RUSAL Trading House	Russian Federation	15 March 2000	163,660 shares of RUB100 each	100.0%	Trading
Rusal America Corp.	USA	29 March 1999	1,000 shares of USD 0.01 each	100.0%	Trading
RS International GmbH	Switzerland	22 May 2007	1 share with nominal value of CHF 20,000	100.0%	Trading

Name	Place of incorporation and operation	Date of incorporation	Particulars of issued and paid up capital	Attributable equity interest	Principal activities
Rusal Marketing GmbH	Switzerland	22 May 2007	Capital quota of CHF2,000,000	100.0%	Trading
RTI Limited	Jersey	27 October 2006	764,959,894 shares of USD1 each	100.0%	Trading
Alumina & Bauxite Company Limited	British Virgin Islands	3 March 2004	231,179,727 shares of USD1 each	100.0%	Trading
JSC Komi Aluminii	Russian Federation	13 February 2003	4,303,000,000 shares of RUB1 each	100.0%	Alumina
JSC Bauxite-Timana	Russian Federation	29 December 1992	44,500,000 shares of RUB10 each	100.0%	Bauxite mining
JSC Severo-Uralsky Bauxite Mine	Russian Federation	24 October 1996	10,506,609 shares of RUB275.85 each	100.0%	Bauxite mining
JSC RUSAL Ural	Russian Federation	26 September 1996	2,542,941,932 shares of RUB1 each	100.0%	Primary aluminum and alumina production
SUAL-PM LLC	Russian Federation	20 October 1998	charter fund of RUB56,300,959	100.0%	Aluminum powders production
JSC Kremniy	Russian Federation	3 August 1998	320,644 shares of RUB1,000 each	100.0%	Silicon production
SUAL-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
Kubikemborg Aluminium AB	Sweden	26 January 1934	25,000 shares of SEK 1,000 each	100.0%	Smelting
RFCL Sarl	Luxembourg	13 March 2013	90,000,000 RUB	100.0%	Finance services
Aktivium B.V.	Netherlands	28 December 2010	215,458,134,321 shares of RUB1 each	100.0%	Holding and investment company
Aughinish Alumina Ltd	Ireland	22 September 1977	1,000 shares of EUR2 each	100.0%	Alumina
LLC RUSAL Energo	Russian Federation	26 December 2005	715,000,000 RUB	100.0%	Electric power

Trading entities are engaged in the sale of products to and from the production entities.

27 Statement of Financial Position of the Company as at 31 December 2018

	<u>31 December</u> <u>2018</u> <u>USD million</u>	<u>31 December</u> <u>2017</u> <u>USD million</u>
ASSETS		
Non-current assets		
Investments in subsidiaries	20,468	18,965
Loans to related parties	1,845	2,223
Total non-current assets	22,313	21,188
Current assets		
Loans to related parties	1,416	1,166
Other receivables	911	381
Cash and cash equivalents	186	12
Total current assets	2,513	1,559
Total assets	24,826	22,747
EQUITY AND LIABILITIES		
Equity		
Share capital	152	152
Reserves	14,152	13,017
Total equity	14,304	13,169
Non-current liabilities		
Loans and borrowings	6,816	7,065
Total non-current liabilities	6,816	7,065
Current liabilities		
Loans and borrowings	2,355	1,694
Trade and other payables	1,322	748
Other current liabilities	29	71
Total current liabilities	3,706	2,513
Total liabilities	10,522	9,578
Total equity and liabilities	24,826	22,747
Net current liabilities	(1,193)	(954)
Total assets less current liabilities	21,120	20,234

28 Events subsequent to the reporting date

There were no significant events subsequent to the reporting date except for sanctions removal in January 2019 disclosed in note 1(d).