

IFRS FINANCIAL STATEMENTS

CONSOLIDATED FINANCIAL STATEMENTS

for the years ended 31 December
2020, 2019 and 2018

STATEMENT OF MANAGEMENT'S RESPONSIBILITIES FOR THE PREPARATION AND APPROVAL OF THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2020, 2019 AND 2018

The following statement, which should be read in conjunction with the auditors' responsibility stated in the auditors' report set out on pages 2–5, is made with a view to distinguishing the respective responsibilities of management and those of the auditors in relation to the consolidated financial statements of Public Joint Stock Company "Mining and Metallurgical Company "Norilsk Nickel" and its subsidiaries (the "Group").

Management of the Group is responsible for the preparation of the consolidated financial statements that present fairly in all material aspects the consolidated financial position of the Group at 31 December 2020, 2019 and 2018 and the consolidated statements of income, comprehensive income, cash flows and changes in equity for the years ended 31 December 2020, 2019 and 2018, in accordance with International Financial Reporting Standards ("IFRS").

In preparing the consolidated financial statements, management is responsible for:

- selecting suitable accounting principles and applying them consistently;
- making judgements and estimates that are reasonable and prudent;
- stating whether International Financial Reporting Standards have been followed, subject to any material departures disclosed and explained in the consolidated financial statements; and
- preparing the consolidated financial statements on a going concern basis, unless it is inappropriate to presume that the Group will continue in business for the foreseeable future.

Management, within its competencies, is also responsible for:

- designing, implementing and maintaining an effective system of internal controls throughout the Group;
- maintaining statutory accounting records in compliance with local legislation and accounting standards in the respective jurisdictions in which the Group operates;
- taking steps to safeguard the assets of the Group; and
- detecting and preventing fraud and other irregularities.

The consolidated financial statements for the years ended 31 December 2020, 2019 and 2018 were approved by:

President
V.O. Potanin



Senior Vice President Chief
Financial Officer
S.G. Malyshev





INDEPENDENT AUDITORS' REPORT

TO THE SHAREHOLDERS AND BOARD OF DIRECTORS OF PJSC "MINING AND METALLURGICAL COMPANY "NORILSK NICKEL"

OPINION

We have audited the consolidated financial statements of PJSC "Mining and Metallurgical Company "Norilsk Nickel" (the "Company") and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as at 31 December 2020, 2019 and 2018, the consolidated income statements, the consolidated statements of comprehensive income, changes in equity and cash flows for the years ended 31 December 2020, 2019 and 2018, 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 2020, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years ended 31 December 2020, 2019 and 2018 in accordance with International Financial Reporting Standards (IFRS).

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the independence requirements that are relevant to our audit of the consolidated financial statements in the Russian Federation and with the International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the requirements in the Russian Federation and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

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

Audited entity: PJSC "Mining and Metallurgical Company "Norilsk Nickel"
Registration number. in the Unified State Register of Legal Entities: No. 1028400000298.
Dudinka, Krasnoyarsk region, Russia

Independent auditor: JSC "KPMG", a company incorporated under the Laws of the Russian Federation, a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. Registration number in the Unified State Register of Legal Entities: No. 1027700125628.
Member of the Self-regulatory Organization of Auditors Association "Sodruzhestvo" (SRO AAS). Principal registration number of the entry in the Register of Auditors and Audit Organizations: No. 12006020351.



FUEL LEAKAGE IN NORILSK

Please refer to the Note 26 in the consolidated financial statements.

THE KEY AUDIT MATTER

In May 2020, an incident resulting in contamination of water bodies and land as well as damage to biological resources occurred at the heat and power plant of the Group in Norilsk. On 5 February 2021 the court ruled to partially satisfy the claim filed by Rosprirodnadzor in relation to compensation of damages to water bodies and soil. As at 31 December 2020 the Group recognized an environmental provision relating to reimbursement of environmental damage and forecast clean-up and rehabilitation expenses in the amount of USD 2,076 million.

Given the materiality of the provision, inherent uncertainty around the ultimate outcome of the litigation since the court decision has not yet come into force, this matter required significant judgement including interpretation of laws and regulations. Therefore, we consider the measurement and disclosure of the environmental provision to be a key audit matter

HOW THE MATTER WAS ADDRESSED IN OUR AUDIT

Our audit procedures included the following:

- We reviewed the correspondence with Rosprirodnadzor and documentation considered by the court during the court hearings;
- We involved KPMG legal and environmental experts to gain an understanding of the disputed matter;
- We analysed decision issued by the court partially satisfying the claim filed by Rosprirodnadzor;
- We inquired management of the Group about further steps with regard to the court ruling;
- We obtained Group's and its in-house legal counsel's assessment of other existing and potential claims and analysed their interpretation of the relevant laws and regulation.
- We involved KPMG tax specialists to assess Group's tax treatment in respect of recognized environmental provision.

We also considered the appropriateness and completeness of the disclosures in the consolidated financial statements.

OTHER INFORMATION

Management is responsible for the other information. The other information comprises the Financial Overview (MD&A) (but does not include the consolidated financial statements and our auditors' report thereon), which we obtained prior to the date of this auditors' report, and the information included in other sections of Annual Report for 2020, which is expected to be made available to us after that date.

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 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.

If, based on the work we have performed on the other information that we have obtained prior to the date of this auditors' report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.



RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines 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, management is 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 management either intends 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 management.
 - Conclude on the appropriateness of management's 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.
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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, actions taken to eliminate threats or safeguards applied.

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.

The engagement partner on the audit resulting in this independent auditors' report is:

Natalia Velichko

JSC "KPMG"

Moscow, Russia

16 February 2021





CONSOLIDATED INCOME STATEMENT FOR THE YEARS ENDED 31 DECEMBER 2020, 2019 AND 2018

US DOLLARS MILLION

	Notes	For the year ended 31 December		
		2020	2019	2018
REVENUE				
Metal sales	7	14,977	12,851	10,962
Other sales		568	712	708
Total revenue		15,545	13,563	11,670
Cost of metal sales	8	(4,500)	(4,499)	(4,505)
Cost of other sales		(575)	(684)	(622)
Gross profit		10,470	8,380	6,543
General and administrative expenses	9	(869)	(938)	(890)
Selling and distribution expenses	10	(156)	(127)	(92)
Impairment of non-financial assets	15	(308)	24	(50)
Other operating expenses, net	11, 26	(2,737)	(303)	(95)
Operating profit		6,400	7,036	5,416
Foreign exchange gain/(loss), net		(1,034)	694	(1,029)
Finance costs, net	12	(879)	(306)	(580)
Gain from disposal of subsidiaries	21	19	2	–
Income from investments	13	73	98	95
Profit before tax		4,579	7,524	3,902
Income tax expense	14	(945)	(1,558)	(843)
Profit for the year		3,634	5,966	3,059
Attributable to:				
Shareholders of the parent company		3,385	5,782	3,085
Non-controlling interests		249	184	(26)
		3,634	5,966	3,059
EARNINGS/(LOSS) PER SHARE				
Basic and diluted earnings/(loss) per share attributable to shareholders of the parent company (US Dollars per share)	22	21.4	36.5	19.5

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEARS ENDED 31 DECEMBER 2020, 2019 AND 2018

US DOLLARS MILLION

	For the year ended 31 December		
	2020	2019	2018
PROFIT FOR THE YEAR	3,634	5,966	3,059
OTHER COMPREHENSIVE INCOME/(LOSS)			
Items to be reclassified to profit or loss in subsequent periods:			
Effect of translation of foreign operations	(9)	(4)	(2)
Other comprehensive loss to be reclassified to profit or loss in subsequent periods, net	(9)	(4)	(2)
Items not to be reclassified to profit or loss in subsequent periods:			
Effect of translation to presentation currency	(690)	488	(905)
Other comprehensive income/(loss) not to be reclassified to profit or loss in subsequent periods, net	(690)	488	(905)
Other comprehensive income/(loss) for the year, net of tax	(699)	484	(907)
TOTAL COMPREHENSIVE INCOME/(LOSS) FOR THE YEAR, NET OF TAX	2,935	6,450	2,152
Attributable to:			
Shareholders of the parent company	2,763	6,226	2,232
Non-controlling interests	172	224	(80)
	2,935	6,450	2,152



CONSOLIDATED STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2020, 2019 AND 2018

US DOLLARS MILLION

	Note	At 31 December		
		2020	2019	2018
ASSETS				
Non-current assets				
Property, plant and equipment	15	10,762	11,993	9,934
Intangible assets		222	215	163
Other financial assets	16	81	223	141
Deferred tax assets	14	755	98	73
Other non-current assets	18	327	370	386
		12,147	12,899	10,697
Current assets				
Inventories	18	2,192	2,475	2,280
Trade and other receivables	19	537	362	204
Advances paid and prepaid expenses		79	74	75
Other financial assets	16	58	51	147
Income tax receivable		7	68	92
Other taxes receivable	17	444	644	271
Cash and cash equivalents	20	5,191	2,784	1,388
Other current assets		51	117	97
		8,559	6,575	4,554
TOTAL ASSETS		20,706	19,474	15,251
EQUITY AND LIABILITIES				
Capital and reserves				
Share capital	22	6	6	6
Share premium		1,254	1,254	1,254
Translation reserve		(5,521)	(4,899)	(5,343)
Retained earnings	30	8,290	7,452	7,306
Equity attributable to shareholders of the parent company		4,029	3,813	3,223
Non-controlling interests	23	646	474	250
		4,675	4,287	3,473



CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEARS ENDED 31 DECEMBER 2020, 2019 AND 2018

US DOLLARS MILLION

	For the year ended 31 December		
	2020	2019	2018
OPERATING ACTIVITIES			
Profit before tax	4,579	7,524	3,902
Adjustments for:			
Depreciation and amortisation	943	911	765
Impairment of non-financial assets	308	(24)	50
Loss on disposal of property, plant and equipment	19	19	1
Gain from disposal of subsidiaries (Note 21)	(19)	(2)	–
Change in provisions and allowances (Note 26)	2,464	220	61
Finance costs and income from investments, net	806	208	485
Foreign exchange (gain)/loss, net	1,034	(694)	1,029
Other	120	64	46
	10,254	8,226	6,339
Movements in working capital:			
Inventories	(119)	48	297
Trade and other receivables	(161)	(122)	102
Advances paid and prepaid expenses	(32)	14	(5)
Other taxes receivable	125	(331)	(15)
Employee benefit obligations	20	62	11
Trade and other payables	(239)	(247)	676
Provisions	(186)	(35)	(28)
Other taxes payable	(70)	304	(97)
Cash generated from operations	9,592	7,919	7,280
Income tax paid	(1,304)	(1,910)	(787)
Net cash generated from operating activities	8,288	6,009	6,493

	For the year ended 31 December		
	2020	2019	2018
INVESTING ACTIVITIES			
Purchase of share in associates	(14)	–	–
Purchase of property, plant and equipment	(1,686)	(1,262)	(1,480)
Purchase of intangible assets	(74)	(62)	(73)
Purchase of non-current assets	–	–	(104)
Loans issued	(3)	(3)	(7)
Proceeds from repayment of loans issued	36	54	13
Net change in deposits placed	(4)	78	5
Proceeds from disposal of property, plant and equipment	2	10	3
Net cash inflow/(net cash outflow) from disposal of subsidiaries (Note 21)	28	(20)	–
Interest and other investment income received	67	85	81
Net cash used in investing activities	(1,648)	(1,120)	(1,562)
FINANCING ACTIVITIES			
Proceeds from loans and borrowings	2,903	3,212	2,173
Repayments of loans and borrowings	(2,552)	(2,163)	(2,547)
Payments of lease liabilities	(46)	(45)	(9)
Dividends paid (Note 30)	(4,165)	(4,166)	(3,369)
Dividends paid to non-controlling interest	–	(1)	(1)
Interest paid	(472)	(460)	(551)
Net cash used in financing activities	(4,332)	(3,623)	(4,304)
Net increase in cash and cash equivalents	2,308	1,266	627
Cash and cash equivalents at the beginning of the year	2,784	1,388	852
Effects of foreign exchange differences on balances of cash and cash equivalents	99	130	(91)
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	5,191	2,784	1,388



CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEARS ENDED 31 DECEMBER 2020, 2019 AND 2018

US DOLLARS MILLION

	Notes	Share capital	Share premium	Translation reserve
BALANCE AT 1 JANUARY 2018		6	1,254	(4,490)
Profit/(loss) for the year		–	–	–
Other comprehensive loss		–	–	(853)
Total comprehensive income/(loss) for the year		–	–	(853)
Dividends	30	–	–	–
BALANCE AT 31 DECEMBER 2018		6	1,254	(5,343)
Profit for the year		–	–	–
Other comprehensive income		–	–	444
Total comprehensive income for the year		–	–	444
Dividends	30	–	–	–
BALANCE AT 31 DECEMBER 2019		6	1,254	(4,899)
Profit for the year		–	–	–
Other comprehensive loss		–	–	(622)
Total comprehensive income for the year		–	–	(622)
Dividends	30	–	–	–
BALANCE AT 31 DECEMBER 2020		6	1,254	(5,521)

Equity attributable to shareholders of the parent company

Retained earnings	Total	Non-controlling interests	Total
7,557	4,327	331	4,658
3,085	3,085	(26)	3,059
–	(853)	(54)	(907)
3,085	2,232	(80)	2,152
(3,336)	(3,336)	(1)	(3,337)
7,306	3,223	250	3,473
5,782	5,782	184	5,966
–	444	40	484
5,782	6,226	224	6,450
(5,636)	(5,636)	–	(5,636)
7,452	3,813	474	4,287
3,385	3,385	249	3,634
–	(622)	(77)	(699)
3,385	2,763	172	2,935
(2,547)	(2,547)	–	(2,547)
8,290	4,029	646	4,675

1. GENERAL INFORMATION

Organisation and principal business activities

Public Joint Stock Company “Mining and Metallurgical Company “Norilsk Nickel” (the “Company” or “MMC “Norilsk Nickel”) was incorporated in the Russian Federation on 4 July 1997. The principal activities of the Company and its subsidiaries (the “Group”) are exploration, extraction, refining of ore and nonmetallic minerals and sale of base and precious metals produced from ore. Further details regarding the nature of the business and structure of the Group are presented in note 36.

Major production facilities of the Group are located in Taimyr and Kola Peninsulas and the Zabaikalsky region of the Russian Federation, and in Finland.

2. BASIS OF PREPARATION

Statement of compliance

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards (“IFRS”).

The entities of the Group maintain their accounting records in accordance with the laws, accounting and reporting regulations of the jurisdictions in which they are incorporated and registered. Accounting principles in certain jurisdictions may differ from those generally accepted under IFRS. Financial statements of such entities have been adjusted to ensure that the consolidated financial statements are presented in accordance with IFRS.

The Group issues a separate set of IFRS consolidated financial statements to comply with the requirements of Russian Federal Law No 208-FZ On consolidated financial statements (“Law 208-FZ”) dated 27 July 2010.

Basis of measurement

The consolidated financial statements of the Group are prepared on the historical cost basis, except for mark-to-market valuation of certain classes of financial instruments, in accordance with IFRS 9 Financial Instruments.

3. CHANGES IN ACCOUNTING POLICIES

The accounting policies applied in the preparation of these consolidated financial statements are generally consistent with those applied in the preparation of the Group’s consolidated financial statements at and for the year ended 31 December 2019.

The accounting policies applied in the preparation of consolidated financial statements at and for the year ended 31 December 2019 are generally consistent with those applied in the preparation of the Group’s consolidated financial statements at and for the year ended 31 December 2018 except for changes related to the adoption of IFRS 16 Leases from 1 January 2019.

Adoption of new and revised standards and interpretations during the year ended 31 December 2020

Adoption of amendments to the following Standards did not have material impact on the accounting policies, financial position or results of the Group:

- IFRS 3 Business combinations (amended);
- IFRS 7 Financial Instruments: Disclosures (amended);
- IFRS 9 Financial Instruments (amended);
- IFRS 16 Leases (amended);
- IAS 1 Presentation of Financial Statements (amended);
- IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (amended);
- IAS 39 Financial Instruments: Recognition and Measurement (amended);
- Revised Conceptual Framework for Financial Reporting.

Adoption of new and revised standards and interpretations during the year ended 31 December 2018

Adoption of amendments to the following Standards for annual periods from 1 January 2018 did not have material impact on the accounting policies, financial position or results of the Group:

- IFRS 1 First-time Adoption of International Financial Reporting Standards (amended);
- IFRS 2 Share-based Payment (amended);
- IFRS 4 Insurance Contracts (amended);
- IAS 28 Investments in Associates and Joint Ventures (amended);
- IAS 40 Investment Property (amended);
- IFRIC 22 Foreign Currency Transactions and Advance Consideration.

Standards and interpretations in issue but not yet effective

The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

Standards and Interpretations	Effective for annual periods beginning on or after
IAS 16 Property, plant and equipment	1 January 2022
IAS 37 Provisions, contingent liabilities and contingent assets	1 January 2022
IAS 41 Agriculture (amended)	1 January 2022
IFRS 1 First-time Adoption of International Financial Reporting Standards (amended)	1 January 2022
IFRS 3 Business Combinations (amended)	1 January 2022
IFRS 9 Financial Instruments (amended)	1 January 2022
IFRS 16 Leases (amended)	1 January 2022
IAS 1 Presentation of financial statements (amended)	1 January 2023
IFRS 17 Insurance Contracts	1 January 2023

Management of the Group plans to adopt all of the above standards and interpretations in the Group's consolidated financial statements for the respective periods. These standards are not expected to have a material impact on the Group in the future reporting periods and on foreseeable future transactions.

Reclassification

Finance lease liabilities recognised in line with IAS 17 Leases are presented as lease liabilities in the consolidated statement of financial position at 31 December 2018 (previously presented in loans and borrowings).

At 31 December 2020 management reassessed reclassification between cost of metal sales and selling and distribution expenses (refer to notes 8 and 10). Information for the year ended 31 December 2019 has been reclassified to conform with the current period presentation.

4. SIGNIFICANT ACCOUNTING POLICIES

Basis of consolidation

Subsidiaries

The consolidated financial statements incorporate financial statements of the Company and its subsidiaries, from the date that control effectively commenced until the date that control effectively ceased. Control is achieved where the Company is exposed to, 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.

Non-controlling interests in net assets (excluding goodwill) of the consolidated subsidiaries are identified separately from the equity of the shareholders of the Company therein. Non-controlling interests include interests at the date of the original business combination and a non-controlling share of changes in net assets since the date of the combination. Total comprehensive income must be attributed to the shareholders of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Non-controlling interests may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis.

All intra-group balances, transactions and any unrealised profits or losses arising from intra-group transactions are eliminated in full on consolidation.

Changes in the Group's ownership interest in a subsidiary that do not result in the Group losing control are accounted for within the equity.

When the Group loses control of a subsidiary it derecognises the assets and liabilities and related equity components of the former subsidiary. Any gain or loss is recognised in the consolidated income statement. Any investment retained in the former subsidiary is measured at its fair value at the date when control is lost.

Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures, depending on the contractual rights and obligations of each investor. The Group recognises in relation to its interest in a joint operation: its assets, including its share of any assets held jointly; its liabilities, including its share of any liabilities incurred jointly; its revenue from the sale of its share of the output arising from the joint operation; its share of the revenue from the sale of the output by the joint operation; and its expenses, including its share of any expenses incurred jointly. The Group accounts for its investments in joint ventures using the equity method.

Business combinations

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group at the date of acquisition in exchange for control of the acquiree.

Where an investment in a subsidiary, an associate or a joint venture is made, any excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the fair value of the identifiable assets acquired and the liabilities assumed at the acquisition date is recognised as goodwill. Goodwill in respect of subsidiaries and joint operations is disclosed separately and goodwill relating to associates and joint ventures is included in the carrying value of the investment in associates or joint ventures. Goodwill disclosed separately is reviewed for impairment at least annually. If impairment has occurred, it is recognised in the consolidated income statement during the period in which the circumstances are identified and is not subsequently reversed.

If, after reassessment, the fair value of the identifiable assets acquired and liabilities assumed at the acquisition date exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognised in the consolidated income statement immediately as a bargain purchase gain.

Acquisition-related costs are recognised in the consolidated income statement as incurred.



If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are retrospectively adjusted during the measurement period (a maximum of twelve months from the date of acquisition), or additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

Functional and presentation currency

The individual financial statements of each Group entity are presented in its functional currency.

The Russian Rouble (“RUB”) is the functional currency of the Company, all of its subsidiaries located in the Russian Federation and all foreign subsidiaries of the Group, except for the following subsidiaries operating with a significant degree of autonomy. The functional currency of Norilsk Nickel Harjavalta Oy is US Dollar, and the functional currency of Norilsk Nickel Africa Proprietary Limited and Nkomati Nickel Mine is South African Rand.

The presentation currency of the consolidated financial statements of the Group is US Dollar (“USD”). Using USD as a presentation currency is common practice for global mining companies. In addition, USD is a more relevant presentation currency for international users of the consolidated financial statements of the Group. The Group also issues consolidated financial statements to comply with Law 208-FZ, which use the Russian Rouble as the presentation currency.

The translation of Components of the consolidated statement of financial position, consolidated income statement, consolidated statement of cash flows and consolidated statement of changes in equity are translated into presentation currency using the following applicable exchange rates:

Components of consolidated statements	Applicable exchange rates
Assets and liabilities	Period-end rate
Income, expenses and cashflows	Date of underlying transaction or an average approximating exchange rates prevailing at the dates of the transactions
Equity	Historical rates

All resulting exchange differences from translation of the consolidated income statement and consolidated statement of financial position components are recognised as a separate component in other comprehensive income/loss.

Revenue recognition

Metal sales revenue

Revenue from metal sales is recognised at a point of time when control over the asset is transferred to a customer and represents the invoiced value of all metal products shipped to customers, net of value added tax (if any).

Revenue from contracts that are entered into and continue to meet the Group’s expected sale requirements designated for that purpose at their inception and are expected to be settled by physical delivery of the goods, is recognised in the consolidated financial statements as and when they are delivered. A gain or loss on forward contracts expected to be settled by physical delivery or on net basis is measured at fair value recognised in revenue and disclosed separately from revenue from contracts with customers.

As a practical expedient, the Group does not adjust the promised amount of consideration for the effects of a significant financing component, if the expected period between when the Group transfers a promised good or service to a customer and the customer pays for that good or service will be one year or less.

Certain contracts are provisionally priced so that price is not settled until a predetermined future date based on the market price at that time. Revenue from these transactions is initially recognised at the market price at the time of sale. Price adjustment on provisionally priced contracts is recorded in revenue.

Other revenue

Revenue from contracts with customers on sale of goods, other than metals, is recognised at a point of time when control over the asset is transferred to the customer in accordance with the shipping terms specified in the sales agreements.

Revenue from service contracts is recognised over-time when the services are rendered.

DIVIDEND AND INTEREST INCOME

Dividend income from investments is recognised when the Group's right to receive payment has been established. Interest income is accrued using the effective interest method.

Leases

Accounting policies after 1 January 2019

The Group assesses at the inception of a contract whether it or its components is, or contains, a lease. The Group recognises a right-of-use asset and a corresponding lease liability, if a lease contract transfers to the lessee the right to control the use of the identified asset for a period of time in exchange for a consideration, except for current leases with the term of 12 months or less. The Group recognises lease payments associated with current leases as an expense on a straight-line basis over the lease term. Land plots lease payments are treated as variable payments, if they are linked to land cadastral value and changes in the latter do not depend on market rental rates. The Group recognises variable lease payments as an expense in the period when the event that triggers those payments occurs.

Right-of-use assets are initially recognised at cost that comprise when applicable:

- the initial amount of the lease liability;
- any lease payments made at or before the lease commencement date;
- any initial direct costs incurred by the lessee;
- an estimate of costs to be incurred by the lessee for retirement of the underlying asset and restoration of the site on which it is located.

Right-of-use assets are subsequently measured at cost less any accumulated depreciation and any accumulated impairment losses, adjusted for any remeasurement of the lease liability. Right-of-use assets are depreciated on a straight-line basis over their estimated economic useful lives or over the term of the lease, if shorter. Right-of-use assets are presented in property, plant and equipment in the consolidated statement of financial position.

Lease liabilities (refer to note 25) are initially measured at the present value of the lease payments that are not paid at the commencement date and subsequently remeasured to reflect changes to the lease payments. The lease payments are discounted using interest rate implicit in the lease (if that rate can be readily determined) or using Group incremental borrowing rate at the commencement date determined based on lease term and currency of the lease payments.

Accounting policies before 1 January 2019

Leases under which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Assets subject to finance leases are capitalised as property, plant and equipment at the lower of fair value or present value of future minimum lease payments at the date of acquisition. Simultaneously, related lease obligation is recognised at the same value. Assets held under finance leases are depreciated over their estimated economic useful lives or over the term of the lease, if shorter. If there is reasonable certainty that the lessee will obtain ownership at the end of the lease term, the period of expected use is the useful life of the asset.

Finance lease payments are allocated using the effective interest rate method, between the lease finance cost, which is included in finance costs, and the capital repayment, which reduces the related lease obligation to the lessor.

Leases where the lessor retains substantially all the risks and benefits of ownership of the asset are classified as operating leases. Operating lease payments are recognised as an expense in the consolidated income statement on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating and finance leases are expensed in the period in which they are incurred.

Finance costs

Finance costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time when the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

Government grants

Government grants are recognised when there is reasonable assurance that the grant will be received and all conditions and requirements attaching to the grant will be met. Government grants related to assets are deducted from the cost of these assets in arriving at their carrying value.

Employee benefits

Remuneration to employees in respect of services rendered during a reporting period is recognised as an expense in that period. Deferred costs under housing programmes for employees Our Home/My Home and Your Home are recognised as other non-current assets and amortised over the certain period of employee participation in the programme (five to ten years). Long-term employee benefits obligations are discounted to present value.

Defined contribution plans

The Group contributes to the following major defined contribution plans:

- Pension Fund of the Russian Federation;
- Mutual accumulated pension plan.

The only obligation of the Group with respect to these and other defined contribution plans is to make specified contributions in the period in which they arise. These contributions are recognised in the consolidated income statement when employees have rendered respective services.

Income tax expense

Income tax expense represents the sum of the current and deferred tax.

Income tax is recognised as an expense or income in the consolidated income statement unless it relates to other items recognised directly in other comprehensive income, in which case the tax is also recognised directly in other comprehensive income. Where current or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

Current tax

Current tax is based on taxable profit for the year. Taxable profit differs from profit before tax as reported in the consolidated income statement because it excludes items of income or expense that are taxable or deductible in other years and it also excludes items that are never taxable or deductible.

Deferred tax

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in computation of taxable profit. As a general rule, deferred tax liabilities are recognised for all taxable temporary differences, and deferred tax assets are recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Deferred tax assets and liabilities are not recognised, if temporary differences arise from goodwill or from the initial recognition of assets and liabilities other than in a business combination which, at the time of the transaction, affects neither taxable profit nor accounting profit.



Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries, joint ventures, associates and interests in joint operations, unless the Group is able to control the reversal of the temporary difference, and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and adjusted to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

The measurement of deferred tax liabilities and assets reflects the tax consequences of the manner in which the Group expects at the reporting date to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority.

Property, plant and equipment and mine development costs

Mining assets

Mine development costs are capitalised and comprise expenditures directly related to:

- acquiring mining and exploration licences;
- developing new mining operations;
- estimating revised content of minerals in the existing ore bodies; and
- expanding capacity of a mine.

Mine development costs include directly attributable borrowings costs.

Mine development costs are transferred to mining assets and start to be depreciated when a new mine reaches commercial production quantities.

Mining assets are recorded at cost less accumulated depreciation and impairment losses. Mining assets include cost of acquiring and developing mining properties, pre-production expenditure, mine infrastructure, plant and equipment that process extracted ore, mining and exploration licenses and present value of future decommissioning costs and borrowing costs eligible for capitalisation.

Carrying value of mining assets is depreciated over the lesser of their individual economic useful lives on a straight-line basis, or the remaining life of mine based on the amount of the commercial ore reserves on a units of production basis. When determining the life of mine, assumptions valid at the time of estimation may change in case new information becomes available. Useful lives are in average varying from 1 to 49 years

Non-mining assets

Non-mining assets include metallurgical processing plants, buildings, infrastructure, machinery and equipment and other non-mining assets. Non-mining assets are stated at cost less accumulated depreciation and impairment losses.

Non-mining assets are depreciated on a straight-line basis over their economic useful lives.

Depreciation charge is calculated over the following economic useful lives:

- buildings, structures and utilities 2 – 50 years
- machinery, equipment and transport 2 – 30 years
- other non-mining assets 1 – 20 years

Capital construction-in-progress

Capital construction-in-progress comprises costs directly related to construction of buildings, processing plant, infrastructure, machinery and equipment, including:

- advances given for purchases of property, plant and equipment and materials acquired for construction of buildings, processing plant, infrastructure, machinery and equipment;
- irrevocable letters of credit opened for future fixed assets deliveries and secured with deposits placed in banks;
- borrowing costs eligible for capitalisation.

Depreciation of an asset begins when it is available for use and it is in the location and condition necessary for it to be capable of operating in the manner intended by management.



Exploration expenditure

Exploration expenditure, including geophysical, topographical, geological and similar types of expenditure made within research, mining and exploration licences acquired, is capitalised and begins to be amortised over the life of mine, when commercial viability of the project is proved. Otherwise it is expensed in the period in which it is incurred.

Exploration expenditure written-off before development and construction starts is not subsequently capitalised, even if a commercial discovery subsequently occurs.

Intangible assets, excluding goodwill

Intangible assets are recorded at cost less accumulated amortisation and impairment losses. Intangible assets mainly include patents, licences, software and rights to use software and other intangible assets.

Amortisation of patents, licenses and software is charged on a straight-line basis over 1 – 12 years.

Impairment of tangible and intangible assets, excluding goodwill

At each reporting date, the Group analyses the triggers of impairment of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not practical to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less cost to sell and value-in-use. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or cash-generating unit. If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised in the consolidated income statement immediately.

Where an impairment loss subsequently reversed, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but only to the extent that the increased carrying amount does not exceed the original carrying amount that would have been determined had no impairment loss been recognised in prior periods. A reversal of an impairment loss is recognised in the consolidated income statement.

Inventories

Refined metals

Main jointly produced metals include nickel, copper, palladium, platinum; by-products include cobalt, gold, rhodium, silver and other metals. Main products are measured at the lower of cost of production or net realisable value. The cost of production of main products is determined as total production cost, allocated to each joint product by reference to their relative sales value. By-products are initially measured at net realisable value. These estimates take into consideration fluctuations of price or cost directly relating to events occurring subsequent to the consolidated statement of financial position date to the extent that such events confirm conditions existing at the end of the period

Work-in-process

Work-in-process includes all costs incurred in the normal course of business for producing each product including direct material and direct labour costs and allocation of production overheads, depreciation and amortisation and other costs, incurred for producing each product, given its stage of completion less allowance for adjustment to net realisable value. The change in allowance for work-in-process is recognised in the Cost of metal sales in the consolidated income statement.

Materials and supplies

Materials and supplies are valued at the weighted average cost less allowance for obsolete and slow-moving items.

Financial assets

Financial assets are recognised when the Group has become a party to the contractual arrangement of the instrument and are initially measured at fair value, plus transaction costs, except for those financial assets classified at fair value through profit or loss, which are initially measured at fair value.

Financial assets are classified into the following specified categories:

- financial assets at amortised cost;
- financial assets at fair value through other comprehensive income; and
- financial assets at fair value through profit or loss.

The classification of financial assets depends on the Group's business model for managing the financial assets and the contractual terms of the cash flows and is determined at the time of initial recognition.

Effective interest method

The effective interest method is used for calculating the amortised cost of a financial asset and for allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including transaction costs and other premiums or discounts) through the expected life of the financial asset, or, where appropriate, a shorter period.

Income is recognised on an effective interest basis for debt instruments other than those financial assets designated at fair value through profit or loss or fair value through other comprehensive income.

Financial assets at amortised cost

A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated at fair value through profit or loss:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The Group generally classifies cash and cash equivalents, trade and other receivables (excluding trade receivables under provisionally priced contracts), loans issued and bank deposits as financial assets at amortised cost.

Financial assets at fair value through other comprehensive income

A debt instrument is measured at fair value through other comprehensive income if it meets both of the following conditions and is not designated at fair value through profit or loss:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

At initial recognition the Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument that is not held for trading. This election is made on an instrument-by-instrument basis.

Financial assets at fair value through profit or loss

All financial assets not classified as measured at amortised cost or fair value through other comprehensive income are classified as financial assets at fair value through profit or loss.

Trade receivables under provisionally priced contracts and derivative financial assets are measured at fair value through profit or loss. Trade receivables under provisionally priced contracts are remeasured at each reporting date using the forward price for the period till the price settlement date outlined in the contract.

Impairment of financial assets

The Group recognises an allowance for expected credit losses on a financial asset measured at amortised cost using one of the two methods

Lifetime expected credit losses	Trade and other receivables Financial assets other than trade and other receivables if the credit risk on that financial asset has increased significantly since initial recognition
12-month expected credit losses since the reporting date	Financial assets other than trade and other receivables at initial recognition Financial assets other than trade and other receivables for which credit risk has not increased significantly since initial recognition

When determining whether the credit risk of the financial asset has increased significantly since initial recognition and when estimating expected credit losses, the Group considers reasonable and supportable information that is relevant and available, including both quantitative and qualitative information and analysis based on Group’s historical experience and forward-looking information.

The Group applies the IFRS 9 Financial Instruments simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. The Group assumes that expected credit loss for all trade and other receivables, which are overdue in excess of 365 days is equal to their carrying amount. To measure the expected credit losses, trade and other receivables that are past due for less than 365 days are grouped based on the length of the overdue period to which respective expected loss rates are applied. The expected loss rates are based on the historical credit loss experience, adjusted to reflect current and forward-looking information on the ability of the customers to settle the receivables.

When trade and other receivables are considered uncollectible, they are written off against the allowance for expected credit losses. Changes in the allowance are recognised in the consolidated income statement.

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire; or it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for the amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

Financial liabilities

The Group classifies financial liabilities into loans and borrowings, trade and other payables. Such financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest method. Derivative financial liabilities are measured at fair value through profit or loss.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash outflows through the expected life of the financial liability, or where appropriate, a shorter period.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group’s obligations are discharged, cancelled or they expire.

Cash and cash equivalents

Cash and cash equivalents comprise cash balances, cash deposits in banks, brokers and other financial institutions and highly liquid investments with original maturities of three months or less and on demand deposits, which are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.

Provisions

Provisions are recognised when the Group has a legal or constructive obligation as a result of past events for which it is probable that an outflow of economic benefits will be required to settle the obligation, and the amount of the obligation can be reliably estimated. The Group creates provisions for social commitments, tax and other provisions.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the reporting date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

Decommissioning obligations and environmental provisions

Decommissioning obligations include direct asset decommissioning costs as well as related land restoration costs.

Future decommissioning and other related obligations, discounted to present value, are recognised at the moment when the legal or constructive obligation in relation to such costs arises and the future costs can be reliably estimated. These costs are capitalised as part of the initial cost of the related asset (i.e. a mine) and is depreciated over the useful life of the asset. The unwinding of the discount on decommissioning obligations is included in the consolidated income statement as finance costs. Decommissioning obligations are periodically reviewed in light of current laws and regulations, and adjustments are made as necessary.

Environmental provisions include expenses for clean-up, rehabilitation works and legal claims and penalties of government authorities on environmental incidents and consequences of the incidents, settlement of environment damages.

Environmental provisions are recognised at the moment when respective legal or constructive obligation arises.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In order to prepare the consolidated financial statements in accordance with IFRS the Group's management have to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the reporting date, and the reported amounts of revenues and expenses for the reporting period. Making estimates may require judgement based on historical experience, current and expected economic conditions, and all other available information. Actual results may differ from such estimates. Descriptions of key estimates and assumptions made by the Group's management are stated in current or other respective Notes.

The most significant areas requiring the use of management estimates and assumptions are as follows:

- useful economic lives of property, plant and equipment;
- impairment of non-financial assets;
- decommissioning obligations and environmental provisions;
- income taxes.

Useful economic lives of property, plant and equipment

The factors, that may affect the estimation of the life of mine, which determines useful economic lives of mining assets, classified within property, plant and equipment, include the following:

- changes in proved and probable ore reserves;
- the grade of ore reserves varying significantly from time to time;
- differences between actual commodity prices and commodity price assumptions used in the estimation and classification of ore reserves;
- unforeseen operational issues at mine sites; and
- changes in capital, operating, mining, processing and decommissioning costs, discount rates and foreign exchange rates could possibly adversely affect the economic viability of ore reserves.

Useful economic lives of non-mining property, plant and equipment are reviewed by management periodically. The review is based on the current condition of the assets and the estimated length of the period during which they will continue to bring economic benefit to the Group.

Impairment of non-financial assets

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible non-financial assets for an indication that these assets may be impaired or that a previously recognised impairment loss may have decreased. For the purpose of the impairment test, the assets that do not generate independent cash flows are allocated to an appropriate cash-generating unit. To calculate the value in use, management necessarily applies judgement in allocating assets that do not generate independent cash flows to appropriate cash-generating units, and in estimating the timing and value of the underlying cash flows. Subsequent changes to the assets allocation to cash generating units or the timing of cash flows may affect the carrying value of the respective assets.

Decommissioning obligations and environmental provisions

The Group's mining and exploration activities are subject to various environmental laws and regulations. The Group estimates decommissioning obligations and environmental provisions based on management's understanding of the current legal requirements in the various jurisdictions in which it operates, terms of the license agreements and internally generated engineering estimates. Provisions are recognised, based on present values, for decommissioning and land restoration costs as soon as the obligations arise.

Environmental provisions are recognised based on the best estimate of the consideration required to settle the environmental obligation at the reporting date, taking into account the risks and uncertainties surrounding the present obligation, including possible compensations under civil lawsuits and costs to be incurred under corresponding ecological and ethnological programs. Where it is possible to set accurate period of maturity of the environmental obligation, estimation is determined using the present value of cash flows directed to settlement of those obligation, otherwise management uses best estimate of the future cash outflows, which relates to the environmental obligation.

Actual costs incurred in future periods may differ materially from the amounts of provided provisions. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates may affect the carrying amount of this provision.

Income taxes

The Group is subject to income taxes in numerous jurisdictions. Significant judgement is required in determining provision for income taxes due to the complexity of legislation in some jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain. The Group recognises provisions for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

Deferred tax assets are reviewed at each reporting date and adjusted to the extent that it is probable that sufficient taxable income will be available to allow all or part of the deferred tax asset to be utilised. The estimation of that probability includes judgements based on the expected performance.

Various factors are considered to assess the probability of the future utilisation of deferred tax assets, including past operating results, operational plans, expiration of tax losses carried forward, and tax planning strategies. If actual results differ from these estimates or if these estimates must be adjusted in future periods, the financial position, results of operations and cash flows may be affected.

6. SEGMENT INFORMATION

Operating segments are identified on the basis of internal reports on components of the Group that are regularly reviewed by the Management Board.

Management has determined the following operating segments:

- GMK Group segment includes main mining, processing and metallurgy operations as well as transport services, energy, repair and maintenance services located in Taimyr Peninsula. GMK Group metal sales to external customers include metal volumes produced from semi-products purchased from South Cluster segment starting May 2019. Intersegment revenue from metal sales for 2019 included primarily sale of semi-products to KGМК Group segment for further processing (previously processed under intersegment tolling arrangements). GMK Group other sales to external customers primarily include revenue for energy and utilities services provided in Taimyr Peninsula.
- South Cluster segment includes certain ore mining and processing operations located in Taimyr Peninsula which were reviewed within GMK Group segment in 2018. The Group did not restate the corresponding items of respective segment information for the year ended 31 December 2018 since the necessary information is not practically available. Intersegment revenue from metal sales included sale of semi-products to GMK Group for further processing starting May 2019 (previously processed under intersegment tolling arrangements). South Cluster segment revenue from other sales includes intersegment ore processing services under tolling arrangements provided to GMK Group segment.
- KGМК Group segment includes ore mining and processing operations, metallurgy operations, energy, exploration activities located in Kola Peninsula. KGМК Group metal sales to external customers included metal produced from semi-products purchased from GMK Group segments starting in 2019. Intersegment revenue from metal sales includes sale of semi-products to GMK Group and NN Harjavalta for further processing. KGМК Group revenue from other sales includes intersegment metal processing services under tolling arrangements provided to other segments and energy and utilities services provided to external customers in Kola Peninsula.
- NN Harjavalta segment includes refinery operations located in Finland. NN Harjavalta metal sales to external customers primarily include metal produced from semi-products purchased from GMK Group and KGМК Group segments.
- GRK Bystrinskoye segment includes ore mining and processing operations located in the Zabaikalsky region of the Russian Federation.
- Other mining segment primarily includes 50% Group interest in metal mining and processing joint operations of Nkomati Nickel Mine ("Nkomati"), as well as certain other mining and exploration activities located in Russia and abroad. Other mining segment sales primarily include Group 50% share in sales of metal semi-products produced by Nkomati.
- Other non-metallurgical segment includes resale of third party metal products, other trading operations, supply chain management, transport services, energy and utility, research and other activities located in Russia and abroad. Other non-metallurgical segment also includes resale of 50% metal semi-products produced by Nkomati. Other sales of Other non-metallurgical segment primarily include revenue from passenger air transportation, freight transportation services and fuel sales.

Corporate activities of the Group do not represent an operating segment, include primarily headquarters' general and administrative expenses and treasury operations of the Group and are presented as Unallocated.

The amounts in respect of reportable segments in the disclosure below are stated before intersegment eliminations, excluding:

- balances of intercompany loans and borrowings and interest accruals;
- intercompany investments;
- accrual of intercompany dividends.

Amounts are measured on the same basis as those in the consolidated financial statements.



The following tables present revenue, measure of segment profit or loss (EBITDA) and other segment information from continuing operations regarding the Group's reportable segments for the years ended 31 December 2020, 2019 and 2018, respectively.

For the year ended 31 December 2020	GMK Group	South cluster	KGMK Group	NN Harjavalta
Revenue to external customers				
Metal sales	5,427	–	6,897	949
Other sales	156	–	27	5
Inter-segment revenue				
Metal sales	6,907	532	2,001	354
Other sales	210	162	1	–
TOTAL REVENUE	12,700	694	8,926	1,308
Segment EBITDA	6,171	407	1,757	70
Unallocated				
CONSOLIDATED EBITDA				
Depreciation and amortisation				
Impairment of non-financial assets				
Finance costs, net				
Foreign exchange loss, net				
Income from investments and disposal of subsidiaries				
PROFIT BEFORE TAX				
OTHER SEGMENT INFORMATION				
Purchase of property, plant and equipment and intangible assets	1,275	114	155	17
Depreciation and amortisation	596	28	152	32
Impairment of non-financial assets, net	43	–	264	–
Environmental provisions	2,242	–	–	–

GRK Bystrinskoye	Other mining	Other non-metallurgical	Elimination	Tota
897	129	678	–	14,977
3	8	369	–	568
98	–	–	(9,892)	–
6	–	340	(719)	–
1,004	137	1,387	(10,611)	15,545
717	(14)	31	(556)	8,583
				(932)
				7,651
				(943)
				(308)
				(879)
				(1,034)
				92
				4,579
98	2	99	–	1,760
110	1	24	–	943
1	–	–	–	308
–	–	–	–	2,242

For the year ended 31 December 2019	GMK Group	South cluster	KGMK Group	NN Harjavalta
Revenue to external customers				
Metal sales	8,208	349	2,271	1,145
Other sales	171	–	36	6
Inter-segment revenue				
Metal sales	5,177	336	608	21
Other sales	280	179	200	–
TOTAL REVENUE	13,836	864	3,115	1,172
Segment EBITDA	9,522	475	58	74
Unallocated				
CONSOLIDATED EBITDA				
Depreciation and amortisation				
Reversal of impairment of non-financial assets				
Finance costs, net				
Foreign exchange gain, net				
Income from investments				
PROFIT BEFORE TAX				
Other segment information				
Purchase of property, plant and equipment and intangible assets	839	76	221	18
Depreciation and amortisation	669	25	104	26
Impairment of non-financial assets, net	(43)	–	(1)	–

For the year ended 31 December 2019	GMK Group	KGMK Group	NN Harjavalta
Revenue to external customers			
Metal sales	8,787	361	1,020
Other sales	160	33	6
Inter-segment revenue			
Metal sales	720	154	–
Other sales	75	363	–
TOTAL REVENUE	9,742	911	1,026
Segment EBITDA	6,602	190	71
Unallocated			
CONSOLIDATED EBITDA			
Depreciation and amortisation			
Impairment of non-financial assets			
Finance costs, net			
Foreign exchange loss, net			
Income from investments			
PROFIT BEFORE TAX			
Other segment information			
Purchase of property, plant and equipment and intangible assets	1,016	292	18
Depreciation and amortisation	612	82	24
Impairment of non-financial assets, net	8	3	–

The following table presents segment metal sales to external customers breakdown by metal for the years ended 31 December 2020, 2019 and 2018, respectively.:

For the year ended 31 December 2020	GMK Group	South cluster	KGMK Group
Nickel	6	–	2,181
Copper	2,293	–	389
Palladium	2,283	–	3,399
Platinum	266	–	338
Rhodium	259	–	423
Gold	260	–	85
Other metals	60	–	82
	5,427	–	6,897

For the year ended 31 December 2019	GMK Group	South cluster	KGMK Group
Nickel	1,079	30	1,269
Copper	2,417	35	246
Palladium	3,634	209	588
Platinum	484	39	78
Rhodium	281	–	10
Gold	240	–	26
Other metals	73	36	54
	8,208	349	2,271

For the year ended 31 December 2018	GMK Group	KGMK Group
Nickel	1,827	275
Copper	2,824	51
Palladium	2,990	1
Platinum	574	3
Rhodium	118	19
Gold	206	–
Other metals	248	12
	8,787	361

The following tables present assets and liabilities of the Group's reportable segments at 31 December 2020, 2019 and 2018, respectively.

At 31 December 2020	GMK Group	South cluster	KGMK Group	NN Harjavalta
Inter-segment assets	2,848	162	720	165
Segment assets	10,150	412	3,440	480
TOTAL SEGMENT ASSETS	12,998	574	4,160	645
Unallocated				
TOTAL ASSETS				
Inter-segment liabilities	350	24	2,645	266
Segment liabilities	3,794	129	322	84
Total segment liabilities	4,144	153	2,967	350
Unallocated				
TOTAL LIABILITIES				

At 31 December 2019	GMK Group	South cluster	KGMK Group	NN Harjavalta
Inter-segment assets	3,286	163	315	100
Segment assets	10,416	375	4,177	486
TOTAL SEGMENT ASSETS	13,702	538	4,492	586
Unallocated				
TOTAL ASSETS				
Inter-segment liabilities	305	39	3,227	138
Segment liabilities	1,732	108	348	102
Total segment liabilities	2,037	147	3,575	240
Unallocated				
TOTAL LIABILITIES				

At 31 December 2018	GMK Group	KGMK Group	NN Harjavalta	GRK Bystrinskoye
Inter-segment assets	292	114	140	24
Segment assets	9,903	996	451	1,492
TOTAL SEGMENT ASSETS	10,195	1,110	591	1,516
Unallocated				
TOTAL ASSETS				
Inter-segment liabilities	139	63	122	39
Segment liabilities	1,756	134	100	68
Total segment liabilities	1,895	197	222	107
Unallocated				
TOTAL LIABILITIES				



7. METAL SALES

The Group's metal sales to external customers are detailed below (based on external customers' locations):

For the year ended 31 December 2020	Total	Nickel	Copper
Europe	6,755	1,277	1,826
Asia	5,266	1,366	1,027
North and South America	2,400	260	23
Russian Federation and CIS	556	241	202
	14,977	3,144	3,078
FOR THE YEAR ENDED 31 DECEMBER 2019			
Europe	6,680	1,399	2,354
Asia	3,243	1,329	226
North and South America	2,289	427	77
Russian Federation and CIS	639	233	220
	12,851	3,388	2,877
FOR THE YEAR ENDED 31 DECEMBER 2018			
Europe	5,868	1,323	2,356
Asia	2,929	1,090	386
North and South America	1,619	348	26
Russian Federation and CIS	546	252	209
	10,962	3,013	2,977

Revenue from metal sales for the year ended 31 December 2020 included net loss of USD (104) million in respect of forward contracts measured at fair value that are expected to be settled by physical delivery or on a net basis (for the year ended 31 December 2019: net loss in the amount of USD (47) million and for the year ended 31 December 2018: net gain in the amount of USD 12 million).

Palladium	Platinum	Rhodium	Gold	Other metals
2,353	543	275	341	140
2,292	27	51	308	195
1,715	46	339	–	17
5	6	17	27	58
6,365	622	682	676	410
1,892	574	85	261	115
1,476	32	14	47	119
1,595	14	137	1	38
80	8	55	19	24
5,043	628	291	328	296
1,216	514	41	199	219
1,313	41	17	6	76
1,111	34	76	1	23
34	7	3	–	41
3,674	596	137	206	359

For the year ended 31 December 2020, metal revenue included net gain of USD 38 million from price adjustments in respect of certain provisionally priced contracts, primarily for sale of palladium and other metals in Europe, Asia, North and South America (for the year ended 31 December 2019: net loss in the amount of USD (1) million and for the year ended 31 December 2018: net loss in the amount of USD (5) million).

8. COST OF METAL SALES

	For the year ended 31 December		
	2020	2019	2018
CASH OPERATING COSTS			
Labour	1,307	1,295	1,283
Materials and supplies	731	712	727
Purchases of refined metals for resale	482	438	430
Purchases of raw materials and semi-products	298	402	436
Third party services	276	239	200
Mineral extraction tax and other levies	248	221	212
Electricity and heat energy	151	155	143
Fuel	109	101	87
Transportation expenses	90	78	70
Sundry costs	194	167	155
Total cash operating costs	3,886	3,808	3,743
Depreciation and amortisation	845	735	653
(Increase)/decrease in metal inventories	(231)	(44)	109
TOTAL	4,500	4,499	4,505

9. GENERAL AND ADMINISTRATIVE EXPENSES

	For the year ended 31 December		
	2020	2019	2018
Staff costs	529	601	569
Third party services	134	117	96
Taxes other than mineral extraction tax and income tax	69	77	103
Depreciation and amortisation	67	69	38
Transportation expenses	18	15	9
Rent expenses	2	5	23
Other	50	54	52
TOTAL	869	938	890

10. SELLING AND DISTRIBUTION EXPENSES

	For the year ended 31 December		
	2020	2019	2018
Transportation expenses	71	53	39
Marketing expenses	44	45	31
Staff costs	18	15	14
Other	23	14	8
TOTAL	156	127	92

11. OTHER OPERATING EXPENSES, NET

	For the year ended 31 December		
	2020	2019	2018
Environmental provisions (Note 26)	2,242	1	–
Social expenses	500	224	207
Change in other provisions	24	39	21
Change in provision on production facilities shut down (Note 26)	(10)	190	
Net income earned during the pre-commissioning stage	–	(192)	(106)
Other, net	(19)	41	(27)
TOTAL	2,737	303	95

12. FINANCE COSTS, NET

	For the year ended 31 December		
	2020	2019	2018
Interest expense, net of amounts capitalised	364	340	382
Changes in fair value of other long-term and other current liabilities	262	64	46
Fair value (gain)/loss on the cross-currency interest rate swap	182	(199)	51
Unwinding of discount on provisions and payables	61	84	100
Interest expense on lease liabilities	12	12	2
Other, net	(2)	5	(1)
TOTAL	879	306	580

13. INCOME FROM INVESTMENTS

	For the year ended 31 December		
	2020	2019	2018
Interest income on bank deposits	43	64	59
Other, net	30	34	36
TOTAL	73	98	95

14. INCOME TAX EXPENSE

	For the year ended 31 December		
	2020	2019	2018
Current income tax expense	1,685	1,924	812
Deferred tax (benefit)/expense	(740)	(366)	31
TOTAL INCOME TAX EXPENSE	945	1,558	843

A reconciliation of theoretic income tax, calculated at the statutory rate in the Russian Federation, the location of major production assets of the Group, to the amount of actual income tax expense recorded in the consolidated income statement is as follows:

	For the year ended 31 December		
	2020	2019	2018
Profit before tax	4,579	7,524	3,902
Income tax at statutory rate of 20%	916	1,505	780
Allowance for deferred tax assets	14	25	29
Non-deductible impairment of non-financial assets	–	–	4
Non-deductible social expenses	93	64	54
Effect of different tax rates of subsidiaries	(38)	(62)	(39)
Tax effect of other permanent differences	(40)	26	15
TOTAL INCOME TAX EXPENSE	945	1,558	843

The corporate income tax rates in other countries where the Group has a taxable presence vary from 0% to 30%.

DEFERRED TAX BALANCES

	At 31 December 2019	Recognised in income statement	Effect of translation to presentation currency	At 31 December 2020
Property, plant and equipment, right-of use assets	492	(9)	(94)	389
Inventories	(279)	(258)	89	(448)
Trade and other receivables	(10)	16	–	6
Decommissioning obligations	(113)	7	12	(94)
Environmental provisions	–	(439)	23	(416)
Other provisions	–	(50)	(1)	(51)
Loans and borrowings, trade and other payables, lease liabilities	(153)	1	35	(117)
Other assets	22	(5)	4	21
Other liabilities	36	(6)	(9)	21
Tax loss carry-forwards	(33)	3	7	(23)
NET DEFERRED TAX (ASSETS)	(38)	(740)	66	(712)

	At 31 December 2018, prior to adoption of IFRS 16	Adjustments on IFRS 16 adoption	At 1 January 2019, adjusted on IFRS 16 adoption	Recognised in income statement	Effect of translation to presentation currency	At 31 December 2019
Property, plant and equipment, right-of use assets	386	41	427	15	50	492
Inventories	107	–	107	(377)	(9)	(279)
Trade and other receivables	(7)	–	(7)	(3)	–	(10)
Decommissioning obligations	(53)	–	(53)	(51)	(9)	(113)
Loans and borrowings, trade and other payables, lease liabilities	(82)	(41)	(123)	(15)	(15)	(153)
Other assets	24	–	24	(3)	1	22
Other liabilities	(2)	–	(2)	38	–	36
Tax loss carry-forwards	(61)	–	(61)	30	(2)	(33)
NET DEFERRED TAX LIABILITIES/ (ASSETS)	312	–	312	(366)	16	(38)

	At 31 December 2017	Recognised in income statement	Effect of translation to presentation currency	At 31 December 2018
Property, plant and equipment	368	86	(68)	386
Inventories	124	–	(17)	107
Trade and other receivables	(3)	(5)	1	(7)
Decommissioning obligations	(69)	5	11	(53)
Loans and borrowings, trade and other payables	(69)	(28)	15	(82)
Other assets	46	(18)	(4)	24
Other liabilities	8	(10)	–	(2)
Tax loss carry-forwards	(75)	1	13	(61)
NET DEFERRED TAX LIABILITIES	330	31	(49)	312

Certain deferred tax assets and liabilities have been offset to the extent they relate to taxes levied on the Group's entities which entered into the tax consolidation group. Deferred tax balances (after offset) presented in the consolidated statement of financial position were as follows:

	At 31 December		
	2020	2019	2018
Deferred tax liability	43	60	385
Deferred tax asset	(755)	(98)	(73)
NET DEFERRED TAX (ASSETS)/LIABILITIES	(712)	(38)	312

Unrecognised deferred tax assets

Deferred tax assets have not been recognised as follows:

	At 31 December		
	2020	2019	2018
Deductible temporary differences	218	164	100
Tax loss carry-forwards	182	240	191
TOTAL	400	404	291

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilise the benefits therefrom.

At 31 December 2020 deferred tax asset in the amount of USD 136 million related to tax loss arising on disposal of OJSC "Third Generation Company of the Wholesale Electricity Market" ("OGK-3") (31 December 2019: USD 162 million and 31 December 2018: USD 145 million) was not recognised as it was incurred by the Company prior to setting up of the tax consolidation group. This deferred tax asset can be utilised without expiry only if the Company exits the tax consolidation group.

At 31 December 2020 deferred tax assets in the amount of USD 46 million related to other non-expiring tax losses were not recognised due to specific rules stated by art. 283 of the Tax code of the Russian Federation (31 December 2019: USD 78 million and 31 December 2018: USD 46 million).

At 31 December 2020, the Group did not recognise a deferred tax liability in respect of taxable temporary differences of USD 2,031 million (31 December 2019: USD 628 million and 31 December 2018: USD 1,558 million) associated with investments in subsidiaries, because management believes that it is in a position to control the timing of reversal of such differences and does not expect its reversal in foreseeable future.

15. PROPERTY, PLANT AND EQUIPMENT

	Non-mining assets and right-of-use assets					Total
	Mining assets and mine development cost	Buildings, structures and utilities	Machinery, equipment and transport	Other	Capital construction-in-progress	
COST						
Balance at 1 January 2018	8,994	3,134	3,507	289	1,484	17,408
Additions	925	–	–	–	798	1,723
Transfers	–	304	348	9	(661)	–
Change in decommissioning provision	(6)	(1)	–	–	–	(7)
Disposals	(67)	(4)	(43)	(4)	(12)	(130)
Other	(12)	(13)	20	5	–	–
Effect of translation to presentation currency	(1,589)	(542)	(586)	(50)	(251)	(3,018)
BALANCE AT 31 DECEMBER 2018, BEFORE THE ADOPTION OF IFRS 16	8,245	2,878	3,246	249	1,358	15,976
Effect of adoption of IFRS 16 (Note 2)	–	137	62	5	–	204
BALANCE AT 1 JANUARY 2019, AFTER THE ADOPTION OF IFRS 16	8,245	3,015	3,308	254	1,358	16,180
Additions	614	–	–	–	855	1,469
Transfers	–	177	513	11	(701)	–
Change in decommissioning provision	79	4	–	–	–	83
Additions of right-of-use assets and remeasurement of the lease liability	–	9	15	5	–	29
Disposals	(52)	(43)	(69)	(6)	(32)	(202)
Other	91	38	(43)	–	(86)	–
Effect of translation to presentation currency	999	360	382	31	166	1,938
BALANCE AT 31 DECEMBER 2019	9,976	3,560	4,106	295	1,560	19,497
Additions	943	–	–	–	942	1,885
Transfers	–	192	361	21	(574)	–
Change in decommissioning provision	42	2	–	–	–	44



	Non-mining assets and right-of-use assets					
	Mining assets and mine development cost	Buildings, structures and utilities	Machinery, equipment and transport	Other	Capital construction-in-progress	Total
Additions of right-of-use assets and remeasurement of the lease liability	–	(9)	69	5	–	65
Disposed on disposal of subsidiary (Note 21)	(68)	–	–	–	–	(68)
Acquired on acquisition of subsidiaries	–	25	1	–	–	26
Disposals	(32)	(25)	(29)	(2)	(12)	(100)
Other	(31)	10	20	(1)	(9)	(11)
Effect of translation to presentation currency	(1,557)	(567)	(645)	(46)	(244)	(3,059)
BALANCE AT 31 DECEMBER 2020	9,273	3,188	3,883	272	1,663	18,279

	Non-mining assets and right-of-use assets					Total
	Mining assets and mine development cost	Buildings, structures and utilities	Machinery, equipment and transport	Other	Capital construction-in-progress	
ACCUMULATED DEPRECIATION AND IMPAIRMENT						
Balance at 1 January 2018	(2,600)	(1,637)	(1,876)	(96)	(239)	(6,448)
Charge for the year	(350)	(108)	(291)	(24)	–	(773)
Disposals	62	3	38	3	2	108
Impairment loss, net	(33)	(31)	(19)	(2)	35	(50)
Other	9	6	(12)	(3)	–	–
Effect of translation to presentation currency	460	274	329	19	39	1,121
BALANCE AT 31 DECEMBER 2018	(2,452)	(1,493)	(1,831)	(103)	(163)	(6,042)
Charge for the year	(437)	(145)	(314)	(27)	–	(923)
Disposals	41	36	54	4	15	150
Impairment loss, net	(32)	42	–	(1)	15	24
Other	7	(18)	19	1	(9)	–
Effect of translation to presentation currency	(286)	(182)	(214)	(13)	(18)	(713)
BALANCE AT 31 DECEMBER 2019	(3,159)	(1,760)	(2,286)	(139)	(160)	(7,504)
Charge for the year	(466)	(175)	(338)	(24)	–	(1,003)
Disposals	27	18	25	1	9	80
Impairment loss, net	(247)	(41)	(18)	–	(2)	(308)
Disposed on disposal of subsidiary (Note 21)	50	–	–	–	–	50
Other	28	(9)	(10)	–	–	9
Effect of translation to presentation currency	463	289	359	23	25	1,159
BALANCE AT 31 DECEMBER 2020	(3,304)	(1,678)	(2,268)	(139)	(128)	(7,517)
Carrying value						
AT 31 DECEMBER 2018	5,793	1,385	1,415	146	1,195	9,934
AT 31 DECEMBER 2019	6,817	1,800	1,820	156	1,400	11,993
AT 31 DECEMBER 2020	5,969	1,510	1,615	133	1,535	10,762

At 31 December 2020 capital construction-in-progress included USD 14 million of irrevocable letters of credit opened for property, plant and equipment purchases (31 December 2019: USD 52 million and 31 December 2018: USD 197 million), representing security deposits placed in banks.

For the year ended 31 December 2020 purchases of property, plant and equipment in the consolidated statement of cash flows include USD 1 million of irrevocable letters of credit (for the year ended 31 December 2019: USD 221 million and for the year ended 31 December 2018: USD 192 million).

Capitalised borrowing costs for the year ended 31 December 2020 amounted to USD 118 million (for the year ended 31 December 2019: USD 174 million and for the year ended 31 December 2018: USD 172 million). The capitalisation rate used to determine the amount of borrowing costs was 4.10% per annum for the year ended 31 December 2020 (for the year ended 31 December 2019: 5.12% and for the year ended 31 December 2018: 5.15%).

At 31 December 2020 mining assets and mine development cost included USD 2,593 million of mining assets under development (31 December 2019: USD 2,750 million and 31 December 2018: USD 2,868 million).

At 31 December 2020 non-mining assets included USD 39 million of investment property (31 December 2019: USD 48 million and 31 December 2018: USD 44 million).

Impairment

During the year ended 31 December 2015, the Group revised its intention on the further use of the gas extraction assets. As a result, these assets are assessed as a separate cash-generating unit with its value-in-use being determined using a discounted cash flow model approach at each subsequent reporting date.

As a result of the performed assessment of the value-in-use, an impairment loss of USD 41 million was recognised in the consolidated income statement for the year ended 31 December 2020 (for the year ended 31 December 2019: impairment loss reversal of USD 70 million and for the year ended 31 December 2018: impairment loss of USD 8 million). Accumulated impairment loss, net of respective accumulated depreciation had no impairment been recognised, amounted to USD 152 million at 31 December 2020 (31 December 2019: USD 153 million and 31 December 2018: USD 243 million).

During the years ended 31 December 2018 and 31 December 2019 the Group identified indicators of further impairment of Nkomati assets and performed impairment tests using a discounted cash flow model approach. As a result, the carrying value of the Group's share in Nkomati property, plant and equipment was impaired in full at 31 December 2019 (the value-in-use of the Group's share in Nkomati property, plant and equipment at 31 December 2018: USD 12 million). Impairment loss in the amount of USD 12 million was recognised in impairment of non-financial assets in the consolidated income statement for the year ended 31 December 2019 (31 December 2018: USD 39 million).

In 2020 the Federal law set increase of mineral extraction tax in 3.5 on the types of ore mined by the Group. The Group assessed the change in tax legislation as an indicator for impairment of one of cash-generating units within JSC "Kolskaya GMK": ore mining and processing production KGMK.

The recoverable amount of the cash generating unit was determined based on value in use calculations. As a result ore mining and processing production KGMK assets were fully impaired as at 31 December 2020. The impairment loss in the amount of USD 264 million was recognised in impairment of non-financial assets in the consolidated income statement.

The most significant estimates and assumptions used in determination of value in use are as follows:

- Future cash flows were projected based on budgeted amounts, taking into account actual results for the previous years. Forecasts were assessed up to 2031. Measurements were performed based on discounted cash flows expected to be generated by separate cash-generating unit.
- Management used adjusted commodities price forecasts for copper-nickel concentrate price forecast. Prices adjustments were made based on current contract terms.
- Production information was primarily based on internal production reports available at the date of impairment test and management's assumptions regarding future production levels.
- Inflation indices and foreign currency trends in general consistent with external sources of information. Inflation used was projected within 3.6-4.5%, exchange rates USD/RUB were within 72.02-84.76.
- A pre-tax nominal discount rate of 13.7% was calculated based on weighted average cost of capital and reflects management's estimates of the risks specific to production units.

The Group plans to develop in 2021 optimization actions on increase of ore mining and processing production KGMK future cash flows and partial elimination of mineral extraction tax rate increase effect.

During the year ended 31 December 2020 the Group recognised additional impairment losses in the amount of USD 3 million in respect of specific individual assets (for the year ended 31 December 2019: USD 34 million and for the year ended 31 December 2018: USD 3 million).

Right-of-use assets

	Buildings, structures and utilities	Machinery, equipment and transport	Other	Total
Balance at 1 January 2019, adjusted on IFRS 16 adoption	137	62	5	204
Additions of right-of-use assets and remeasurement of the lease liability	9	15	5	29
Depreciation	(23)	(18)	(3)	(44)
Effect of translation to presentation currency	16	7	–	23
BALANCE AT 31 DECEMBER 2019	139	66	7	212
Additions of right-of-use assets and remeasurement of the lease liability	(9)	69	5	65
Acquired on acquisition of subsidiaries	25	–	–	25
Depreciation	(20)	(12)	(3)	(35)
Effect of translation to presentation currency	(20)	(12)	(1)	(33)
BALANCE AT 31 DECEMBER 2020	115	111	8	234

16. OTHER FINANCIAL ASSETS

	At 31 December		
	2020	2019	2018
NON-CURRENT			
Loans issued and other receivables	56	113	130
Investments in associates	14	–	–
Bank deposits	11	8	8
Derivative financial instruments (Note 29)	–	102	3
Total non-current	81	223	141
CURRENT			
Loans issued	57	47	57
Bank deposits	–	–	83
Derivative financial instruments	1	4	7
Total current	58	51	147

17. OTHER TAXES

	At 31 December		
	2020	2019	2018
TAXES RECEIVABLE			
Value added tax recoverable	434	638	244
Other taxes	17	13	28
	451	651	272
Less: Allowance for value added tax recoverable	(7)	(7)	(1)
OTHER TAXES RECEIVABLE	444	644	271
TAXES PAYABLE			
Value added tax	199	397	74
Social security contributions	48	46	37
Mineral extraction tax	15	16	15
Property tax	12	15	23
Other	55	29	13
OTHER TAXES PAYABLE	329	503	162

18. INVENTORIES

	At 31 December		
	2020	2019	2018
Refined metals and other metal products	547	407	526
Work-in-process and semi-products	1,159	1,339	1,138
Less: Net realizable allowance for work-in-process	(84)	(5)	(4)
Total metal inventories	1,622	1,741	1,660
Materials and supplies	644	811	662
Less: Allowance for obsolete and slow-moving items	(74)	(77)	(42)
Materials and supplies, net	570	734	620
INVENTORIES	2,192	2,475	2,280

At 31 December 2020 part of metal semi-products stock in the amount of USD 73 million net of allowance in the amount of USD 57 million was presented in other non-current assets according to Group's production plans (31 December 2019: USD 52 million net of allowance USD 52 million and 31 December 2018: USD 88 million net of allowance USD 38 million).

19. TRADE AND OTHER RECEIVABLES

	At 31 December		
	2020	2019	2018
Trade receivables from metal sales	411	277	143
Other receivables	150	151	131
Receivables from the registrar on transfer of dividends to shareholders (Note 30)	32	–	–
	593	428	274
Less: Allowance for expected credit losses	(56)	(66)	(70)
TRADE AND OTHER RECEIVABLES, NET	537	362	204

In 2020, 2019 and 2018, the average credit period on metal sales varied from 0 to 30 days. Trade receivables are generally non-interest bearing.

At 31 December 2020 trade and other receivables include USD 339 million of short-term trade accounts receivable measured at fair value through profit or loss, Level 2 of fair value hierarchy (31 December 2019: USD 196 million and 31 December 2018: USD 120 million).

At 31 December 2020, 2019 and 2018 there were no material trade accounts receivable which were overdue or individually determined to be impaired.

The average credit period on sales of other products and services for the year ended 31 December 2020 was 37 days (for the year ended 31 December 2019: 25 days and for the year ended 31 December 2018: 23 days). No interest was charged on these receivables.

Included in the Group's other receivables at 31 December 2020 were debtors with a carrying value of USD 83 million (31 December 2019: USD 43 million and 31 December 2018: USD 29 million) that were past due but not impaired. Management of the Group believes that these amounts are recoverable in full.

The Group did not hold any collateral for accounts receivable balances.

Ageing of other receivables past due but not impaired was as follows:

	At 31 December		
	2020	2019	2018
Less than 180 days	75	35	24
180-365 days	8	8	5
	83	43	29

Movement in the allowance for expected credit losses was as follows:

	At 31 December		
	2020	2019	2018
Balance at beginning of the year	66	70	92
Change in allowance	3	(8)	5
Accounts receivable written-off	(2)	(4)	(12)
Effect of translation to presentation currency	(11)	8	(15)
BALANCE AT END OF THE YEAR	56	66	70

20. CASH AND CASH EQUIVALENTS

	At 31 December		
	2020	2019	2018
Current accounts			
• RUB	41	72	49
• USD	3,744	918	398
• EUR	18	34	13
• other	102	60	64
Bank deposits			
• RUB	39	1,357	–
• USD	1,237	326	850
• other	8	9	10
Other cash and cash equivalents	2	8	4
TOTAL	5,191	2,784	1,388

Bank deposits

Interest rate on USD-denominated deposits held in banks at 31 December 2020 was in the range from 0.15% to 0.41% (31 December 2019: from 1.25% to 1.80% and 31 December 2018: from 1.70% to 3.95%) per annum. Interest rate on RUB-denominated deposits held in banks at 31 December 2020 was 3.75% (31 December 2019: from 5.90% to 6.26%) per annum.

21. DISPOSAL OF SUBSIDIARIES

In September 2020, the Group sold nickel assets in Australia, including Honeymoon Well project, held by the Group subsidiary MPI Nickel Pty Ltd for a consideration of USD 29 million (AUD 40 million). Net cash inflow from disposal of the subsidiary in the amount of USD 28 million were recognised in the consolidated statement of cash flows, net of costs to sell in the amount of USD 1 million. Gain on disposal in the amount of USD 19 million was recognised in the consolidated income statement.

On 4 July 2019 the Group sold its interest in a subsidiary which provides construction services for a cash consideration of USD 5 million, resulting in a net cash outflow from disposal of the subsidiary in the amount of USD 20 million. Gain on disposal in the amount of USD 2 million was recognised in the consolidated income statement.

22. SHARE CAPITAL

Authorised and issued ordinary shares

At 31 December 2020, 2019 and 2018 the Group's number of authorised and issued ordinary shares was 158,245,476.

Earnings per share

	For the year ended 31 December		
	2020	2019	2018
BASIC EARNINGS PER SHARE (US DOLLARS PER SHARE):	21.4	36.5	19.5

The earnings and weighted average number of shares used in the calculation of earnings per share are as follows:

	For the year ended 31 December		
	2020	2019	2018
PROFIT FOR THE YEAR ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT COMPANY	3,385	5,782	3,085

Weighted average number of shares used in the calculation of basic and diluted earnings per share for the years ended 31 December 2020, 2019 and 2018 was 158,245,476 shares.

At 31 December 2020, 2019 and 2018, the Group had no issued financial instruments, which would have a dilutive effect on earnings per share of ordinary stock.

23. NON-CONTROLLING INTEREST

At 31 December 2020, 2019 and 2018 aggregate financial information relating to the subsidiary, LLC "GRK "Bystrinskoye", that has material non-controlling interest, before any intra-group eliminations, is presented below:

	At 31 December		
	2020	2019	2018
Non-current assets	1,298	1,486	1,222
Current assets	762	407	195
Non-current liabilities	(718)	(824)	(790)
Current liabilities	(67)	(142)	(139)
Net assets	1,275	927	488
NET ASSETS ATTRIBUTABLE TO NON-CONTROLLING INTEREST	656	464	244

	For the year ended 31 December		
	2020	2019	2018
Net profit/(loss) for the year	497	362	(61)
Other comprehensive (loss)/income for the year	(147)	76	(104)
Total comprehensive income/(loss) for the year	350	438	(165)
Profit/(loss) attributable to non-controlling interest	248	181	(31)
OTHER COMPREHENSIVE (LOSS)/INCOME ATTRIBUTABLE TO NON-CONTROLLING INTEREST	(73)	38	(52)

	For the year ended 31 December		
	2020	2019	2018
Cash flows from operating activities	619	302	72
Cash flows used in investing activities	(413)	(252)	(190)
Cash flows from/(used in) financing activities	(215)	(4)	142
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS	(9)	46	24

24. LOANS AND BORROWINGS

	Currency	Fixed or floating interest rate	Average nominal % rate during the year ended 31 December			Maturity	At 31 December		
			2020	2019	2018		2020	2019	2018
Unsecured loans	USD	floating	1.99%	3.75%	3.45%	2021–2028	5,319	3,746	3,837
	RUB	fixed	–	8.30%	8.30%	2020	–	969	864
	EUR	floating	0.85%	0.85%	0.85%	2021–2028	30	30	19
Secured loans	RUB	fixed	9.75%	9.75%	9.75%	2021–2022	8	10	9
Total loans							5,357	4,755	4,729
Bonds	USD	fixed	4.39%	4.88%	5.24%	2022–2025	3,736	4,220	3,472
	RUB	fixed	8.85%	8.85%	11.60%	2024–2026	541	645	216
Total bonds							4,277	4,865	3,688
TOTAL LOANS AND BORROWINGS							9,634	9,620	8,417
Less: current portion due within twelve months and presented as current loans and borrowings							(12)	(1,087)	(209)
NON-CURRENT LOANS AND BORROWINGS							9,622	8,533	8,208

The Group is obliged to comply with a number of restrictive financial and other covenants, including maintaining certain financial ratios and restrictions on pledging and disposal of certain assets.

Changes in loans and borrowings and lease liabilities (refer to Note 25), including interest, for the year ended 31 December 2020 consist of changes from financing cash flows in the amount of USD (167) million, effect of changes in foreign exchange rates of USD (335) million and other non-cash changes of USD 545 million (for the year ended 31 December 2019: changes from financing cash flows in the amount of USD 544 million, effect of changes in foreign exchange rates of USD 164 million, adjustments on IFRS 16 adoption in the amount of USD 204 million and other non-cash changes of USD 505 million and for the year ended 31 December 2018: changes from financing cash flows in the amount of USD (934) million, effect of changes in foreign exchange rates of USD (230) million and other non-cash changes of USD 542 million).

At 31 December 2020 loans were secured by property, plant and equipment with a carrying amount of USD 8 million (31 December 2019: USD 10 million and 31 December 2018: USD 8 million).

25. LEASE LIABILITIES

	Currency	Average borrowing rate during the year ended 31 December, %		Maturity	At 31 December		
		2020	2019		2020	2019	2018
Lease liabilities	RUB	7.37%	8.21%	2021–2099	126	56	–
	USD	4.07%	4.57%	2021–2030	114	148	2
	other	1.56%	2.29%	2021–2024	22	20	20
Total lease liabilities					262	224	22
Less: current lease liabilities					(59)	(44)	(6)
NON-CURRENT LEASE LIABILITIES					203	180	16

At 31 December 2020 lease liabilities with original maturity in excess of 15 years amounted to USD 12 million (31 December 2019: USD 15 million).

26. PROVISIONS

	At 31 December		
	2020	2019	2018
CURRENT PROVISIONS			
Environmental provisions	2,072	–	–
Provision for social commitments	96	51	53
Decommissioning obligations	66	29	21
Tax provision	5	4	2
Other provisions	19	16	1
Total current provisions	2,258	100	77
NON-CURRENT PROVISIONS			
Decommissioning obligations	549	633	316
Provision for social commitments	84	38	49
Environmental provisions	9	–	–
Other provisions	2	3	–
Total non-current provisions	644	674	365
TOTAL	2,902	774	442



	Decommissioning	Environmental provisions	Social commitments	Tax	Other	Total
Balance at 1 January 2018	422	–	96	134	1	653
Accruals	–	–	47	21	2	70
Utilization	(22)	–	(29)	(144)	(3)	(198)
Change in estimates	(21)	–	(2)	–	–	(23)
Unwinding of discount	29	–	5	–	–	34
Effect of translation to presentation currency	(71)	–	(15)	(9)	1	(94)
BALANCE AT 31 DECEMBER 2018	337	–	102	2	1	442
Accruals	187	1	32	4	37	261
Utilization	(18)	(1)	(66)	(1)	(20)	(106)
Change in estimates	81	–	2	–	–	83
Unwinding of discount	30	–	8	–	–	38
Effect of translation to presentation currency	45	–	11	(1)	1	56
BALANCE AT 31 DECEMBER 2019	662	–	89	4	19	774
Accruals	26	2,136	223	1	17	2,403
Utilization	(16)	(48)	(132)	–	(9)	(205)
Change in estimate	17	106	11	–	(6)	128
Unwinding of discount	32	–	5	–	–	37
Effect of translation to presentation currency	(106)	(113)	(16)	–	–	(235)
BALANCE AT 31 DECEMBER 2020	615	2,081	180	5	21	2,902

Significant event – fuel leakage in Norilsk

On 6 July 2020 the Federal Environment Supervision Agency (Rosprirodnadzor) assessed the amount of environmental damages to the water bodies and land as RUB 147.78 billion. (USD 2,113 million at RUB/USD rate at 30 June 2020) and claimed this amount from the Group as voluntary reimbursement. The Group recognised the provision of USD 2,134 million as at 30 June 2020 taking into consideration actual and forecast clean-up and rehabilitation expenses with respective deferred tax benefit of USD 427 million. Based on the interpretation of the Russian tax law and current practice of its application the Group assesses recoverability of deferred tax assets recognised with respect to the environmental provision as probable taking into consideration taxable profit forecasts.

On 10 September 2020 Yenisei interregional administration of Rosprirodnadzor filed the lawsuit to the Krasnoyarsk Arbitrary Court against JSC “Norilsk-Taimyr Energy Company” (JSC “NTEK”) claiming compensation of damages to water bodies and soil caused by diesel fuel spill at HPP-3 in Norilsk for the amount of RUB 147.78 billion (USD 1,943 million at RUB/USD at the date of filing).

On 5 February 2021 the court ordered partial satisfaction of the lawsuit of Rosprirodnadzor. As per the court’s decision, the amount of damages to be compensated equaled RUB 146.177 billion (USD 1,979 million at RUB/USD rate at 31 December 2020). The Group received the complete reasoned judgment of the Court on 13 February 2021 and as of the date the consolidated financial statements are authorised for issue its analysis is on-going. Having regard to its provisional view of the merits of an appeal, the Group’s management considers that it would not be in the best interests of the Group to appeal the judgment. The final decision on the appeal will be made in accordance with all necessary corporate procedures before expiration of the term set by the Russian law for filing of an appeal: one month following the issuance of the complete reasoned decision. If the decision is not appealed by the expiration of the one-month term, the decision will come into force.

As of the reporting date the total expenditure for clean-up and rehabilitation equals RUB 10.6 billion (USD 144 million at RUB/USD rate at 31 December 2020). The environmental provision was increased by this amount in the consolidated financial statements in addition to the amount of environmental damages.

Based on the above, the Group recognised the change in estimates of the environmental provision of USD 102 million included in other operating expenses in the consolidated income statement with respective deferred tax benefit of USD 20 million.

As of the reporting date, the Group recognised utilization of the provision for the incurred clean-up expenses of USD 48 million. Therefore, at 31 December 2020 the amount of the environmental provision recognised within short-term and long-term liabilities of the Group’s consolidated statement of financial position equals USD 2,076 million.

The Group will be updating its assessment of the possible amount of future expenses relating to environmental clean-up and rehabilitation, including their tax treatment.

On 11 February 2021 the Group received a claim from the Ministry for ecology and environmental management of Krasnoyarsk region to voluntarily reimburse damages to wildlife, hunting resources and the respective habitat caused by the HPP-3 incident in Norilsk for the total amount of RUB 494 million (USD 7 million at RUB/USD rate 31 December 2020). The Group is currently analyzing the claim. With respect to damages to water biological resources there are no official claims, lawsuits or regulations filed against the Group as of the date the consolidated financial statements are authorised for issue, therefore the Group did not accrue any provision, as the amount of such liability, if any, cannot be assessed reliably.

All these factors could possibly influence the amount and expected settlement date of the obligations relating to the incident depending on the resolution of the above uncertainties.

Decommissioning obligations and environmental provisions

Key assumptions used in estimation of decommissioning obligations were as follows:

	At 31 December		
	2020	2019	2018
Discount rates Russian entities	4.2% - 7.0%	5.6% - 7.5%	7.7% - 8.9%
Discount rates non-Russian entities	3.64%	7.14%	8.17%
Expected closure date of mines	up to 2057	up to 2060	up to 2068
Expected inflation over the period from 2021 to 2040	2.8% - 4.1%	2.9% - 4.2%	2.9% - 4.1%
Expected inflation over the period from 2041 onwards	2.5%	2.9%	2.9% - 3.0%

Present value of expected cost to be incurred for settlement of decommissioning obligations and environmental provisions was as follows:

	At 31 December		
	2020	2019	2018
Due from second to fifth year	226	275	149
Due from sixth to tenth year	88	124	24
Due from eleventh to fifteenth year	62	102	27
Due from sixteenth to twentieth year	82	64	86
Due thereafter	100	68	30
TOTAL	558	633	316

At 31 December 2019 the Group recognised a provision for expenditure to shutdown certain production facilities located in the Kola Peninsula starting from 2021 (Note 11). The amount of decommissioning obligation was calculated based on the best estimate of the amount and timing of future expenditures included in the detailed asset retirement programme, and accounted for accordingly.

Social commitments

In 2010 the Group entered into multilateral agreements with the Government of the Russian Federation and the Krasnoyarsk Regional Government for construction of pre-schools and other social facilities in Norilsk and Dudinka till 2020, and for resettlement of families currently residing in Norilsk and Dudinka to other Russian regions with more favorable living conditions till 2020. In 2017 the Group entered into agreements with the Zabaikalsky Regional Government for construction and development of industrial, social and other infrastructure till 2026. In 2020 the Group entered into a number of agreements with Regional Governments including revision of current agreements under which the Company took additional financial commitments in respect to social and economic development of the regions including construction of social infrastructure facilities construction in the regions where the Group operates. The provisions are measured at the best estimate of the present value of future expenditures to settle these obligations.

27. TRADE AND OTHER PAYABLES

	At 31 December		
	2020	2019	2018
FINANCIAL LIABILITIES			
Trade payables	267	425	357
Payables for acquisition of property, plant and equipment	242	212	192
Other creditors	116	117	110
Total financial liabilities	625	754	659
NON-FINANCIAL LIABILITIES			
Advances received on contracts with customers	802	952	892
Total non-financial liabilities	802	952	892
TOTAL	1,427	1,706	1,551

The maturity analysis for the Group's financial liabilities that shows the remaining contractual maturities was as follows:

	At 31 December		
	2020	2019	2018
Due within one month	322	260	183
Due from one to three months	246	199	192
Due from three to twelve months	57	295	284
TOTAL	625	754	659

28. EMPLOYEE BENEFIT OBLIGATIONS

	At 31 December		
	2020	2019	2018
Accrual for annual leave	218	206	177
Wages and salaries	178	225	147
Other	27	32	22
Total obligations	423	463	346
Less: non-current obligations	(22)	(70)	(39)
CURRENT OBLIGATIONS	401	393	307

Defined contribution plans

Amounts recognised within continuing operations in the consolidated income statement in respect of defined contribution plans were as follows:

	For the year ended 31 December		
	2020	2019	2018
Pension Fund of the Russian Federation	283	281	278
Mutual accumulated pension plan	6	7	7
Other	5	5	7
TOTAL	294	293	292

29. DERIVATIVE FINANCIAL INSTRUMENTS

At 31 December 2020 the fair value of the cross-currency interest rate swap contracts was presented in non-current and current liabilities in the amount of USD 52 million and USD 84 million respectively (31 December 2019: other non-current financial assets (refer to Note 16) in the amount of USD 101 million and 31 December 2018: non-current liabilities in the amount of USD 61 million).

The fair value of cross-currency interest rate swap contracts (Level 2 of fair value hierarchy) is calculated as the present value of future cash flows discounted at the interest rates applicable to the currencies of the corresponding cash flows and available at the reporting date. The fair value is subject to a credit risk adjustment that reflects the credit risk of the Group and of the other party and is calculated based on credit spreads derived from current tradeable financial instruments (refer to Note 35).

30. DIVIDENDS

Dividends declared and paid in Russian roubles were translated to US dollars using prevailing RUB/USD rates at the declaration date or payment date, respectively, as presented in the table below.

Dividends for the period	Declaration period	Dividends declared			Dividends paid	
		Per share RUB	Per share USD	Total USD million	Payment period	Total USD million
9 months 2020	December 2020	623.35	8.50	1,346	December 2020	1,334
Annual 2019	May 2020	557.20	7.59	1,201	June 2020	1,264
9 months 2019	December 2019	604.09	9.66	1,529	January 2020	1,567
6 months 2019	September 2019	883.93	13.77	2,179	October 2019	2,180
Annual 2018	June 2019	792.52	12.19	1,928	July 2019	1,986
6 months 2018	September 2018	776.02	11.45	1,813	October 2018	1,841
Annual 2017	June 2018	607.98	9.63	1,524	July 2018	1,527

At 31 December 2020 dividends paid by the Company to the shareholders registrar but not transferred to shareholders bank accounts amounted to USD 32 million (refer to Note 19).

31. RELATED PARTIES TRANSACTIONS AND OUTSTANDING BALANCES

Related parties include major shareholders and entities under their ownership and control; associates, joint ventures and joint operation; and key management personnel. The Group defines major shareholders as shareholders, which have significant influence over the Group activities. The Company and its subsidiaries, in the ordinary course of their business, enter into various sale, purchase and service transactions with related parties. Transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Details of transactions between the Group and other related parties are disclosed below.

Transactions with related parties	Sales of goods and services and participating shares		
	For the year ended 31 December 2020	For the year ended 31 December 2019	For the year ended 31 December 2018
Entities under ownership and control of the Group's major shareholders	–	–	7
Associates, joint ventures and joint operation	–	–	–
TOTAL	–	–	7

Transactions with related parties	Purchase of assets and services and other operating expenses		
	For the year ended 31 December 2020	For the year ended 31 December 2019	For the year ended 31 December 2018
Entities under ownership and control of the Group's major shareholders	92	89	64
Associates, joint ventures and joint operation	120	136	86
TOTAL	212	225	150

Social commitments

The Group contributes to mandatory and voluntary social programs and maintains social facilities in the locations in which it operates. The Group's social assets as well as local social programme benefit the community at large and are not normally restricted to the Group's employees.

33. CONTINGENCIES

By their nature, contingencies will only be resolved when one or more future events occur or fail to occur. The assessment of such contingencies inherently involves the exercise of significant judgement and estimates of the outcome of future events.

Litigation

At 31 December 2020 the Group is involved in legal disputes in the ordinary course of its operations, with the probability of their unfavorable resolution being assessed as possible. At 31 December 2020, total claims under unresolved litigation (except legal claims from Rosprirodnadzor which are disclosed in Note 26) amounted to approximately USD 7 million (31 December 2019: USD 14 million and 31 December 2018: USD 13 million).

Taxation contingencies in the Russian Federation

The Russian Federation currently has a number of laws related to various taxes imposed by both federal and regional governmental authorities. Applicable taxes include value-added (VAT), income tax, mandatory social security contributions, mineral extraction tax and other levies. Tax returns, together with other legal compliance areas (for example, customs and currency control matters), are subject to review and investigation by government authorities, which are authorised by law to impose severe fines, penalties and interest charges. Generally, tax returns remain open and subject to inspection for a period of three years following the fiscal year.

While management of the Group believes that it has recognised adequate provisions for tax liabilities based on its interpretation of current and previous legislation, the risk remains that the tax authorities in the Russian Federation could take differing positions with regard to interpretive issues. This uncertainty may expose the Group to additional taxation, fines and penalties.

Transfer pricing legislation enacted in the Russian Federation starting from 1 January 2012 provides for major modifications making local transfer pricing rules closer to OECD guidelines, but creating additional uncertainty in practical application of tax legislation in certain circumstances.

A very limited number of publicly available transfer pricing court cases in Russia does not provide enough certainty as to the approach to applying transfer pricing rules in Russia. The impact of any transfer pricing assessment may be material to financial statements of the Group, however, the probability of such impact cannot be reliably assessed.

These transfer pricing rules provide for an obligation for the taxpayers to prepare transfer pricing documentation with respect to controlled transactions and prescribe the basis and mechanisms for accruing additional taxes and interest in case prices in the controlled transactions differ from the market level.

Current Russian transfer pricing legislation requires transfer pricing analysis for the majority of cross-border intercompany and major domestic intercompany transactions. Starting from 2019, transfer pricing control, as a general rule, is applied to domestic transactions only if both criteria are met: the parties apply different tax rates, and the annual turnover of transactions between them exceeds RUB 1 billion (USD 14 million at RUB/USD rate at 31 December 2020).

Russian tax authorities may review prices used in intra-group transactions, in addition to transfer pricing audits. They may assess additional taxes if they conclude that taxpayers have received unjustified tax benefits as a result of those transactions.

Russian tax authorities continue to exchange transfer pricing as well as other tax related information with tax authorities of other countries. This information may be used by the tax authorities to identify transactions for additional in-depth analysis.

Environmental matters

The Group is subject to extensive federal, state and local environmental controls and regulations in the countries in which it operates. The Group's operations involve pollutant emissions to air and water bodies as well as generation and disposal of production waste.

The Group periodically evaluates its environmental provisions pursuant to the environmental legislation in the countries, in which it operates. Such provisions are recognised in the consolidated financial statements as and when obligating events occur. Management of the Group believes that there are no material obligations for environmental damage other than those recognised in the consolidated financial statements. However, potential liabilities, which could arise due to changes in environmental laws and regulations, cannot be reliably estimated but may be material. The Group is unable to predict the timing or extent to which environmental laws and regulations may change. Such change, if it occurs, may require that the Group modernise technology to meet more stringent standards.

Russian Federation risk

As an emerging market, the Russian Federation does not possess a fully developed business and regulatory infrastructure including stable banking and judicial systems which would generally exist in a more mature market economy. The economy of the Russian Federation is characterised by a currency that is not freely convertible outside the country, currency controls, low liquidity levels for debt and equity markets, and continuing inflation. As a result, operations in the Russian Federation involve risks that are not typically associated with those in more developed markets. Stability and success of Russian economy and the Group's business mainly depend on the effectiveness of economic measures undertaken by the government as well as the development of legal system.

Starting 2014, the United States of America, the European Union and some other countries have imposed and expanded economic sanctions against a number of Russian individuals and legal entities. The imposition of the sanctions has led to 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 certain restrictions for operations with individuals and legal entities under sanctions, including financing and investment activities. Management assesses the changes in the Russian business environment did not significantly affect the operations, financial results and the financial position of the Group as of the date of issue of these consolidated financial statements. The longer-term effects of the imposed and possible additional sanctions are difficult to determine.

Impact of the COVID-19 outbreak on the Group's operations

On 11 March 2020, the World Health Organization declared COVID-19 outbreak a pandemic. The spread of COVID-19 led to lockdown and business disruption in many countries, which triggered increased volatility of financial markets, including commodity markets, and general economic uncertainty.

The Group operates primarily in exploration, extraction, refining of ore and nonmetallic minerals and sale of base and precious metals produced from ore, which have not been subject to significant adverse impact by the outbreak of coronavirus. Revenue from metal sales increased during the year ended 31 December 2020, with the relative decrease of demand in certain markets for the Group's products offset by higher market prices. Respectively finished goods balance increased at the end of the reporting period.

The activities of the Group, including products deliveries, were not interrupted. According to the analysis of the Group's financial position, its liquidity and access to debt financing, including compliance with debt covenants, the above factors did not have a material effect on the Group's financial stability, hence the management of the Group believes that there is no uncertainty related to the Group's going concern.

Based on the results of the analysis of possible outcomes and their consequences for the economic environment and operations of the Group, the Group's management has developed and implemented a number of measures to ensure normal operating activities, including:

- administrative arrangements to ensure timely response to threats, caused by COVID-19, continuity of production, procurement and marketing of the Group's products and protection of health and safety of employees;
- establishing remote workplaces for employees in administrative functions, sales and procurement departments whose presence in the office is not necessary;
- training employees in operations to ensure strict compliance with work safety measures including social distancing;
- procurement of supplies to ensure compliance with the requirements of government authorities relating to wearing personal protective equipment and the use of antiseptics;
- providing financial support to the regional healthcare, including significant funding allocated to healthcare institutions through procurement of necessary medical equipment and medicines to prevent further spread of the epidemic;
- uninterrupted deliveries of supplies for operating and investing activities as per arrangements with the Group suppliers.

For the year ended 31 December 2020, the Group spent USD 157 million net of VAT to prevent and combat spread of COVID-19, including USD 123 million recognised as expenses for the year ended 31 December 2020, which are presented in the following line items of the consolidated income statement:

Line items of consolidated income statement for the year ended 31 December 2020		USD million
Cost of metal sales	Labour	45
	Materials and supplies	5
	Sundry costs	5
Cost of other sales	Labour	11
General and administrative expenses	Staff costs and other costs	8
Other operating expenses	Social expense	49

The remaining amount as at 31 December 2020 included capital expenditures of USD 12 million and inventories and prepayments for supplies in the amount of USD 22 million. The Group also granted rent waivers to businesses in the regions of its operations in the amount of USD 2 million.

Taking into account the above-mentioned measures and the Group's current operational and financial performance as well as other currently available public information, Group management does not expect a significant adverse impact on the financial position and operating results of the Group in a short-term perspective. The management will continue to monitor the situation closely and will implement necessary measures to respond to possible adverse events, as they occur.

34. FINANCIAL RISK MANAGEMENT

Capital risk management

The Group manages its capital in order to safeguard the Group's ability to continue as a going concern and to maximise the return to shareholders through the optimisation of debt (long and short-term borrowings) and equity (share capital and retained earnings) structure.

Management of the Group regularly reviews its level of leverage, calculated as the ratio of Net Debt to EBITDA, to ensure that it is in line with the Group's financial policy aimed at preserving investment grade credit ratings.

The Company maintains not lower than investment grade ratings, assigned by international rating agencies S&P's, Fitch and Moody's on BBB-/BBB-/Baa2 investment grade level.

Financial risk factors and risk management structure

In the normal course of its operations, the Group is exposed to a variety of financial risks: market risk (including interest rate and currency risk), credit risk and liquidity risk. The Group has an explicit risk management structure aligned with internal control procedures that enable it to assess, evaluate and monitor the Group's exposure to such risks.

Interest rate risk

Interest rate risk relates to changes in interest rates will adversely impact the financial results of the Group. The Group's interest rate risk arises from borrowings at floating rates.

The Group performs thorough analysis of its interest rate risk exposure regularly, primarily the sensitivity analysis of basic floating rate. In order to minimize and manage the risk, the Group carries out arrangements to maintain the structure of loans and borrowings with fixed and floating interest rates. The Group also considers impact of this factor together with macroeconomic environment changes, particularly stage of economic growth and increase in prices, generally leading to increase of base rates.

Management believes that the Group's exposure to interest rate risk fluctuations is at an acceptable level.

Currency risk

Currency risk relates to changes in the fair value or future cash flows of a financial instrument denominated in foreign currency because of changes in exchange rates.

The major part of the Group's revenue and related trade accounts receivable are denominated in US dollars while expenditure is primarily incurred in Russian roubles and therefore the Group is exposed to fluctuation of USD exchange rate.

Currency risk arising from other currencies is assessed by management of the Group as immaterial.

The currency risk is managed by analysis of currency position, efficiency control of currency exchange operations and the most possible matching of cash inflows and cash outflows denominated in the same currency.

The Group uses in appropriate cases derivative financial instruments primarily cross-currency interest rate swap to reduce exposure to currency risk by balancing revenue cash flows denominated in US Dollar and liabilities denominated in Russian Rouble.

The carrying amounts of monetary assets and liabilities denominated in foreign currencies other than functional currencies of the individual Group entities at 31 December 2020, 2019 and 2018 were as follows:

	At 31 December 2020			At 31 December 2019			At 31 December 2018		
	USD	EUR	Other currencies	USD	EUR	Other currencies	USD	EUR	Other currencies
Cash and cash equivalents	4,940	19	110	1,227	35	69	1,234	13	74
Trade and other receivables	638	15	–	398	13	4	265	3	4
Other assets	32	–	12	59	2	10	380	73	8
Total assets	5,610	34	122	1,684	50	83	1,879	89	86
Trade and other payables	277	99	7	213	66	8	249	114	10
Loans and borrowings	9,055	30	–	7,966	30	–	7,308	19	3
Lease liabilities	114	20	2	147	3	2	–	–	–
Other liabilities	16	2	–	11	16	–	14	19	–
TOTAL LIABILITIES	9,462	151	9	8,337	115	10	7,571	152	13

Given that the Group's exposure to currency risk for the net USD-denominated monetary liabilities is offset by the revenue denominated in USD, management believes that the Group's exposure to currency risk is at an acceptable level.

The sensitivity analysis of interest rate and currency risks

	Increase/(decrease) of profit before tax for the year ended 31 December		
	2020	2019	2018
INTEREST RATE RISK			
1 p.p. RUB rate increase impact	(18)	(33)	(20)
1 p.p. USD rate increase impact	(34)	(6)	(15)
CURRENCY RISK			
USD 20% STRENGTHENING AGAINST RUB	(1,034)	(1,594)	(1,315)

The sensitivity analysis is prepared including cross-currency interest rate swap effects and assuming that the amount of loans and borrowings at floating rates outstanding at the reporting date was outstanding for the whole year.

Credit risk

Credit risk refers to the risk that a debtor will default on its contractual obligations resulting in a financial loss to the Group. Credit risk arises from cash and cash equivalents, bank deposits as well as credit exposures to customers, including outstanding uncollateralised trade and other receivables as well as loans receivable.

The Group minimizes the credit risk through its allocation to a large number of customers and respective credit limits approval based on customers financial position analysis in addition to trade financing and insurance instruments, bank guarantees and documentary forms of payment.

The Group assesses customers creditworthiness using current and forecasted credit rating by international credit-rating agencies. In case of their absence, the Group performs the assessment of a customer's financial sustainability and general creditworthiness through analysis of its financial measures and financial statements of customers for several reporting periods.

The outstanding balances with 5 financial institutions and 5 largest customers are presented below. The banks have a minimum of BB+ credit rating.

Cash and cash equivalents	Outstanding balance at 31 December		
	2020	2019	2018
Cash and cash equivalents	2,512	821	417
Bank A	800	715	402
Bank B	712	485	214
Bank C	170	162	75
Bank D	160	152	64
Bank E	837	449	216
Other	5,191	2,784	1,388
TOTAL			
Trade and other receivables	108	31	50
Customer A	32	24	38
Customer B	26	22	34
Customer C	21	21	20
Customer D	21	21	15
Customer E	329	243	47
Other	537	362	204
Total			

The Group is not economically dependent on a limited number of customers because the majority of its products are industrial metals traded on the world commodity markets. Metal and other sales to the Group's customers are presented below:

	For the year ended 31 December 2020		For the year ended 31 December 2019		For the year ended 31 December 2018	
	Revenue USD million	%	Revenue USD million	%	Revenue USD million	%
Largest customer	2,541	16	2,363	17	1,564	13
Next 9 largest customers	5,596	36	4,176	31	3,461	30
Total 10 largest customers	8,137	52	6,539	48	5,025	43
Remaining customers	7,408	48	7,024	52	6,645	57
TOTAL	15,545	100	13,563	100	11,670	100

Management of the Group believes that with the exception of the cash and cash equivalents in banks indicated above there is no significant concentration of credit risk.

The following table provides information about the exposure to credit risk for financial assets:

	Note	At 31 December		
		2020	2019	2018
Cash and cash equivalents	20	5,191	2,784	1,388
Derivative financial instruments	16	1	106	10
Loans and other long-term receivables	16	113	160	187
Trade and other receivables	19	537	362	204
Cover for irrevocable letters of credit	15	14	52	197
Bank deposits not included in cash and cash equivalents	16	11	8	91

Liquidity risk

Liquidity risk is the risk that the Group will not be able to settle all liabilities as they fall due.

The Group's Centralised treasury continuously monitors actual and forecast cash flow and performs analysis of maturity profiles of financial liabilities to take in time appropriate actions to minimize possible negative effects. These actions include liquidity management and proactive management of credit portfolio to minimise short term debt and maintain weighted average period of credit portfolio.

Liquidity management includes detailed budgeting procedures, maintenance of daily payment position for each currency and bank account for 30 days period and monthly planning of the Group's finance model for a period up to 12 months.

The Group manages liquidity risk by maintenance of liquid funds level and a portfolio of confirmed credit lines and overdrafts with numerous banks, sufficient to cover possible revenue fluctuations based on price, currency and interest rate risks. In particular, the Group had available committed bank facilities for the management of its day to day liquidity requirements of USD 3,313 million at 31 December 2020 (31 December 2019: USD 5,044 million and 31 December 2018: USD 4,290 million).

The following table contains the maturity profile of the Group's borrowings and lease liabilities (maturity profiles for trade and other payables are presented in note 27) based on contractual undiscounted payments, including interest:

At 31 December 2020	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there-after
FIXED RATE BANK LOANS AND BORROWINGS							
Principal	4,299	4	1,504	1,000	1,088	500	203
Interest	656	213	203	106	86	36	12
	4,955	217	1,707	1,106	1,174	536	215
FLOATING RATE BANK LOANS AND BORROWINGS							
Principal	5,387	7	345	2,558	2,055	400	22
Interest	312	105	103	74	29	1	–
	5,699	112	448	2,632	2,084	401	22
LEASE OBLIGATION							
Lease obligation	288	61	61	48	41	26	51
CROSS-CURRENCY INTEREST RATE SWAP							
Payable	1,364	938	12	12	402	–	–
Receivable	(1,305)	(893)	(24)	(24)	(364)	–	–
	59	45	(12)	(12)	38	–	–
TOTAL	11,001	435	2,204	3,774	3,337	963	288

At 31 December 2019	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there- after
FIXED RATE BANK LOANS AND BORROWINGS							
Principal	5,860	985	974	1,505	1,000	1,154	242
Interest	1,050	346	277	200	103	82	42
	6,910	1,331	1,251	1,705	1,103	1,236	284
FLOATING RATE BANK LOANS AND BORROWINGS							
Principal	3,797	104	1,204	1,541	833	100	15
Interest	346	143	118	68	16	1	–
	4,143	247	1,322	1,609	849	101	15
LEASE OBLIGATION							
Lease obligation	274	55	48	44	41	37	49
CROSS-CURRENCY INTEREST RATE SWAP							
Payable	1,415	51	938	12	12	402	
Receivable	(1,665)	(109)	(1,065)	(29)	(29)	(433)	
	(250)	(58)	(127)	(17)	(17)	(31)	
TOTAL	11,077	1,575	2,494	3,341	1,976	1,343	348

At 31 December 201	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there- after
FIXED RATE BANK LOANS AND BORROWINGS							
Principal	4,595	5	987	871	1,507	1,003	222
Interest	1,022	279	280	213	142	46	62
	5,617	284	1,267	1,084	1,649	1,049	284
FLOATING RATE BANK LOANS AND BORROWINGS							
Principal	3,883	210	957	1,202	1,302	202	10
Interest	363	127	123	77	33	3	–
	4,246	337	1,080	1,279	1,335	205	10
CROSS-CURRENCY INTEREST RATE SWAP							
Payable	1,008	41	41	926			
Receivable	(1,067)	(72)	(72)	(923)			
	(59)	(31)	(31)	3			
TOTAL	9,804	590	2,316	2,366	2,984	1,254	294

35. FAIR VALUE OF FINANCIAL INSTRUMENTS

Financial instruments that are measured at fair value subsequent to initial recognition, are grouped into Levels 1 to 3 of fair value hierarchy based on the degree to which their fair value is observable as follows:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the assets or liability, either directly or indirectly; and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data.

Management believes that the carrying value of financial instruments such as cash and cash equivalents (refer to note 20), other financial assets (refer to note 16), trade and other accounts receivable (refer to note 19) and current accounts payable (refer to note 27) and lease liabilities (refer to note 25) either approximates to their fair value or may not significantly differ from it.

At 31 December 2020 other current liabilities classified as measured at fair value through profit or loss include a liability on the execution of a put option related to transactions with owners of non-controlling interest, holding 13.3% of share capital in GRK Bystrinskoe in the amount of USD 428 million (non-current liability at 31 December 2019: USD 210 million and at 31 December 2018: USD 146 million). Reclassification to current liabilities was carried out due to the fact that the put option is exercisable on demand at the reporting date. The fair value of the liability is determined based on the discounted cash flow of the asset less net debt taking into account the amount of working capital at the reporting date and application of lack of control discount reflecting the ownership interest. The fair value estimate is within Level 3 of fair value hierarchy. The most significant estimates and assumptions used in determination of the fair value at 31 December 2020, 2019 and 2018 are as follows:

- Future cash flows are forecast up to 2044 based on budgeted amounts, taking into account actual results for the previous years as well as capital expenditure budgets;
- Prices for metal concentrates (gold, copper) and iron ore are estimated using consensus forecasts for commodity prices;
- Metals concentrate (copper, gold and iron ore concentrates) production and sales forecast is based on production reports available at the reporting date and the life of mine plan taking into account the current production capacity and current estimates of metal content in ore reserves;
- The inflation and exchange rate forecasts are based on Oxford Economics data, consistent with a consensus forecast of investment banks. Forecast for exchange rate is made based on expected RUB and USD inflation indices.
- An after-tax nominal RUB discount rate of 13.8% (31 December 2019: 14.3%, 31 December 2018: 16.34%) was estimated by reference to the weighted average cost of capital and management's estimates of the risks specific to the asset.

Change in the fair value of the liability on the execution of the put option for 2020 amounted up to USD 262 million and was presented in the financial costs of the consolidated income statement (31 December 2019: USD 64 million and 31 December 2018: USD 46 million). The estimation of fair value of the liability on the execution of the put option is sensitive to changes in the number of key assumptions. The sensitivity analysis at the reporting date is disclosed in the table below:

Increase in fair value of the liability on the execution of the put option	Change of parameters			
	Decrease in discount rate by 1 p.p.	Weakening of RUB/USD exchange rate by 10%	Increase of copper price by 10%	Increase of gold price by 10%
At 31 December 2020	25	70	37	36
At 31 December 2019	15	68	33	30
At 31 December 2018	6	44	22	18

The information below presents financial instruments not measured at fair value, including loans and borrowings (refer to note 24), trade and other long-term payables (refer to note 27).

At 31 December 2020
At 31 December 2019
At 31 December 2018

	Carrying value	Fair value Level 1	Carrying value	Fair value Level 1	Carrying value	Fair value Level 1
Fixed rate bonds	4,277	4,512	4,865	5,100	3,688	3,705
TOTAL	4,277	4,512	4,865	5,100	3,688	3,705
Loans, including:	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2
Floating rate loans	5,349	5,309	3,776	3,814	3,856	3,654
Fixed rate loans	8	8	979	1,007	873	861
TOTAL	5,357	5,317	4,755	4,821	4,729	4,515
	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2
Trade and other long-term payables	32	32	37	37	200	210
TOTAL	32	32	37	37	200	210

The fair value of financial liabilities presented in table above is determined as follows:

- the fair value of corporate bonds was determined as their market price at the reporting dates;
- the fair value of floating rate and fixed rate loans and borrowings at 31 December 2020, 2019 and 2018 was determined as the present value of future cash flows (principal and interest), discounted at the market interest rates, which are determined as of the reporting date based on the currency of a loan, its expected maturity and credit risks attributable to the Group;
- the fair value of trade and other long-term payables at 31 December 2020, 2019 and 2018 was determined as the present value of future cash flows, discounted at the best management estimation of market interest rates.

36. INVESTMENTS IN SIGNIFICANT SUBSIDIARIES

Subsidiaries by operating segments	Country	Nature of business	Effective % held		
			31 December 2020	31 December 2019	31 December 2018
GMK GROUP					
JSC "Norilsky Kombinat"	Russian Federation	Rental of property	100	100	100
JSC "Taimyrgaz"	Russian Federation	Gas extraction	-	-	100
JSC "Norilskgazprom"	Russian Federation	Gas extraction	100	100	100
JSC "Norilsktransgaz"	Russian Federation	Gas transportation	100	100	100
JSC "Taimyrenergo"	Russian Federation	Rental of equipment	-	-	100
JSC "NTEK"	Russian Federation	Electricity production and distribution	100	100	100
LLC "ZSC"	Russian Federation	Construction	100	100	100
LLC "Norilsknickelremont"	Russian Federation	Repairs	100	100	100
LLC "Norilskiy obespechivaushyi complex"	Russian Federation	Production of spare parts	100	100	100

MEASUREMENT UNITS AND CURRENCY EXCHANGE RATES

MEASUREMENT UNITS

LENGTH

1 km	0.6214 mi
1 m	3.2808 ft
1 cm	0.3937 in
1 mi	1.609344 km
1 foot	0.3048 m
1 in	2.54 cm

AREA

1 sq m	10.7639 sq ft
1 sq km	0.3861 sq mi
1 ha	2.4710 acres
1 sq ft	0.09290304 sq m
1 sq m	2.589988 sq km
1 acre	0.4046873 ha

WEIGHT

1 kg	2.2046 lb
1 metric tonne	1,000 kg
1 short tonne	907.18 kg
1 troy ounce	31.1035 g
1 lb	0.4535924 kg
1 g	0.03215075 oz t

CURRENCY EXCHANGE RATES IN 2016–2020

Index	2016	2017	2018	2019	2020
Average rate Russian Rouble / US Dollar	67.03	58.35	62.71	64.74	72.15
Average effective rate Russian Rouble / US Dollar (for CAPEX)	66.25	58.32	63.88	64.40	73.15

GLOSSARY

Anode. Crude metal (nickel or copper) obtained from anode smelting and fed for electrolytic refining (electrolysis) whereby it is dissolved.

Refinement. The process of extracting high purity precious metals through their separation and removal of impurities.

Rich ores. Ores with high sulphide content (over 70%) and the following metal grades: 2–5% for nickel, 2–25% for copper, and 5–100 g/t for platinum group metals.

Probable ore reserves. Estimated based on the economically mineable part of indicated and, in some circumstances, measured mineral resources, including possible dilution and losses during mining operations.

Disseminated ores. Ores containing 5% to 30% sulphides, with the following metal grades: 0.2–1.5% for nickel, 0.3–2% for copper, and 2–10 g/t for platinum group metals.

Leaching. Selective dissolution of one or several components of the processed solid material in organic solvents or water solutions of inorganic substances. Kinds of leaching: acid leaching (leaching with acids as reagents), chlorine leaching.

Proven ore reserves. Estimated based on the economically mineable part of measured mineral resources, including possible dilution and losses during mining operations.

Metal extraction. The ratio between the quantity of a component extracted from the source material and its quantity in the source material (as a percentage or a fraction).

Cathode. Pure metal (nickel or copper) obtained as a result of electrolytic refining of anodes.

Cake. Solid residue from filtering pulp during leaching of ores, concentrates or metallurgical intermediates, and purification of processing solutions.

Conversion. Oxidation process to turn matte into converter matte (in smelting copper-nickel concentrates) or blister copper (in smelting copper concentrates) and remove slag (carbon, sulphur, iron and other impurities).

Concentrate. A product of ore concentration with a high grade of the extracted mineral, which gives its name to the concentrate (copper, nickel, etc.).

Cuprous ores. Ores containing 20% to 70% sulphides, with the following metal grades: 0.2–2.5% for nickel, 1.0–15.0% for copper, 5–50 g/t for platinum group metals.

Roasting. Heating ore to high temperatures to trigger chemical changes that enable subsequent metal recovery processes.

Concentration. Artificial improvement of metallurgical feedstock mineral grades by removal of a major portion of waste rock not containing any valuable minerals.

Oxide. A compound of a chemical element with oxygen.

Tailings pit. A complex of hydraulic structures used to receive and store mineral waste / tailings.

Vanyukov furnace. An autogenous smelter for processing concentrates, where smelting is performed in a bath of slag and matte, with intensive injection of air-oxygen mixture. The heat from oxidation reactions is actively used in the process.

Flash smelter. An autogenous smelter for processing dry concentrates, where the smelted substance is finely ground feedstock mixed with a gaseous oxidiser (air, oxygen), which holds melted metal particles suspended. The heat from oxidation reactions is actively used in the process.

Fluidised bed furnace. A furnace where solid particles are intensively mixed under a fluidising impact of heated gas (air, oxygen or flue gases) flowing through the bed of grainy material (powder, granules).

Pyrrhotite concentrate. By-product of copper-nickel ore concentration.

Smelting. Pyrometallurgical process carried out at temperatures that ensure complete melting of the processed material.

Sublevel caving. An underground mining method in which ore blocks are developed from top to bottom via sublevels, and ore is extracted by blasting or causing sublevels to cave in. The voids formed after extraction get filled with fractured rock.

Pulp. A mixture of finely ground rock with water or a water solution.

Ore. Natural minerals containing metals or their compounds in economically valuable amounts and forms.

Mine. A mining location for extraction of ores.

Thickening. Separation of liquid (water) and solid particles in dispersion systems (pulp, suspension, colloid) based on natural gravity settling of solid particles in settlers and thickeners, or centrifugal settling of solid particles in hydrocyclones.

Metal grade. The ratio between the weight of metal in the dry material and the total dry weight of the material expressed as a percentage or grammes per tonne (g/t).

Sulphides. Compounds of metals and sulphur.

Drying. Removal of moisture from concentrates performed in designated drying furnaces (to a moisture level below 9%).

Tolling agreement. An agreement to process foreign feedstock with subsequent shipping of finished product. The feedstock and end product are exempt from customs duties.

Converter matte. A metallurgical intermediate produced as a result of matte conversion. Depending on the chemical composition, the following types of converter matte are distinguished: copper, nickel and copper-nickel.

Filtration. The process of reducing the moisture level of the pulp by forcing it through a porous medium.

Flotation. A concentration process where specific mineral particles suspended within the pulp attach to air bubbles. Poorly wettable mineral particles attach to the air bubbles and rise through the suspension to the top of the pulp, producing foam, while well wettable mineral particles do not attach to the bubbles and remain in the pulp. This is how the minerals are separated.

Tailings. Waste materials left over after concentration processes and containing mostly waste rock with a minor amount of valuable minerals.

Ore mixture. A mixture of materials in certain proportions needed to achieve the required chemical composition of the end product.

Slag. Melted or solid substance with a varying composition that covers the surface of a liquid product during metallurgical processes (resulting from ore mixture melting, melted intermediate processing and metal refining) and includes waste rock, fluxes, fuel ash, metal sulphides and oxides, and products of interaction between the processed materials and lining of melting units.

Sludge. Powder product containing precious metals settling during electrolysis of copper and other metals.

Matte. Intermediate product in the form of an alloy of sulphides of iron and non-ferrous metals with a varying chemical composition. Matte is the main product accumulating precious metals and metal impurities the feedstock contains.

Electrolysis. A series of electrochemical reduction-oxidation reactions at electrodes immersed in an electrolyte as a result of passing of an electric current from an external source.

Electrowinning. Electrodeposition of metal from ores that have been put in solution. Ore or concentrate is leached with agents that dissolve metal-containing minerals or the entire material, so that the metal is deposited on the cathode. The electrolyte is typically reused in the process. The end product is high-purity metal cathode.

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