

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2021, 2020 AND 2019

US Dollars million

1. GENERAL INFORMATION

Organisation and principal business activities

Public Joint Stock Company "Mining and Metallurgical Company "Norilsk Nickel" (the "Company" or PJSC "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 37.

Major production facilities of the Group are located on Russia's Taimyr and Kola Peninsulas and in the Zabaikalsky Territory, 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 significantly 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 the Russian Federal Law No 208-FZ On consolidated financial statements ("208-FZ") which was adopted on 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 as at and for the years ended 31 December 2020 and 2019.

Adoption of new and revised standards and interpretations during the year ended 31 December 2021

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

Amendments related to interest rate benchmark reform:

- IFRS 4 Insurance Contracts (amended);
- IFRS 7 Financial Instruments: Disclosures (amended);
- IFRS 9 Financial Instruments (amended);
- IFRS 16 Leases (amended);
- IAS 39 Financial Instruments: Recognition and Measurement (amended).

Other amendments:

- IFRS 16 Leases (amended).

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 financial 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 2019

The Group initially adopted IFRS 16 Leases from 1 January 2019 in accordance with the modified retrospective approach.

In accordance with modified retrospective approach as of the date of initial application:

- for leases previously classified as operating lease in line with IAS 17 Leases lease liabilities were recognised at the present value of the remaining lease payments, discounted using the weighted average incremental borrowing rate at that date (at 1 January 2019: 5.55% per annum);

- right-of-use assets were recognised in the amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to the respective lease contracts.

On the initial application of IFRS 16 Leases the Group recognised additional lease liabilities (both current and non-current) in the amount of USD 204 million. These leases had been classified as operating lease applying IAS 17 Leases and had not been recognised as lease liabilities before 1 January 2019.

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

- IFRIC 23 Uncertainty over Income Tax Treatments;
- IFRS 9 Financial Instruments (amended);
- IAS 28 Investments in Associates and Joint Ventures (amended);
- IAS 19 Employee Benefits (amended);
- Annual Improvements to IFRSs 2015-2017 Cycle.

Standards and interpretations issued but not yet effective

The Group did not early adopt any standard, interpretation or amendment that had been issued but was not yet effective.

Standards and Interpretations	Effective for annual periods beginning on or after
IAS 16 Property, plant and equipment (amended)	1 January 2022
IAS 37 Provisions, contingent liabilities and contingent assets (amended)	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
IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (amended)	1 January 2023
IAS 12 Income Taxes (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

At 31 December 2021 management presented social liabilities as a separate item in the consolidated statement of financial position (previously presented in Provisions). Information at 31 December 2020 and 2019 was reclassified to conform with the current period presentation (Notes 26 and 27).

At 31 December 2021 management reassessed classification of certain cost items in cost of other sales, general and administrative expenses, and selling and distribution expenses. Information for the years ended 31 December 2020 and 2019 was 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 share of changes in net assets since the date of the business 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 equity.

When the Group loses control of a subsidiary it derecognises the assets and liabilities and related equity components of the former subsidiary. Any resulting 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 arising from 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, undertaken and new liabilities and the equity instruments issued by the Group at the date of acquisition in exchange for control over 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 Federal Law 208-FZ, which use the Russian Rouble as the presentation currency.

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 exchange differences resulting 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 the goods are delivered. A gain or loss on forward contracts expected to be settled by physical delivery or on a net basis is 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 promised goods or a service to a customer and the customer pays for that goods or service is one year or less.

Certain contracts are provisionally priced so that price is not settled until a predetermined future date, as of which the delivery price is settled based on the market price (contracts with quotation period). Revenue from these transactions is initially recognised at the market price at the date of sale. Price adjustments under provisionally priced contracts are recognised 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 a 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

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.

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.

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 subsidised housing programmes for employees 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 benefit 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 in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. 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 each reporting date 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

Mining assets

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

- acquiring mining and exploration licences;
- developing new mines;
- estimating revised content of minerals in the existing ore bodies, which are being developed;
- expanding capacity of a mine.

Mine development costs include directly attributable finance costs capitalised during mine development.

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

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

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 measured at cost less accumulated depreciation and impairment losses. Non-mining assets may include property, plant and equipment used both in operations directly and to provide social services in the regions where the Group operates.

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, facilities and infrastructure
2 – 50 years
- machinery, equipment and transport
2 – 31 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 plants, infrastructure, machinery and equipment, including:

- advances given for purchases of property, plant and equipment and materials acquired for construction of buildings, processing plants, infrastructure, machinery and equipment;
- irrevocable letters of credit opened for future fixed assets deliveries and secured with deposits placed in banks;
- directly attributable finance costs capitalised during construction.

Depreciation of these assets begins when they are available for use and are in the location and condition necessary for them 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 recognised 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 non-current assets, excluding goodwill

At each reporting date, the Group analyses the triggers of impairment of its non-current 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 or 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. The cost of production includes export custom duties incurred before a point of time when control over the asset is transferred to a customer. By-products are initially measured at net realisable value, based on current market prices. These estimates take into consideration fluctuations of price or cost directly relating to events after the reporting date, to the extent that such events confirm conditions existing at the end of the reporting 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, given its stage of completion, less allowance for adjustment to net realisable value. The change in the allowance 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 directly attributable 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 categories:

- financial assets at amortised cost;
- financial assets at fair value through other comprehensive income;
- 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 directly attributable 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;
- 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 measured at fair value 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;
- 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 at fair value through other comprehensive income are classified by the Group 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 for which credit risk 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 the 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 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 overdue 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 respective allowance. 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 if 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 the Group's economic benefits will be required to settle the obligation, and the amount of the obligation can be reliably estimated. If, in the course of discharging an obligation, the Group recognises property, plant and equipment, then this settlement does not result in an outflow of the Group's resources and, therefore, no provision is recognised.

Provisions may be recognized in respect of the Group social, environmental, asset decommissioning or other obligations, and are presented in these consolidated financial statements accordingly. In particular, the Group presents social provisions together with other liabilities related to its social expenditure as a separate item Social Liabilities in the consolidated statement of financial position.

The amount recognised as a provision is the best estimate of the expenditure 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 and are 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 may include expenditure for remediation of the damage to the environment, including land and water bodies clean-up and rehabilitation costs, restoration of biological resources, settlement of legal claims and environmental damages, fines and penalties imposed by government authorities in respect of the environmental incidents.

5. CRITICAL

ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In preparation of the consolidated financial statements the Group's management necessarily 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. Estimates and assumptions do require management judgement based on historical experience, current and expected economic conditions, and all other available information. Actual results may differ from such estimates. Key estimates and assumptions made by the Group's management are disclosed below or elsewhere in the notes to the consolidated financial statements, when applicable.

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

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

Useful economic life of property, plant and equipment

The factors, that may affect the estimation of the life of mine, which determines useful economic life 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;
- changes in capital, operating, mining, processing and decommissioning costs, discount rates and foreign exchange rates that 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 benefits 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 in full or in part. 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 for decommissioning and land restoration costs are recognised based on discounted present values 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 programmes. 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 relate to the environmental obligation.

Actual costs incurred in future periods may differ materially from the amounts of the provisions. Additionally, future changes to environmental laws and regulations, life of mine estimates and discount rates, court decisions and government actions may affect the carrying amount of these provisions.

Income taxes

The Group is subject to income taxes in numerous jurisdictions. Significant judgement is required in determining provision for income taxes paid in various jurisdictions, due to the complexity of legislation. 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 recognised, 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, the Group's operational plan, expiration of tax losses carried forward, and tax planning strategies. If actual results differ from these estimates or if these estimates are to be adjusted in future periods, the financial position, results of operations and cash flows of the Group may be affected.

6. SEGMENT INFORMATION

Operating segments are based on 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 on Taimyr Peninsula. GMK Group metal sales to external customers include metal volumes produced from semi-products purchased from the South Cluster and GRK Bystrinskoye segments. Intersegment revenue from metal sales includes primarily sale of semi-products

to the KGMK Group segment for further processing. GMK Group's other sales to external customers primarily include revenue from energy and utilities services provided on Taimyr Peninsula.

- South Cluster segment includes certain ore mining and processing operations located on Taimyr Peninsula. Intersegment revenue from metal sales includes sale of semi-products to GMK Group for further processing. The South Cluster segment revenue from other sales includes intersegment ore processing services under tolling arrangements provided to the GMK Group segment.
- KGMK Group segment includes ore mining and processing operations, metallurgy operations, energy, and exploration activities located on Kola Peninsula. KGMK Group's metal sales to external customers include metal produced from semi-products purchased from the GMK Group segment. Intersegment revenue from metal sales includes sale of semi-products to GMK Group and NN Harjavalta for further processing. KGMK Group's 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 on Kola Peninsula.
- NN Harjavalta segment includes refinery operations located in Finland. NN Harjavalta's metal sales to external customers primarily include metal produced from semi-products purchased from the GMK Group and KGMK Group segments.
- GRK Bystrinskoye segment includes ore mining and processing operations located in the Zabaikalsky Territory of the Russian Federation.

- Other mining segment primarily includes a 50% interest of the Group in metal mining and processing joint operations of Nkomati Nickel Mine ("Nkomati"), which was disposed of during the year ended 31 December 2021, as well as certain other mining and exploration activities located in Russia and abroad. The Other mining segment's sales primarily include 50% of the Group in the sales of metal semi-products produced by Nkomati.
- Other non-metallurgical segment includes resale of third-party refined metal products, other trading operations, transport services, supply chain management, energy and utility, research and other activities located in Russia and abroad. The Other non-metallurgical segment also includes resale of 50% of metal semi-products produced by Nkomati. Other sales of the 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 the 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;
- balances of 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 2021, 2020 and 2019, respectively.

For the year ended 31 December 2021	GMK Group	South cluster	KGMK Group
REVENUE FROM EXTERNAL CUSTOMERS			
Metal sales	6,480	-	7,687
Other sales	188	1	26
INTERSEGMENT REVENUE			
Metal sales	4,852	618	2,179
Other sales	316	148	1
Total revenue	11,836	767	9,893
Segment EBITDA	5,456	397	3,758
Unallocated			
CONSOLIDATED EBITDA			
Depreciation and amortisation			
Impairment of non-financial assets,			
Finance costs, net			
Foreign exchange loss, net			
Income from investments and disposal of foreign joint operation			
Profit before tax			
OTHER MATERIAL CASH AND NON-CASH			
Purchase of property, plant and equipment and intangible assets	2,002	304	205
Depreciation and amortisation	622	30	84
(Reversal of impairment)/impairment of non-financial assets, net	(101)	-	137
Change in provisions and allowances	760	6	19



	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
	1,106	1,200	28	602	-	17,103
	7	3	-	524	-	749
	380	109	-	-	(8,138)	-
	-	34	-	407	(906)	-
	1,493	1,346	28	1,533	(9,044)	17,852
	59	1,076	(16)	11	716	11,457
						(945)
						10,512
						(928)
						(48)
						(279)
						(53)
						81
						9,285
	26	62	12	153	-	2,764
	12	122	1	57	-	928
	-	2	-	10	-	48
	-	1	-	-	110	896



For the year ended 31 December 2020	GMK Group	South cluster	KGMK Group
REVENUE FROM EXTERNAL CUSTOMERS			
Metal sales	5,427	-	6,897
Other sales	156	-	27
INTERSEGMENT REVENUE			
Metal sales	6,907	532	2,001
Other sales	210	162	1
Total revenue	12,700	694	8,926
Segment EBITDA	6,171	407	1,757
Unallocated			
CONSOLIDATED EBITDA			
Depreciation and amortisation			
Impairment of non-financial assets, net			
Finance costs, net			
Foreign exchange loss, net			
Income from investments and disposal of subsidiaries			
Profit before tax			
OTHER MATERIAL CASH AND NON-CASH ITEMS			
Purchase of property, plant and equipment and intangible assets	1,275	114	155
Depreciation and amortisation	596	28	152
Impairment of non-financial assets, net	43	-	264
Change in provisions and allowances	2,362	-	(14)

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
	949	897	129	678	-	14,977
	5	3	8	369	-	568
	354	98	-	-	(9,892)	-
	-	6	-	340	(719)	-
	1,308	1,004	137	1,387	(10,611)	15,545
	70	717	(14)	31	(556)	8,583
						(932)
						7,651
						(943)
						(308)
						(879)
						(1,034)
						92
						4,579
	17	98	2	99	-	1,760
	32	110	1	24	-	943
	-	1	-	-	-	308
	-	-	22	1	106	2,477



For the year ended 31 December 2019	GMK Group	South cluster	KGMK Group
REVENUE TO EXTERNAL CUSTOMERS			
Metal sales	8,208	349	2,271
Other sales	171	-	36
INTERSEGMENT REVENUE			
Metal sales	5,177	336	608
Other sales	280	179	200
Total revenue	13,836	864	3,115
Segment EBITDA	9,522	475	58
Unallocated			
CONSOLIDATED EBITDA			
Depreciation and amortisation			
Reversal of impairment of non-financial assets, net			
Finance costs, net			
Foreign exchange gain, net			
Income from investments			
Profit before tax			
OTHER MATERIAL CASH AND NON-CASH ITEMS			
Purchase of property, plant and equipment and intangible assets	839	76	221
Depreciation and amortisation	669	25	104
(Reversal of impairment)/impairment of non-financial assets, net	(43)	-	(1)
Change in provisions and allowances	9	-	188

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
	1,145	182	133	563	-	12,851
	6	4	-	495	-	712
	21	12	-	4	(6,158)	-
	-	3	-	350	(1,012)	-
	1,172	201	133	1,412	(7,170)	13,563
	74	349	(31)	31	(1,770)	8,708
						(785)
						7,923
						(911)
						24
						(306)
						694
						100
						7,524
	18	103	5	62	-	1,324
	26	54	1	32	-	911
	-	-	13	7	-	(24)
	-	(2)	7	18	13	233

The following table presents segment metal sales to external customers breakdown by metal for the years ended 31 December 2021, 2020 and 2019, respectively.

For the year ended 31 December 2021	GMK Group	KGMK Group	
Nickel			
Copper	2,778	151	
Palladium	2,764	3,583	
Platinum	302	373	
Rhodium	241	800	
Gold	273	76	
Other metals	117	80	
	6,480	7,687	

For the year ended 31 December 2020	GMK Group	KGMK Group	
Nickel			
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	

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Total
	967			17	3,627
	23	524	4	309	3,789
	55	-	5	258	6,665
	6	-	2	2	685
	-	-	-	15	1,056
	-	305	-	-	654
	55	371	3	1	627
	1,106	1,200	28	602	17,103

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Total
	839			59	3,144
	12	364	10	10	3,078
	44	-	43	596	6,365
	4	-	7	7	622
	-	-	-	-	682
	-	331	-	-	676
	50	202	10	6	410
	949	897	129	678	14,977

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Total
	880			65	3,388
	83	76	10	10	2,877
	106	-	31	475	5,043
	12	-	8	7	628
	-	-	-	-	291
	-	62	-	-	328
	64	44	19	6	296
	1,145	182	133	563	12,851

The following tables present assets and liabilities of the Group's reportable segments at 31 December 2021, 2020 and 2019, respectively.

At 31 December 2021	GMK Group	South cluster	KGMK Group	
Intersegment assets	804	60	635	
Segment assets	11,605	827	3,111	
Total segment assets	12,409	887	3,746	
Unallocated				
Total assets				
Intersegment liabilities	205	32	739	
Segment liabilities	2,676	250	578	
Total segment liabilities	2,881	282	1,317	
Unallocated				
Total liabilities				

At 31 December 2020	GMK Group	South cluster	KGMK Group	
Intersegment assets	2,848	162	720	
Segment assets	10,150	412	3,440	
Total segment assets	12,998	574	4,160	
Unallocated				
Total assets				
Intersegment liabilities	350	24	2,645	
Segment liabilities	3,794	129	322	
Total segment liabilities	4,144	153	2,967	
Unallocated				
Total liabilities				

At 31 December 2019	GMK Group	South cluster	KGMK Group	
Intersegment assets	3,286	163	315	
Segment assets	10,416	375	4,177	
Total segment assets	13,702	538	4,492	
Unallocated				
Total assets				
Intersegment liabilities	305	39	3,227	
Segment liabilities	1,732	108	348	
Total segment liabilities	2,037	147	3,575	
Unallocated				
Total liabilities				

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
	188	39	-	60	(1,786)	-
	731	1,508	98	1,266	(1,445)	17,701
	919	1,547	98	1,326	(3,231)	17,701
						5,734
						23,435
	508	7	1	294	(1,786)	-
	64	135	72	1,319	-	5,094
	572	142	73	1,613	(1,786)	5,094
						13,553
						18,647

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
	165	109	14	45	(4,063)	-
	480	1,526	49	1,150	(2,020)	15,187
	645	1,635	63	1,195	(6,083)	15,187
						5,519
						20,706
	266	8	-	770	(4,063)	-
	84	107	79	1,139	-	5,654
	350	115	79	1,909	(4,063)	5,654
						10,377
						16,031

	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
	100	28	5	38	(3,935)	-
	486	1,791	78	984	(1,983)	16,324
	586	1,819	83	1,022	(5,918)	16,324
						3,150
						19,474
	138	11	-	215	(3,935)	-
	102	107	54	1,197	-	3,648
	240	118	54	1,412	(3,935)	3,648
						11,539
						15,187

7. METAL SALES

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

	Total	Nickel	Copper	Palladium	Platinum	Rhodium	Gold	Other metals
FOR THE YEAR ENDED 31 DECEMBER 2021								
Europe	9,036	1,693	3,073	2,778	612	354	342	184
Asia	4,688	1,209	576	2,204	1	82	306	310
North and South America	2,647	351	6	1,671	56	554	-	9
Russian and CIS	732	374	134	12	16	66	6	124
	17,103	3,627	3,789	6,665	685	1,056	654	627
FOR THE YEAR ENDED 31 DECEMBER 2020								
Europe	6,755	1,277	1,826	2,353	543	275	341	140
Asia	5,266	1,366	1,027	2,292	27	51	308	195
North and South America	2,400	260	23	1,715	46	339	-	17
Russian and CIS	556	241	202	5	6	17	27	58
	14,977	3,144	3,078	6,365	622	682	676	410
FOR THE YEAR ENDED 31 DECEMBER 2019								
Europe	6,680	1,399	2,354	1,892	574	85	261	115
Asia	3,243	1,329	226	1,476	32	14	47	119
North and South America	2,289	427	77	1,595	14	137	1	38
Russian and CIS	639	233	220	80	8	55	19	24
	12,851	3,388	2,877	5,043	628	291	328	296

Revenue from metal sales for the year ended 31 December 2021 included net loss of USD (41) 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 2020: net loss in the amount of USD (104) million and

for the year ended 31 December 2019: net loss in the amount of USD (47) million).

For the year ended 31 December 2021, metal revenue included net gain of USD 25 million from price adjustments in respect of certain provisionally priced contracts, primarily for

sale of rhodium and other metals in Europe, Asia, North and South America (primarily for sale of palladium for the year ended 31 December 2020: net gain in the amount of USD 38 million and for the year ended 31 December 2019: net loss in the amount of USD (1) million)

8. COST OF METAL SALES

For the year ended 31 December

	2021	2020	2019
CASH OPERATING COSTS			
Labour	1,406	1,307	1,295
Materials and supplies	715	731	712
Mineral extraction tax and other levies	627	248	221
Purchases of refined metals for resale	581	482	438
Export custom duties	442	-	-
Third party services	410	276	239
Transportation expenses	130	90	78
Fuel	122	109	101
Electricity and heat energy	118	151	155
Purchases of raw materials and semi-products	95	298	402
Sundry costs	228	194	167
Total cash operating costs	4,874	3,886	3,808
Depreciation and amortisation	843	845	735
Increase in metal inventories	(660)	(231)	(44)
Total	5,057	4,500	4,499

9. GENERAL AND ADMINISTRATIVE EXPENSES

For the year ended 31 December

	2021	2020	2019
Staff costs	577	529	601
Third party services	191	142	123
Depreciation and amortisation	83	67	69
Taxes other than mineral extraction tax and income tax	76	69	77
Transportation expenses	18	18	15
Other	44	44	53
Total	989	869	938

10. SELLING AND DISTRIBUTION EXPENSES

	For the year ended 31 December		
	2021	2020	2019
Transportation expenses	81	72	54
Marketing expenses	48	44	45
Staff costs	19	19	16
Other	36	32	18
Total	184	167	133

11. OTHER OPERATING EXPENSES, NET

	For the year ended 31 December		
	2021	2020	2019
Social expenses (Note 27)	1,031	500	224
Environmental provisions (Note 26)	176	2,242	1
Expenses on industrial incidents response	69	-	-
Change in provision on production facilities shut down (Note 26)	(3)	(10)	190
Change in other provisions	(3)	24	39
Net income earned during the pre-commissioning stage	-	-	(192)
Other, net	15	(19)	41
Total	1,285	2,737	303

12. FINANCE COSTS, NET

	For the year ended 31 December		
	2021	2020	2019
Interest expense, net of amounts capitalised	225	364	340
Changes in fair value of other non-current and other current liabilities	66	262	64
Unwinding of discount on provisions and payables	59	61	84
Interest expense on lease liabilities	15	12	12
Fair value (gain)/loss on the cross-currency interest rate swap contracts	(68)	182	(199)
Other, net	(18)	(2)	5
Total	279	879	306

13. INCOME FROM INVESTMENTS

	For the year ended 31 December		
	2021	2020	2019
Interest income on bank deposits	51	43	64
Other, net	1	30	34
Total	52	73	98

14. INCOME TAX EXPENSE

	For the year ended 31 December		
	2021	2020	2019
Current income tax expense	1,695	1,685	1,924
Deferred tax expense/(benefit)	616	(740)	(366)
Total income tax expense	2,311	945	1,558

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 recognised in the consolidated income statement is as follows:

	For the year ended 31 December		
	2021	2020	2019
Profit before tax	9,285	4,579	7,524
Income tax at statutory rate of 20%	1,857	916	1,505
Changes in unrecognised deferred tax assets	15	14	25
Non-deductible social expenses	177	93	64
Effect of different tax rates of subsidiaries	(45)	(38)	(62)
Income tax provision related to the compensation of environmental damages	460	-	-
Tax effect of other permanent differences	(153)	(40)	26
Total income tax expense	2,311	945	1,558

Tax effect of other permanent differences mainly represents an income tax rate credit applicable to a Group's subsidiary.

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 2020	Recognised in income statement	Recognised in other comprehensive income	Effect of translation to presentation currency	At 31 December 2021
Property, plant and equipment, right-of use assets	389	104	-	(3)	490
Inventories	(448)	285	-	(11)	(174)
Trade and other receivables	6	(3)	-	-	3
Decommissioning obligations	(94)	(22)	-	1	(115)
Environmental provisions	(416)	407	-	3	(6)
Other provisions	(51)	(38)	-	-	(89)
Loans and borrowings, trade and other payables, lease liabilities	(117)	(37)	-	9	(145)
Other assets	21	6	-	(12)	15
Other liabilities	21	11	2	(1)	33
Tax loss carry-forwards	(23)	(97)	-	14	(106)
Net deferred tax (assets)	(712)	616	2	-	(94)

	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 1 January 2019	Recognised in income statement	Effect of translation to presentation currency	At 31 December 2019
Property, plant and equipment, right-of-use assets	427	15	50	492
Inventories	107	(377)	(9)	(279)
Trade and other receivables	(7)	(3)	-	(10)
Decommissioning obligations	(53)	(51)	(9)	(113)
Loans and borrowings, trade and other payables, lease liabilities	(123)	(15)	(15)	(153)
Other assets	24	(3)	1	22
Other liabilities	(2)	38	-	36
Tax loss carry-forwards	(61)	30	(2)	(33)
Net deferred tax liabilities/ (assets)	312	(366)	16	(38)

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		
	2021	2020	2019
Deferred tax liabilities	73	43	60
Deferred tax assets	(167)	(755)	(98)
Net deferred tax (assets)	(94)	(712)	(38)

Unrecognised deferred tax assets

Deferred tax assets have not been recognised as follows:

	At 31 December		
	2021	2020	2019
Deductible temporary differences	194	218	164
Tax loss carry-forwards	201	182	240
Total	395	400	404

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 2021 deferred tax asset in the amount of USD 135 million related to past tax loss arising on disposal of shares of OJSC "Third Generation Company of the Wholesale Electricity Market" ("OCK-3") (31 December 2020: USD 136 million and 31 December 2019: USD 162 million) was not recognised as it occurred before the Company joined the tax consolidation group.

This deferred tax asset can be utilised without expiry after the Company exits the tax consolidation group.

At 31 December 2021 unrecognized deferred tax assets in the amount of USD 66 million related to other tax loss carry-forwards may be recognised without expiry due to specific rules stated by art. 283 "Carry-Forward Of Losses" of the Tax code of the Russian Federation (31 December 2020: USD 46 million and 31 December 2019: USD 78 million).

At 31 December 2021, the Group did not recognise a deferred tax liability in respect of taxable temporary differences of USD 3,499 million (31 December 2020: USD 2,031 million and 31 December 2019: USD 628 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

	Mining assets and mine development cost	Buildings, facilities and infrastructure	Machinery, equipment and transport	Other	Capital construction-in-progress	Total
COST						
Balance at 1 January 2019	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
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
Additions	1,237	-	-	-	1,750	2,987
Transfers	-	302	465	26	(793)	-
Change in decommissioning provision	134	21	-	-	-	155
Additions of right-of-use assets and remeasurement of the lease liability	-	7	18	8	-	33
Disposals	(68)	(55)	(107)	(51)	(17)	(298)
Other	(3)	(6)	(2)	(1)	-	(12)
Effect of translation to presentation currency	(82)	(21)	(22)	(2)	(21)	(148)
Balance at 31 December 2021	10,491	3,436	4,235	252	2,582	20,996

Non-mining assets and right-of-use assets

	Mining assets and mine development cost	Buildings, facilities and infrastructure	Machinery, equipment and transport	Other	Capital construction-in-progress	Total
ACCUMULATED DEPRECIATION AND IMPAIRMENT						
Balance at 1 January 2019	(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
Reversal of impairment, 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)
Charge for the year	(479)	(179)	(357)	(24)	–	(1,039)
Disposals	57	51	89	32	5	234
Impairment loss, net	(123)	75	13	(2)	(11)	(48)
Other	3	4	1	2	–	10
Effect of translation to presentation currency	40	8	12	1	2	63
Balance at 31 December 2021	(3,806)	(1,719)	(2,510)	(130)	(132)	(8,297)
Carrying value 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 2021	6,685	1,717	1,725	122	2,450	12,699

At 31 December 2021 capital construction-in-progress included USD nil million of irrevocable letters of credit opened for property, plant and equipment purchases (31 December 2020: USD 14 million and 31 December 2019: USD 52 million), representing security deposits placed in banks.

For the year ended 31 December 2021 purchases of property, plant and equipment in the consolidated statement of cash flows include USD nil million of irrevocable letters of credit (for the year ended 31 December

2020: USD 1 million and for the year ended 31 December 2019: USD 221 million).

Capitalised borrowing costs for the year ended 31 December 2021 amounted to USD 95 million (for the year ended 31 December 2020: USD 118 million and for the year ended 31 December 2019: USD 174 million). The capitalisation rate used to determine the amount of borrowing costs was 3.12% per annum for the year ended 31 December 2021 (for the year ended 31 December 2020: 4.10% and for the year ended 31 December 2019: 5.12%).

At 31 December 2021 mining assets and mine development cost included USD 2,560 million of mining assets under development (31 December 2020: USD 2,593 million and 31 December 2019: USD 2,750 million).

At 31 December 2021 non-mining assets included USD 38 million of investment property (31 December 2020: USD 39 million and 31 December 2019: USD 48 million).

Impairment

In 2015 the Group recognised the gas extraction assets as a separate cash-generating unit, with its value-in-use determined using a discounted cash flow model 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 and impairment loss reversal of USD 70 million for the year ended 31 December 2019.

During the year ended 31 December 2021 due to change in circumstances and changes in the operating environment the Group reviewed the aggregation of assets into a separate cash-generating unit. As a result, the gas extraction assets were included in a cash-generating unit which includes operations of the core production assets in Norilsk. The Group did not identify indicators of impairment in respect of the above cash-generating unit and reversed the previously recognised impairment losses from the gas extraction assets, net of respective accumulated depreciation that would have been accrued had no impairment been recognised, included in reversal of impairment of non-financial assets, in the consolidated income statement in the amount of USD 115 million.

During the year ended 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. Impairment loss in the amount of USD 12 million was recognised

in the consolidated income statement for the year ended 31 December 2019. For the years ended 31 December 2021 and 2020 no further impairment losses or impairment reversal was recognised.

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

The recoverable amount of the cash-generating unit was determined based on value in use calculations. As a result of the impairment test the carrying value of KGMK ore mining and processing production assets in the amount of USD 264 million were fully impaired as at 31 December 2020. At 31 December 2021, the Group recognised further impairment in respect of additions to property, plant and equipment in the cash-generating unit. The impairment loss in the amount of USD 137 million was recognised in impairment of non-financial assets in the consolidated income statement (31 December 2020: USD 264 million).

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 a 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 are in general consistent with external sources of information. Inflation used was projected within 3.0-4.6% (31 December 2020: 3.6-4.5%), exchange rates USD/RUB were within the range of 72.23-84.76 (31 December 2020: 72.02-84.76).
- A pre-tax nominal discount rate of 12.2% (31 December 2020: 13.7%) was calculated based on weighted average cost of capital and reflects management's estimates of the risks specific to the cash generating unit.

During the year ended 31 December 2021 the Group developed and partially implemented optimization plans in order to increase of KGMK ore mining and processing operations cash flows and mitigate the negative impact of higher mineral extraction tax, with further implementation expected during 2022.

During the year ended 31 December 2021 the Group recognised additional impairment losses in the amount of USD 26 million in respect of specific individual assets (for the year ended 31 December 2020: USD 3 million and for the year ended 31 December 2019: USD 34 million).

Right-of-use assets

	Buildings, facilities and infrastructure	Machinery, equipment and transport	Other	Total
Balance at 1 January 2019	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
Additions of right-of-use assets and remeasurement of the lease liability	7	18	8	33
Depreciation	(30)	(21)	(2)	(53)
Effect of translation to presentation currency	-	-	-	-
Balance at 31 December 2021	92	108	14	214

16. OTHER FINANCIAL ASSETS

	At 31 December		
	2021	2020	2019
NON-CURRENT			
Loans issued and other receivables	58	56	113
Investments in associates	17	14	-
Bank deposits	12	11	8
Derivative financial instruments (Note 30)	2	-	102
Total non-current	89	81	223
CURRENT			
Loans issued	1	57	47
Deposits	34	-	-
Derivative financial instruments	8	1	4
Total current	43	58	51

17. OTHER TAXES

	At 31 December		
	2021	2020	2019
TAXES RECEIVABLE			
Value added tax recoverable	410	434	638
Advance payments of other taxes	9	17	13
	419	451	651
Less: Allowance for impairment of value added tax recoverable	(7)	(7)	(7)
Other taxes receivable	412	444	644
Taxes payable			
Value added tax	75	199	397
Social security contributions	51	48	46
Mineral extraction tax	50	15	16
Property tax	19	12	15
Other	74	55	29
Other taxes payable	269	329	503

18. INVENTORIES

	At 31 December		
	2021	2020	2019
Refined metals and other metal products	767	547	407
Work-in-process and semi-products	1,572	1,159	1,339
Less: net realisable value allowance for finished goods and work-in-process	(78)	(84)	(5)
Total metal inventories	2,261	1,622	1,741
Materials and supplies	823	644	811
Less: allowance for obsolete and slow-moving items	(58)	(74)	(77)
Materials and supplies, net	765	570	734
Inventories	3,026	2,192	2,475

At 31 December 2021 a part of the metal semi-product stock in the amount of USD 121 million net of impairment allowance in the amount of USD 69 million was presented in other non-current assets in line with the Group's production plans (31 December 2020: USD 73 million net of impairment allowance of USD 57 million and 31 December 2019: USD 52 million net of impairment allowance of USD 52 million).

19. TRADE AND OTHER RECEIVABLES

	At 31 December		
	2021	2020	2019
Trade receivables	345	411	277
Other receivables	171	150	151
Receivables from the registrar on transfer of dividends to shareholders (Note 31)	-	32	-
	516	593	428
Less: Allowance for expected credit losses	(48)	(56)	(66)
Trade and other receivables, net	468	537	362

In 2021, 2020 and 2019, the average credit period on metal sales varied from 0 to 30 days. Trade receivables are generally non-interest bearing.

At 31 December 2021 trade and other receivables include USD 248 million of accounts receivable measured at fair value through profit or loss, Level 2 of fair value hierarchy (31 December 2020: USD 339 million and 31 December 2019: USD 196 million).

At 31 December 2021, 2020 and 2019 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 2021 was 42 days (for the year ended 31 December 2020: 37 days and for the year ended 31 December 2019: 25 days). No interest was charged on these receivables.

Included in the Group's other receivables at 31 December 2021 were debtors with a carrying value of USD 109 million (31 December 2020: USD 83 million and 31 December 2019: USD 43 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		
	2021	2020	2019
Less than 180 days	97	75	35
180-365 days	12	8	8
	109	83	43

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

	At 31 December		
	2021	2020	2019
BALANCE AT THE BEGINNING OF THE YEAR	56	66	70
Change in allowance	2	3	(8)
Accounts receivable written-off	(10)	(2)	(4)
Effect of translation to presentation currency	-	(11)	8
Balance at the end of the year	48	56	66

20. CASH AND CASH EQUIVALENTS

	At 31 December		
	2021	2020	2019
Current accounts			
• RUB	249	41	72
• USD	1,691	3,744	918
• EUR	20	18	34
• other	35	102	60
Bank deposits			
• RUB	2,402	39	1,357
• USD	1,132	1,237	326
• other	5	8	9
Other cash and cash equivalents			
• RUB	6	-	6
• USD	7	-	1
• other	-	2	1
Total	5,547	5,191	2,784

Bank deposits

Interest rate on USD-denominated deposits held in banks at 31 December 2021 was in the range from 0.05% to 0.88% (31 December 2020: 0.15% to 0.41% and 31 December 2019: 1.25% to 1.80%) per annum. Interest rate on RUB-denominated deposits held in banks at 31 December 2021 was in the range from 7.20% to 9.12% (31 December 2020: 3.75% and 31 December 2019: 5.90% to 6.26%) per annum.

21. DISPOSAL OF SUBSIDIARIES AND FOREIGN JOINT OPERATIONS

With regard to suspended production of the joint operations of Nkomati, the Group reclassified the foreign currency translation reserve of foreign operations to the profit or loss for the year ended 31 December 2021 in the amount of USD 20 million. In October 2021, the Group received cash consideration in the amount of USD 51 million and incurred associated costs in the amount of USD 2 million under the settlement agreement in relation to the cancelled sale of Nkomati. The reported amount was presented in Disposal of foreign joint operations in the consolidated income statement and consolidated statement of cash flows.

In September 2020, the Group sold a number of assets in Australia, including Honeymoon Well nickel project, held by the Group subsidiary MPI Nickel Pty Ltd for a consideration of USD 29 million (AUD 40 million). Net cash inflow from the disposal of the subsidiary in the amount of USD 28 million was 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 recognised in the consolidated statement of cash flows 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 and 2019 the number of the Group's authorised and issued ordinary shares was 158,245,476. At 31 December 2021 the number of the Group's authorized and issued shares taking into account cancellation amounts to 153,654,624.

On 27 April 2021, the Board of Directors of the Company decided to acquire the Company's own outstanding shares. The Company completed acquisition of 5,382,079 ordinary shares on 29 June 2021 and presented the purchase of treasury shares in the consolidated statement of changes in equity in the amount of USD 2,075 million (RUB 149,630 million). Cash consideration was fully paid and recognised in the consolidated statement of cash flows in the amount of USD 2,068 million (RUB 149,630 million) at the USD /RUB exchange rates effective on payment dates.

On 19 August 2021, the extraordinary General meeting of shareholders of the Company decided to reduce the Company's share capital by cancelling 4,590,852 ordinary shares. The state registration of the amendments to the Company's Charter related to the reduction of the Company's share capital was carried out on 14 October 2021. The cancellation of treasury shares was recognised in the consolidated statement of changes in equity for the year ended 31 December 2021.

Earnings per share

	For the year ended 31 December		
	2021	2020	2019
Basic and diluted earnings per share (US Dollars per share):	41.9	21.4	36.5

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

	For the year ended 31 December		
	2021	2020	2019
Profit for the period attributable to shareholders of the parent company	6,512	3,385	5,782

Weighted average number of shares outstanding

	For the year ended 31 December		
	2021	2020	2019
Shares outstanding at 1 January	158,245,476	158,245,476	158,245,476
June 2021: acquisition of own shares from shareholders	(5,382,079)	-	-
Shares outstanding at 31 December	152,863,397	158,245,476	158,245,476
Weighted average number of outstanding shares used in the calculation of basic and diluted earnings per share	155,502,830	158,245,476	158,245,476

23. NON-CONTROLLING INTEREST

At 31 December 2021, 2020 and 2019 aggregate financial information relating to the subsidiary, LLC "CRK "Bystrinskoye", that has material non-controlling interest, before any intra-group eliminations, is presented below:

	At 31 December		
	2021	2020	2019
Non-current assets	1,254	1,298	1,486
Current assets	1,061	762	407
Non-current liabilities	(66)	(718)	(824)
Current liabilities	(65)	(67)	(142)
NET ASSETS	2,184	1,275	927
Net assets attributable to non-controlling interest	1,093	656	464

	For the year ended 31 December		
	2021	2020	2019
Net profit for the year	924	497	362
Other comprehensive (loss)/income for the year	(15)	(147)	76
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	909	350	438
Profit attributable to non-controlling interest	462	248	181
Other comprehensive (loss)/income attributable to non-controlling interest	(7)	(73)	38

	For the year ended 31 December		
	2021	2020	2019
Cash flows from operating activities	1,083	619	302
Cash flows used in investing activities	(407)	(413)	(252)
Cash flows used in financing activities	(675)	(215)	(4)
Net increase/(decrease) in cash and cash equivalents	1	(9)	46

24. LOANS AND BORROWINGS

	Currency	Fixed or floating interest rate	Average nominal % rate during the year ended 31 December			Maturity	At 31 December		
			2021	2020	2019		2021	2020	2019
Unsecured loans	USD	floating	1.53%	1.99%	3.75%	2022-2028	5,624	5,319	3,746
	RUB	fixed	-	-	8.30%		-	-	969
	EUR	floating	0.85%	0.85%	0.85%	2022-2028	24	30	30
Secured loans	RUB	fixed	9.75%	9.75%	9.75%	2022	4	8	10
Total loans							5,652	5,357	4,755
Bonds	USD	fixed	4.20%	4.39%	4.88%	2022-2026	4,238	3,736	4,220
	RUB	fixed	7.20%	8.85%	8.85%	2024	336	541	645
Total bonds							4,574	4,277	4,865
Total loans and borrowings							10,226	9,634	9,620
Less: current portion due within twelve months and presented as current loans and borrowings							(1,610)	(12)	(1,087)
Non-current loans and borrowings							8,616	9,622	8,533

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.

At 31 December 2021 loans were secured by property, plant and equipment with a carrying amount of USD 8 million (31 December 2020: USD 8 million and 31 December 2019: USD 10 million).

Reconciliation of liabilities/(assets) and cash flows arising from financing activities presented in the table below:

	Loans and borrowings	Lease liabilities	Derivatives financial instruments	Total
Balance at 1 January 2019	8,417	22	61	8,500
Proceeds from loans and borrowings	3,212	-	-	3,212
Repayments of loans and borrowings	(2,163)	-	-	(2,163)
Payments of lease liabilities	-	(45)	-	(45)
Proceeds on exchange of flows under cross-currency interest rate swaps	-	-	37	37
CHANGES FROM FINANCING CASH FLOWS	1,049	(45)	37	1,041
Other non-cash changes:				
Adjustments on IFRS 16 adoption	-	204	-	204
Recognition of lease liabilities	-	36	-	36
Changes in fair value of the cross-currency interest rate swap	-	-	(199)	(199)
Effect of changes in foreign exchange rates	153	7	-	160
Borrowing costs and amortization of loans at effective interest rate	1	-	-	1
Balance at 31 December 2019	9,620	224	(101)	9,743
Proceeds from loans and borrowings	2,903	-	-	2,903
Repayments of loans and borrowings	(2,552)	-	-	(2,552)
Payments of lease liabilities	-	(46)	-	(46)
Proceeds on exchange of flows under cross-currency interest rate swaps	-	-	38	38

	Loans and borrowings	Lease liabilities	Derivatives financial instruments	Total
CHANGES FROM FINANCING CASH FLOWS	351	(46)	38	343
Other non-cash changes:				
Recognition of lease liabilities	-	90	-	90
Changes in fair value of the cross-currency interest rate swap	-	-	182	182
Effect of changes in foreign exchange rates	(321)	(6)	17	(310)
Borrowing costs and amortization of loans at effective interest rate	(16)	-	-	(16)
Balance at 31 December 2020	9,634	262	136	10,032
Proceeds from loans and borrowings	1,000	-	-	1,000
Repayments of loans and borrowings	(415)	-	-	(415)
Payments of lease liabilities	-	(55)	-	(55)
Proceeds on exchange of flows under cross-currency interest rate swaps	-	-	4	4
Changes from financing cash flows	585	(55)	4	534
Other non-cash changes:				
Recognition of lease liabilities	-	37	-	37
Changes in fair value of the cross-currency interest rate swap	-	-	(68)	(68)
Effect of changes in foreign exchange rates	(4)	(9)	-	(13)
Borrowing costs and amortization of loans at effective interest rate	11	-	-	11
Balance at 31 December 2021	10,226	235	72	10,533

Interest payable on loans and borrowings and lease liabilities (Note 25) arising from financing activities is short-term and is paid within 12 months from the date of accrual

25. LEASE LIABILITIES

	Currenc	Average borrowing rate during the year ended 31 December, %			Maturity	At 31 December		
		2021	2020	2019		2021	2020	2019
Lease liabilities	RUB	7.23%	7.37%	8.21%	2022-2099	113	126	56
	USD	4.10%	4.07%	4.57%	2022-2031	107	114	148
	EUR	6.31%	6.20%	6.55%	2022-2050	15	20	19
	other	-	2.06%	2.29%		-	2	1
Total lease liabilities						235	262	224
Less: current lease liabilities						(57)	(59)	(44)
Non-current lease liabilities						178	203	180

At 31 December 2021 lease liabilities with original maturity in excess of 15 years amounted to USD 13 million (31 December 2020: USD 12 million and 31 December 2019: USD 15 million).

26. PROVISIONS

	Decommissioning	Environmental provisions	Tax	Other	Total
Balance at 1 January 2019	337	-	2	1	340
Accruals	187	1	4	37	229
Utilization	(18)	(1)	(1)	(20)	(40)
Change in estimates	81	-	-	-	81
Unwinding of discount	30	-	-	-	30
Effect of translation to presentation currency	45	-	(1)	1	45
Balance at 31 December 2019	662	-	4	19	685
Accruals	26	2,136	1	17	2,180
Utilisation	(16)	(48)	-	(9)	(73)
Change in estimates	17	106	-	(6)	117
Unwinding of discount	32	-	-	-	32
Effect of translation to presentation currency	(106)	(113)	-	-	(219)
Balance at 31 December 2020	615	2,081	5	21	2,722
Accruals	146	-	2	11	159
Utilisation	(24)	(1,984)	(1)	(20)	(2,029)
Change in estimate	1	176	(1)	(3)	173
Unwinding of discount	39	-	-	-	39
Effect of translation to presentation currency	(9)	(14)	(1)	-	(24)
Balance at 31 December 2021	29	-	4	16	49
including the current portion:	66	2,072	5	19	2,162
At 31 December 2019	86	48	4	8	146
At 31 December 2020					
At 31 December 2021					

Significant event – fuel leakage in Norilsk

On 29 May 2020 an incident occurred at the site of heat and power plant №3 (HPP-3) in the Kayerkan neighborhood of Norilsk: diesel fuel storage reservoir was damaged through sudden failure of support posts, which resulted in approximately 21.2 kt of diesel fuel leakage. According to the Group's assessment, the incident was caused by defects in design and construction as well as by unusually hot weather, which led to thawing of permafrost resulting in sinking of support posts.

The incident resulted in contamination of nearby water bodies and land in the area of leakage as well as damage to biological resources. The main stage of clean-up works following the incident was finished in 2020, with USD 48 million of clean-up costs incurred at 31 December 2020.

On 10 September 2020 Yenisei interregional administration of Federal Environment Supervision Agency (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).

For the year ended 31 December 2020, the Group recognised accruals of the environmental provision for the claim for compensation of environmental damages and expenditure for clean-up and rehabilitation in the total amount USD 2,134 million.

Based on an interpretation of the Russian tax law and the way it was applied at the time the Group assessed the recoverability of the recognised deferred tax assets of USD 415 million with respect to the environmental provision as probable at 31 December 2020 taking into consideration taxable profit forecasts.

On 10 March 2021, in accordance with the court decision on the lawsuit filed by Rosprirodnadzor, the Group paid RUB 146.177 billion (USD 1,968 million) as the compensation of damages to water bodies and soil.

During the first half of 2021, expenditure for the compensation was deducted against taxable profits.

On 3 December 2021, the Group received a decision of the off-site tax audit for the consolidated taxpayers group for the first half of 2021 that invalidated income tax deduction of the damages compensation. The Group is currently in the process of a pre-trial appeal of this decision. Taking into consideration all the facts and circumstances and based on an assessment of the probability of economic benefits outflows, the Group recognised an income tax provision in the amount of USD 402 million offset against income tax prepayments at 31 December 2021.

In April 2021, the Company subsidiary, JSC "NTEK" signed a three-party agreement with the Ministry of Ecology and Environmental Management of the Krasnoyarsk Territory and the Siberian Federal University in order to develop, approve and implement a package of measures to remediate the damage caused by the oil spill to the fauna and broader environment of the Krasnoyarsk Territory.

On 29 July 2021, Yenisei territorial administration of the Federal Agency for Fishery (Rosrybolovstvo) filed a lawsuit for compensation of damages to aquatic bioresources for the total amount of RUB 58.65 billion (USD 810 million).

On 3 September 2021 during the court hearing, the parties agreed to proceed with the dispute settlement by negotiating an amicable agreement, which would include compensation in kind of the damage caused to aquatic life by constructing fish breeding plants, artificially reproducing the affected fish species and releasing the fry to the water bodies. As of the date the consolidated

financial statements are authorised for issue, the parties are at the final stage of negotiations regarding this agreement. The next court hearing is scheduled on 18 February 2022.

The key assumptions for determining the liabilities arising from the long-term action plan on artificial reproduction of the biological resources expected to be implemented under the amicable agreement inherently contain a high degree of uncertainty, primarily due to the following: the period of time for fish species reproduction and their population stabilization, the cost to build and operate the fish breeding plants, the costs of operation at the water bodies of the Norilo-Pyasinskoe lake and river system, macroeconomic assumptions (including applicable inflation rates and risk-free rates), and the material effect of the discount factor for longer terms.

During the year ended 31 December 2021, the Group incurred clean-up and remediation expenditures amounting to USD 16 million. The Group continues rehabilitation works as well as post-incident environmental monitoring.

At 31 December 2021 and 2020, the total discounted amount of the provision in relation to the diesel fuel spill at HPP-3 in Norilsk was recognised in the environmental provisions in the consolidated statement of financial position.

The amount of the provision is subject to a high degree of uncertainty and will be adjusted in the future reporting periods as new facts and circumstances arise, including the outcome of the negotiations between the parties involved, court decisions, the reassessment of forecast cost for environment remediation, changes in macroeconomic and other factors. However, to the best of its knowledge and in accordance with the requirements of law the Group does not expect new significant claims to be filed with respect to the HPP-3 fuel spill in the future periods.

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

	At 31 December		
	2021	2020	2019
Discount rates Russian entities	8.2% - 8.67%	4.2% - 7.0%	5.6% - 7.5%
Discount rates non-Russian entities	4.44% - 9.57%	3.64%	7.14%
Expected closure date of mines	up to 2054	up to 2057	up to 2060
Expected inflation over the period from 2022 to 2041	2.8% - 4.9%	2.8% - 4.1%	2.9% - 4.2%
Expected inflation over the period from 2042 onwards	2.5% - 2.8%	2.5% - 2.8%	2.9%

Present value of expected cost to be incurred for settlement of long-term provisions was as follows:

	At 31 December		
	2021	2020	2019
Due from second to fifth year	317	228	278
Due from sixth to tenth year	231	88	124
Due from eleventh to fifteenth year	86	62	102
Due from sixteenth to twentieth year	66	82	64
Due thereafter	194	100	68
Total	894	560	636

At 31 December 2019 the Group recognised a provision for expenditure to shutdown certain production facilities located on 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.

27. SOCIAL LIABILITIES AND CONTINGENT SOCIAL COMMITMENTS

Social liabilities of the Group include social provisions and payables relating to social commitments of the Group.

The table below represents changes in social liabilities of the Group for the years ended 31 December 2021, 2020 and 2019.

	Social liabilities
Balance at 1 January 2019	102
Accruals of provision and payables	222
Utilisation and payment	(256)
Change in estimates	2
Unwinding of discount	8
Effect of translation to presentation currency	11
Balance at 31 December 2019	89
Accruals of provision and payables	489
Utilisation and payment	(398)
Change in estimates	11
Unwinding of discount	5
Effect of translation to presentation currency	(16)
Balance at 31 December 2020	180
Accruals of provision and payables	1,062
Utilisation and payment	(431)
Change in estimate	(31)
Unwinding of discount	18
Effect of translation to presentation currency	(7)
Balance at 31 December 2021 including the current portion:	791
At 31 December 2019	51
At 31 December 2020	96
At 31 December 2021	158

At 31 December

	2021	2020	2019
Due from second to fifth year	296	66	32
Due from sixth to tenth year	216	11	6
Due from eleventh to fifteenth year	117	3	-
Due from sixteenth to twentieth year	2	2	-
Due thereafter	2	2	-
Total	633	84	38

Carrying value of social provisions are determined based on the discounted cash flows required to settle the present obligation. The discount rate was in the range from 8.20% to 8.67% at 31 December 2021 (31 December 2020: 4.30% to 5.58% and 31 December 2019: 5.61% to 6.35%).

In 2017, the Group entered into agreements with the Zabaikalsky Territory Government for the construction and development of industrial, social and other infrastructure until 2026.

In 2020, the Group entered into new agreements with the Zabaikalsky Territory Government and the Government of the Murmansk Region as well as amendments to the existing agreements, and increased its financial commitments accordingly in respect of the social and economic development of these regions, including the construction of social infrastructure facilities.

In 2021, the Group entered into an agreement with the Krasnoyarsk Territory Government to support investment projects in the region envisaging the implementation of a number of social and infrastructure projects until 2028, which will contribute to the region's development in priority areas (society, culture, education, science, support for small and medium-sized businesses and innovation).

At 31 December 2021, the Group carried a provision of USD 115 million (including USD 74 million accrued during 2021 and USD 36 million during 2020) in Social liabilities with respect to the above-mentioned agreements with the regional governments.

Comprehensive Social and Economic Development Plan for the city of Norilsk

In February 2021, the Group entered into a four-party agreement with the Ministry for the Development of the Russian Far East and Arctic, the Krasnoyarsk Territory Government, and the Norilsk Municipality to implement large-scale social and economic development programmes in Norilsk. In December 2021, the Government of the Russian Federation approved the Comprehensive Social and Economic Development Plan for the city of Norilsk ("the Comprehensive Plan"), which includes a schedule of mutual financial commitments from the Government of the Russian Federation, the Krasnoyarsk Territory Government, and the Group for the social and economic development of the city up to 2035. The Comprehensive Plan covers housing renovation, the overhaul and modernisation of the city's engineering and utilities infrastructure, construction, repair, reconstruction and development of social infrastructure facilities and resettlement of Norilsk and Dudinka citizens to areas with more favourable living conditions. In addition, the Comprehensive Plan provides for the preparation and subsequent update of the Norilsk development strategy with the city envisioned a hub for the Taimyr peninsula overall development, the regional tourism industry development concept and the roll-out of support programmes for small and medium-sized businesses in Norilsk. The financial commitments of the Company from 2021 till 2035 amount to RUB 81.3 billion (USD 1,094 million at the US dollar exchange rate at 31 December 2021).

In line with the Group's accounting policy (Note 4), in respect of the part of its obligations under the four-party agreement and the Comprehensive Plan in the amount of RUB 69.3 billion, the Group recognised a provision in its consolidated income

statement for the year ended 31 December 2021 at the discounted present value of cash outflows in the amount of RUB 37.9 billion (USD 514 million). Remaining financial commitments stipulated by the Comprehensive plan in the amount of RUB 12 billion (USD 162 million) will be recognised in the consolidated statement of financial position as part of property, plant and equipment, as the expenditure is incurred.

If the nature, timing or amount of financing for particular activities are adjusted in line the Comprehensive Plan's provisions during the term of its implementation, then the Group will update the amount of social provisions in its consolidated financial statements accordingly.

Apart from the financing committed under the four-party partnership agreement and the Comprehensive Plan, in 2021 the Company announced an additional financing programme for the social and economic development of Norilsk for RUB 150 billion (USD 2,019 million). As of the date the consolidated financial statements are authorised for issue, the schedule, amounts and terms of financing of the programme's individual activities, as well as the mechanism for their implementation, have not been approved. The implementation of the programme is subject to the Company's verification procedures and corporate approval, which have not been received as of the date these consolidated financial statements were authorised for issue.

For the year ended 31 December 2021, the Group also accrued USD 127 million (for the year ended 31 December 2020: USD 198 million and for the year ended 31 December 2019: USD 34 million) of social provisions under miscellaneous social programmes and contributions other than those referred to above.

28. TRADE AND OTHER PAYABLES

	At 31 December		
	2021	2020	2019
FINANCIAL LIABILITIES			
Trade payables	416	267	425
Payables for acquisition of property, plant and equipment	417	242	212
Other creditors	397	116	117
Total financial liabilities	1,230	625	754
NON-FINANCIAL LIABILITIES			
Advances received on contracts with customers	994	802	952
Total non-financial liabilities	994	802	952
Total	2,224	1,427	1,706

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

	At 31 December		
	2021	2020	2019
Due within one month	854	322	260
Due from one to three months	312	246	199
Due from three to twelve months	64	57	295
Total	1,230	625	754

29. EMPLOYEE BENEFIT OBLIGATIONS

	At 31 December		
	2021	2020	2019
Accrual for annual leave	238	218	206
Wages, salaries and bonuses	190	178	225
Other	31	27	32
Total obligations	459	423	463
Less: non-current obligations	(42)	(22)	(70)
Current obligations	417	401	393

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		
	2021	2020	2019
Pension Fund of the Russian Federation	325	283	281
Mutual accumulated pension plan	6	6	7
Other	5	5	5
Total	336	294	293

30. DERIVATIVE FINANCIAL INSTRUMENTS

At 31 December 2021 the fair value of the cross-currency interest rate swap contracts was presented in non-current liabilities in the amount of USD 72 million (31 December 2020: non-current and current liabilities in the amount of USD 52 million and 84 million respectively and 31 December 2019: other non-current financial assets in the amount of USD 101 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 tradable financial instruments (Note 36).

31. DIVIDENDS

Dividends declared and paid in Russian roubles were translated to US dollars using prevailing RUB/USD rates at the declaration date and 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 2021	December 2021	1,523.17	20.81	3,181	January 2022	3,050
Annual 2020	May 2021	1,021.22	13.86	2,193	June 2021	2,198
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

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 and were recognised in trade and other receivables (Note 19).

32. 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.

Purchase of assets and services and other operating expenses, net

Transactions with related parties	For the year ended 31 December 2021	For the year ended 31 December 2020	For the year ended 31 December 2019
Entities under ownership or control of the Group's major shareholders	103	92	89
Associates, joint ventures and joint operation	66	120	136
Total	169	212	225

Accounts receivable

Outstanding balances with related parties	At 31 December 2021	At 31 December 2020	At 31 December 2019
Entities under ownership or control of the Group's major shareholders	1	–	1
Associates, joint ventures and joint operation	10	7	10
Total	11	7	11

Accounts payable and lease liabilities

Outstanding balances with related parties	At 31 December 2021	At 31 December 2020	At 31 December 2019
Entities under ownership or control of the Group's major shareholders	13	19	3
Associates, joint ventures and joint operation	5	15	8
Total	18	34	11

During the year ended 31 December 2021, the Company acquired own shares from the entities under ownership and control of the Group's major shareholders for a consideration of USD 1,421 million (Note 22).

During the year ended 31 December 2020, the Group acquired from a related party an entity, which holds the right-of-use assets and lease liabilities in the amount of USD 25 million.

Transactions with related parties presented in the table above are made on terms equivalent to those that prevail in arm's length transactions.

Compensation of key management personnel

Key management personnel of the Group consists of members of the Management Board and the Board of Directors. For the year ended 31 December 2021 remuneration of key management personnel of the Group included salary and performance bonuses amounted to USD 91 million (for the year ended 31 December 2020: USD 78 million and for the year ended 31 December 2019: USD 134 million).

33. COMMITMENTS

Capital commitments

At 31 December 2021, contractual capital commitments amounted to USD 3,338 million (31 December 2020: USD 2,021 million and 31 December 2019: USD 930 million).

Leases

The Group is a party to a number of lease contracts with variable lease payments that do not depend on an index or market rental rates, and hence are not recognised as lease liabilities. At 31 December 2021 total future non-discounted variable lease payments under such contracts with the maturity up to 2069 amounted to USD 322 million (31 December 2020: USD 316 million and 31 December 2019: USD 310 million).

At 31 December 2021 future non-discounted lease payments for leased items not transferred to the lessee and not recognised as lease liabilities amounted to USD 36 million (31 December 2020: nil and 31 December 2019: USD 192 million).

34. 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 2021 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 2021, total claims under unresolved litigation (except as disclosed in Note 26) amounted to approximately USD 3 million (31 December 2020: USD 7 million and 31 December 2019: USD 14 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.

The Russian Government's Regulation No. 988 dated 25 June 2021 introduced temporary export duties on some of the base metals produced by the Group for the period from 1 August 2021 to 31 December 2021.

While management of the Group believes that its 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, but have certain differences that create uncertainty in practical application of tax legislation in specific 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 13 million at RUB/USD rate at 31 December 2021).

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. The 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

The Group's operations are primarily located in the Russian Federation. Consequently, the Group is exposed to the economic and financial markets of the Russian Federation, which display the characteristics of an emerging market. The legal, tax and regulatory frameworks continue development, but are subject to varying interpretations and frequent changes which contribute together with other legal and fiscal impediments to the challenges faced by entities operating in the Russian Federation. 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 gradually 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 a significant tightening in the availability of credit. As a result, some Russian entities may experience difficulties accessing the international equity and debt markets and may become increasingly dependent on state support for their operations. The longer-term effects of the imposed and possible additional sanctions are difficult to determine.

Recent elevated tensions related to the situation over Ukraine have further increased the economic uncertainty and the risk of additional sanctions. The consolidated financial statements reflect management's assessment of the impact of the Russian business environment on the operations and the financial position of the Group. The future business environment may differ from management's assessment.

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. Also, the COVID-19 coronavirus pandemic has continued to create additional uncertainty in the business environment.

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. 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 2021, the Group spent USD 66 million in cash net of VAT (for the year ended 31 December 2020: USD 157 million) to prevent and combat the spread of COVID-19. For the year ended 31 December 2021 expenses in the amount of USD 67 million were recognized in the consolidated income statement (for the year ended 31 December 2020: USD 123 million), which are presented in the following line items:

Line items of the consolidated income statement		For the year ended 31 December	
		2021	2020
Cost of metal sales	Labour	10	45
	Materials and supplies	4	5
	Sundry costs	6	5
Cost of other sales	Labour	6	11
General and administrative expenses	Staff costs and other costs	11	8
Other operating expenses	Social expenses	30	49

The part of the amount paid for the year ended 31 December 2021 included capital expenditures of USD 3 million (for the year ended 31 December 2020: USD 12 million). The change in inventory balances and prepayments for future supplies amounted to USD (2) million (for the year ended 31 December 2020: USD 22 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

in the face of the ongoing epidemic of coronavirus. The management will continue to monitor the situation closely and will implement necessary measures to respond to possible adverse events, as they occur.

35. 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 credit ratings from international rating agencies S&P's, Fitch and Moody's at 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 and analysis 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 that could 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 on a regular basis, 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 debt portfolio which includes loans and borrowings with fixed and floating interest rates. The Group also considers impact of this risk factor together with changes in the macroeconomic environment, particularly stage of economic growth and increase in commodity prices, generally accompanying the increase of base rates.

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

A fundamental reform of major interest rate benchmarks is being undertaken globally, including the replacement of some interbank offered rates (IBORs) with alternative nearly risk-free rates (referred to as 'IBOR reform'). The Company monitors market developments and manages the Group's transition to alternative rates. The Group signed amendments to certain loan agreements to replace LIBOR rate with the alternative rate – Term Secured Overnight Financing Rate (Term SOFR) in

effect from June 2023 and intends to switch the remaining loan agreements with floating interest rates to the alternative rates during 2022 and 2023, not later than the scheduled discontinuation of LIBOR rates.

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 best 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 swaps 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 2021, 2020 and 2019 were as follows:

	At 31 December 2021			At 31 December 2020			At 31 December 2019		
	USD	EUR	Other currencies	USD	EUR	Other currencies	USD	EUR	Other currencies
Cash and cash equivalents	2,811	20	39	4,940	19	110	1,227	35	69
Trade and other receivables	792	35	-	638	15	-	398	13	4
Other assets	55	8	12	32	-	12	59	2	10
Total assets	3,658	63	51	5,610	34	122	1,684	50	83
Trade and other payables	353	118	4	277	99	7	213	66	8
Loans and borrowings	9,862	24	-	9,055	30	-	7,966	30	-
Lease liabilities	107	15	-	114	20	2	147	3	2
Other liabilities	23	-	-	16	2	-	11	16	-
Total liabilities	10,345	157	4	9,462	151	9	8,337	115	10

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		
	2021	2020	2019
INTEREST RATE RISK			
1 p.p. RUB rate increase impact	(8)	(18)	(33)
1 p.p. USD rate increase impact	(35)	(34)	(6)
CURRENCY RISK			
USD 20% strengthening against RUB	(1,421)	(1,034)	(1,594)

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 its current and forecasted credit rating from international

credit-rating agencies. In case of their absence, the Group performs the assessment of a customer's financial sustainability and general creditworthiness through calculation of financial metrics and analysis of the financial statements of a customer 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		
	2021	2020	2019
Bank A	1,548	2,512	821
Bank B	902	800	715
Bank C	572	712	485
Bank D	541	170	162
Bank E	405	160	152
Other	1,579	837	449
Total	5,547	5,191	2,784
TRADE AND OTHER RECEIVABLES			
Customer A	149	108	31
Customer B	24	32	24
Customer C	19	26	22
Customer D	18	21	21
Customer E	13	21	21
Other	245	329	243
Total	468	537	362

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

	For the year ended 31 December 2021		For the year ended 31 December 2020		For the year ended 31 December 2019	
	Revenue USD million	%	Revenue USD million	%	Revenue USD million	%
Largest customer	3,431	19	2,541	16	2,363	17
Next 9 largest customers	6,169	35	5,596	36	4,176	31
Total 10 largest customers	9,600	54	8,137	52	6,539	48
Remaining customers	8,252	46	7,408	48	7,024	52
Total	17,852	100	15,545	100	13,563	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, while credit risks related to cash and cash equivalents are at an acceptable level due to high credit ratings of financial institutions, where such cash and cash equivalents are held.

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

	Note	At 31 December		
		2021	2020	2019
Cash and cash equivalents	20	5,547	5,191	2,784
Derivative financial instruments	16	10	1	106
Loans and other long-term receivables	16	59	113	160
Trade and other receivables	19	468	537	362
Cover for irrevocable letters of credit	15	-	14	52
Bank deposits not included in cash and cash equivalents	16	46	11	8

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 forecasted cash flows and performs analysis of maturity profiles of financial liabilities to take timely appropriate actions to minimize possible negative effects. These actions include liquidity management and proactive management of credit portfolio to minimise

the volume of short-term debt and maintain weighted average period of credit portfolio at an acceptable level.

Current liquidity management involves detailed budgeting procedures, as well as analysis and structuring of a daily payment position for a 30-day period. The payment position is calculated separately for each currency and bank account. In addition to the continuous analysis of the payment position, at least three times a month the Group updates its rolling cash flow forecast model with a horizon of up to 12 months.

The Group manages liquidity risk by maintenance of liquid funds and a portfolio of committed credit facilities and overdrafts with a number of banks at a level, which is sufficient to cover possible revenue fluctuations taking into account 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 3,500 million at 31 December 2021 (31 December 2020: USD 3,313 million and 31 December 2019: USD 5,044 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 28) based on contractual undiscounted payments, including interest:

At 31 December 2021	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	4,591	1,504	1,000	1,087	500	500	-
Interest	407	193	97	76	27	14	-
	4,998	1,697	1,097	1,163	527	514	-
FLOATING RATE BANK LOANS AND BORROWINGS							
Principal	5,676	107	2,166	2,100	614	676	13
Interest	221	88	71	40	14	8	-
	5,897	195	2,237	2,140	628	684	13
LEASE LIABILITIES							
Lease liabilities	279	65	50	45	31	20	68
CROSS-CURRENCY INTEREST RATE SWAP							
Payable	426	12	12	402	-	-	-
Receivable	(409)	(24)	(24)	(361)	-	-	-
	17	(12)	(12)	41	-	-	-
Total	11,191	1,945	3,372	3,389	1,186	1,218	81

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 LIABILITIES							
Lease liabilities	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		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 LIABILITIES							
Lease liabilities	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

36. 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 liabilities, either directly or indirectly;
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the assets or liabilities that are not based on observable market data.

The management believes that the carrying value of financial instruments such as cash and cash equivalents (Note 20), other financial assets (Note 16), trade and other receivables (Note 19), trade and other payables (Note 28) and lease liabilities (Note 25) either approximates to their fair value or may not significantly differ from it.

At 31 December 2020 other current liabilities measured at fair value through profit or loss included a liability on the execution of a put option held by owners of 13.3% non-controlling interest in the

share capital in LLC "CRK "Bystrinskoye" in the amount of USD 428 million (non-current liability at 31 December 2019: USD 210 million). Since the non-controlling interest owners did not exercise their right under the put option before its expiry date of 31 December 2021, the Group derecognised the liability on the execution of the put option as at 31 December 2021. The Group presented derecognition of the liability directly in the consolidated statement of changes in equity as Other effects related to transactions with non-controlling interest owners in the amount of USD 490 million, which was its fair value at 31 December 2021 immediately before derecognition. The fair value of the liability at all applicable dates was determined based on the discounted cash flows of LLC "CRK "Bystrinskoye" less its net debt taking into account the amount of working capital at the reporting date and with the relevant discount reflecting the non-controlling 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 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 13.9% (31 December 2020: 13.8%, 31 December 2019: 14.3%) was estimated by reference to the weighted average cost of capital and the 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 2021 till the date of derecognition amounted to USD 66 million included in the financial costs of the consolidated income statement (31 December 2020: USD 262 million and 31 December 2019: USD 64 million). The estimation of fair value of the liability on the execution of the put option was sensitive to changes in the number of key assumptions. The sensitivity analysis at the reporting date is disclosed in the table below:

Change of parameters

Increase in fair value of the liability on the execution of the put option	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

The information below presents financial instruments not measured at fair value, including loans and borrowings (Note 24), trade and other long-term payables (Note 28).

	At 31 December 2021		At 31 December 2020		At 31 December 2019	
	Carrying value	Fair value Level 1	Carrying value	Fair value Level 1	Carrying value	Fair value Level 1
Fixed rate bonds	4,574	4,639	4,277	4,512	4,865	5,100
Total bonds	4,574	4,639	4,277	4,512	4,865	5,100
Loans, including:	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2
Floating rate loans	5,648	5,439	5,349	5,309	3,776	3,814
Fixed rate loans	4	4	8	8	979	1,007
Total loans	5,652	5,443	5,357	5,317	4,755	4,821
	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2
Trade and other long-term payables	55	55	32	32	37	37
Total trade and other long-term payables	55	55	32	32	37	37

The fair value of financial liabilities presented in the 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 2021, 2020 and 2019 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 2021, 2020 and 2019 was determined as the present value of future cash flows, discounted at the best management estimate of market interest rates.

37. INVESTMENTS IN SIGNIFICANT SUBSIDIARIES

Subsidiaries by operating segments	Country	Nature of business	Effective % held		
			31 December 2021	31 December 2020	31 December 2019
GMK GROUP					
JSC "Norilsky Kombinat"	Russian Federation	Rental of property	100	100	100
JSC "Norilskgazprom"	Russian Federation	Gas extraction	100	100	100
JSC "Norilsktransgaz"	Russian Federation	Gas transportation	100	100	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 "Norilskyi obespechivaushyi complex"	Russian Federation	Production of spare parts	100	100	100
SOUTH CLUSTER					
LLC "Medvezhyi ruchey"	Russian Federation	Ore mining and processing	100	100	100
KGMK GROUP					
JSC "Kolskaya GMK"	Russian Federation	Mining and metallurgy	100	100	100
LLC "Pechengastroj"	Russian Federation	Repairs	100	100	100
Norilsk Nickel Harjavalta					
Norilsk Nickel Harjavalta OY	Finland	Metallurgy	100	100	100
GRK BYSTRINSKOYE					
LLC "GRK "Bystrinskoye"	Russian Federation	Ore mining and processing	50.01	50.01	50.01
LLC "Vostokgeologiya"	Russian Federation	Geological works and construction	100	100	100
OTHER NON-METALLURGICAL					
Metal Trade Overseas A.C.	Switzerland	Distribution	100	100	100
Norilsk Nickel (Asia) Limited	Hong Kong	Distribution	100	100	100
Norilsk Nickel USA, Inc.	USA	Distribution	100	100	100
LLC "Institut Gypronickel"	Russian Federation	Research	100	100	100
JSC "TTK"	Russian Federation	Supplier of fuel	100	100	100
JSC "ERP"	Russian Federation	River shipping operations	100	100	100
LLC "Aeroport Norilsk"	Russian Federation	Airport	100	100	100
JSC "AK "NordStar"	Russian Federation	Air company	100	100	100

Joint operations by operating segments	Country	Nature of business	Effective % held		
			31 December 2021	31 December 2020	31 December 2019
OTHER MINING					
Nkomati Nickel Mine	Republic of South Africa	Ore mining and processing	50	50	50