Independent Auditor's Report

on the Consolidated Financial Statements

To the Members of Hindalco Industries Limited

Report on the Audit of the Consolidated Financial Statements

Opinion

1. We have audited the accompanying consolidated financial statements of Hindalco Industries Limited (hereinafter referred to as the "Holding Company") which includes the financial statements/financial information in respect of joint operations consolidated on a proportionate basis, trusts and subsidiaries (Holding Company, joint operations, trusts and subsidiaries together referred to as "the Group"), its joint ventures and associate companies (refer Note 51 to the accompanying consolidated financial statements), which comprise the consolidated Balance Sheet as at March 31, 2023, and the consolidated Statement of Profit and Loss (including Other Comprehensive Income), the consolidated Statement of Changes in Equity and the consolidated Statement of Cash Flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies and other explanatory information (hereinafter referred to as "the consolidated financial statements").

2. In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on the audited financial statements /consolidated audited financial information of the joint operations, trusts, subsidiaries, joint venture and associate companies and based on the consideration of the unaudited financial information of the subsidiaries and joint venture, the aforesaid consolidated financial statements give the information required by the Companies Act, 2013 ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the consolidated state of affairs of the Group, its joint ventures and associate companies as at March 31, 2023, of the consolidated total comprehensive income (comprising of profit and other comprehensive income), consolidated changes in equity and its consolidated cash flows for the year then ended.

Basis for Opinion

3. We conducted our audit in accordance with the Standards on Auditing (SAs) specified under Section 143(10) of the Act. Our responsibilities under those Standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements" section of our report. We are independent of the Group, its joint ventures and associate companies in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in India in terms of the Code of Ethics issued by the Institute of Chartered Accountants of India and the relevant provisions of the Act, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors in terms of their reports referred to in sub-paragraph 16 of the Other Matters section below, other than the unaudited financial statements/ financial information as certified by the management and referred to in sub-paragraph 17 of the Other Matters section below, is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

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

Key Audit Matter	How our audit addressed the Key Audit Matter
1. Measurement of inventory quantities of coal, bauxite, copper concentrate and work in progress consisting of precious metals	
Refer Notes 1C(c) and 13(d) to the consolidated financial statements. Of the Holding Company's ₹ 20,186 crores of inventory as at March 31, 2023, ₹ 4,232 crores of inventory comprised of coal, bauxite, copper concentrate and work in progress consisting of precious metals. This was determined a key audit matter, as the measurement of these inventory quantities lying at the Holding Company's yards, smelters and refineries is complex and involves significant judgements and estimates resulting from measuring the surface area, dip measurement of material in tanks/silos and such other parameters. The Holding Company uses internal and external experts, as applicable, to perform volumetric surveys and assessments basis which the quantities of these inventories are estimated.	Our audit procedures relating to the measurement of inventory quantities of coal, bauxite, copper concentrate and work in progress of precious metals included the following: • Understanding and evaluating the design and testing the operating effectiveness of controls over the physical count process and measurement of such inventory; • Evaluation of the independence, competency and capabilities of the management's experts; • Physically observing inventory measurement and count procedures carried out by management using experts to assess its appropriateness and completeness and performing roll forward procedures; and • Obtaining and inspecting inventory measurement and physical count results for such inventories, including assessing and evaluating the results of analysis performed and adjustments made by Holding Company's management in respect of differences between book and physical quantities. Based on the above procedures performed, we did not identify any material exceptions in the measurement of inventory quantities of coal, bauxite, copper concentrate and work in progress inventories consisting of precious metals.
2. Migration to a new ERP system	
The Holding Company's financial reporting process significantly relies on the design and operating effectiveness of its IT systems. The Holding Company is migrating to a centralised enterprise- wide resource planning ('ERP') system in a phased manner across its plants and offices. The changes in the ERP system represent a financial reporting risk as controls and processes that have been established and embedded over a number of years are likely to be revisited. Due to changes in the ERP system, there is a risk of breakdown in internal financial controls and a risk of inaccurate or incomplete processing of the financial data. Further, the migration involved significant program and configuration changes. Accordingly, it is considered as a key audit matter.	We performed the following procedures with respect to transition to the new ERP system: • Obtained an understanding of the changes in the IT environment, IT infrastructure and the ERP system by involving technology specialists; • Obtained understanding and tested the controls over data migration including proper authorisation, completeness and accuracy; • Tested a sample of the migrated balances of general ledgers, sub-ledgers and open items for completeness and accuracy as of the date of migration at the respective plants/offices of the Holding Company; • Evaluated and tested relevant IT general controls over the ERP system and IT dependencies identified as relevant for our audit of the consolidated financial statements; and • Communicated with those charged with governance and Holding Company's management and tested a combination of compensating controls or remediated controls and/or performed alternative audit procedures, wherever necessary. Based on the above no significant exceptions were noted

Key Audit Matter	How our audit addressed the Key Audit Matter
3. Provisions recognised and contingencies disclosed with regards to certain legal and tax matters including uncertain tax positions Refer Notes 1C (e) and (f), 11, 12, 24 and 46A to the consolidated financial statements. The Holding Company operates in a complex tax jurisdiction with certain tax exemption/ deduction that may be subject to challenge and audit by the tax authorities. Further, there are open tax matters under litigation with the tax authorities. As at March 31, 2023, the Holding Company has, recognised provisions and disclosed contingent liabilities towards various legal and tax matters, including environmental, mining, local and state levies, income tax holidays, availing of input tax credits and such other matters. This is a key audit matter, as evaluation of these matters requires management judgement and estimation, related legal advice including those leading to interpretation of laws and regulations and application of relevant judicial precedents to determine the probability of the outflow of economic resources for recognising provisions, disclosing contingent liabilities and making related disclosures in the consolidated financial statements.	Our audit procedures relating to provisions recognised and contingencies disclosed with regard to certain legal and tax matters included the following: • Understanding and evaluating the design and testing the operating effectiveness of controls over the recognition, measurement, presentation and disclosures made in the consolidated financial statements in respect of these matters; • Obtaining details of legal and tax matters, inspecting the supporting documents to evaluate management's assessment of probability of outcome and the magnitude of potential loss as well as testing related to provisions and disclosures in the consolidated financial statements through inquiries with the management and legal counsel; • Assessing on test basis on the underlying calculation supporting the contingent liabilities and other litigation disclosures in the consolidated financial statements; • Reviewing orders and other communication from tax and regulatory authorities and management responses thereto; • Assessing the management expert's legal advice and opinion, as applicable, obtained by the Holding Company's management to corroborate management assessment and evaluating competence and capabilities of the experts; and • Using auditor's specialist for technical assistance in evaluating certain significant and judgemental complex direct and indirect tax litigation and positions in tax returns and their possible outcome. Based on the above procedures performed, we did not identify any material exceptions in the provisions recognised and contingent liabilities disclosed in the consolidated financial statements with regard to such legal and tax matters.

5. The following Key Audit Matter was included in the Memorandum of Work Performed issued by other auditor whose audit report dated May 23, 2023, contained an unmodified audit opinion on the consolidated financial information of Novelis Inc. ("Novelis"), a subsidiary of the Holding Company which is reproduced by us as under:

Key Audit Matter	How the other auditor addressed the Key Audit Matter
Goodwill impairment assessment	
The Company's consolidated goodwill balance was ₹ 25,704 crores as of March 31, 2023. Management conducts an impairment test as of the last day of March of each year, or more frequently if events or circumstances indicate that the carrying value of goodwill may be impaired. As disclosed by management, potential impairment is identified by comparing the recoverable value of each cash generating unit to its carrying value. The Company estimates the recoverable value based on fair value less costs to sell approach. If the carrying value exceeds the recoverable value, management records an impairment charge in an amount equal to that excess. The determination of recoverable value using the market and income approaches requires the use of management's significant assumptions related to selection of market multiples and control premium for the market approach and sales volumes, conversion premium, capital spending, working capital changes and the discount rate for the income approach. The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment is a Key Audit Matter are (i) the significant judgment by management when developing the fair value measurement of the cash generating units; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to market multiples and control premium for the market approach and sales volumes, conversion premium, capital spending and the discount rate for the income approach; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge. Refer to Notes 14 and 42 in the consolidated financial information of Novelis.*	Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the FFC consolidated financial statements. Our procedures included, among others: (i) understanding and evaluating the design and testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's cash generating units; (ii) testing management's process for developing the fair value estimate of the cash generating units; (iii) evaluating the appropriateness of the income and market approaches and the weighting of the approaches; (iv) testing the completeness and accuracy of underlying data used in the approaches; and (iv) evaluating the reasonableness of the significant assumptions used by management in the income and market approaches. (v) Evaluating management's assumptions related to sales volumes and prices, costs to produce, and capital spending involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the cash generating units; (ii) the consistency with external market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. (vi) Professionals with specialized skill and knowledge were used to assist in evaluating the appropriateness of the income and market approaches, the weighting of the approaches, and evaluating the reasonableness of the discount rate, control premium and market multiples assumptions. As a result of our procedures performed, no misstatements were noted.

* These notes are included in Note 1C(a) and 5 of the consolidated financial statements

6. The following Key Audit Matter was included in the Memorandum of Work Performed dated April 29, 2023, issued by an independent firm of Chartered Accountants along with their audit report dated April 24, 2023, which contained an unmodified audit opinion on the financial statements of Utkal Alumina International Limited ("Utkal"), a subsidiary of the Holding Company which is reproduced by us as under:

Key Audit Matter	How the other auditor addressed the Key Audit Matter
Valuation of deferred tax assets including recognized Minimum Alternate Tax (MAT) credit	
The Company has a significant amount of deferred tax assets, mainly resulting from MAT credit as per Income Tax Act. The valuation of deferred tax assets including MAT is significant to our audit because the risk exists that future taxable profits will not be sufficient to fully recover the deferred tax assets including MAT credit. Management supports the recoverability of the deferred tax assets mainly with income projections which contain estimates of and tax strategies for future taxable income. Refer Notes 9 and 35 of Utkal's financial statements.*	Our audit procedures included: • Evaluating the Management's determination of the estimated manner in which the deferred tax asset would be utilised by comparing the Management's assessment to business plans and long-term profit forecasts and the key assumptions used in the projections based on our knowledge of the business and the industry in which company operates; • Critically assessing whether profit forecasts are reasonable in relation to historical trends, current year performance and future plans;

- We also reperformed the calculation of deferred taxes, checking that the tax rate applied is proper;
- We compared the tax plans with the Company's budget on a sample basis in terms of the recoverability of deferred tax assets from temporary differences and from MAT credit;
- Using our own tax team to assist us in assessing the appropriateness of the level of deferred taxes recognised in the balance sheet;
- Recalculating the defer tax which will be reversed the post adoption of new tax regime and ensure that the calculation is proper;
- We assessed the adequacy of the income tax disclosures to the financial statements, setting out the basis of the deferred tax balance and the level of estimation involved; and

Our audit procedures performed did not lead to any reservations regarding the recognition, measurement and disclosure of deferred taxes.

* These notes are included in Note 11A and 11B of the consolidated financial statements.

Other Information

7. The Holding Company's Board of Directors is responsible for the other information. The other information comprises the information included in the integrated annual report but does not include the financial statements and our and other auditor's report thereon. The integrated annual report is expected to be made available to us after the date of this auditor's report.

   Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

   In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

   When we read the integrated annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate action as applicable under the relevant laws and regulations.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

8. The Holding Company's Board of Directors is responsible for the preparation and presentation of these consolidated financial statements in terms of the requirements of the Act that give a true and fair view of the consolidated financial position, consolidated financial performance and consolidated cash flows, and changes in equity of the Group including its joint ventures and associate companies in accordance with the accounting principles generally accepted in India, including the Accounting Standards specified under Section 133 of the Act. The respective Board of Directors of the companies included in the Group and of its joint ventures and associate companies are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group and of its joint ventures and associate companies and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring accuracy and completeness of the accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the consolidated financial statements by the Directors of the Holding Company, as aforesaid.

9. In preparing the consolidated financial statements, the respective Board of Directors of the companies included in the Group and of its joint ventures and associate companies are responsible for assessing the ability of the Group and of its joint ventures and associate companies to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the respective Management either intends to liquidate the Group, its joint ventures and associate companies or to cease operations, or has no realistic alternative but to do so.

10. The respective Board of Directors of the companies included in the Group and of its joint ventures and associate companies are responsible for overseeing the financial reporting process of the respective companies included in the Group and of its joint ventures and associate companies.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

11. Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

12. As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

    - Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

    - Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under Section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the Holding Company has adequate internal financial controls with reference to consolidated financial statements in place and the operating effectiveness of such controls. (Refer paragraph 19(f) below)

    - Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.

    - Conclude on the appropriateness of the Board of Directors use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Group and its joint ventures and associate companies to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group and its joint venture and associate companies to cease to continue as a going concern.

    - Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

    - Obtain sufficient appropriate audit evidence regarding the financial statements / information of the entities or business activities within the Group and its joint ventures and associate companies to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the consolidated financial statements of which we are the independent auditors. For the other entities included in the consolidated financial statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

13. We communicate with those charged with governance of the Holding Company and such other entities included in the consolidated financial statements of which we are the

independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

14. We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

15. From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

16. We did not audit the financial statements of eleven subsidiaries, consolidated financial information of one subsidiary, financial statements of two joint operations and two trusts included in the consolidated financial statements of the Holding Company, which constitute total assets of ₹ 144,867 crores and net assets of ₹ 52,383 crores as at March 31, 2023, total revenue of ₹150,952 crores, total comprehensive income (comprising of profit and other comprehensive income) of ₹ 12,642 crores and net cash inflows amounting to ₹ 3,667 crores for the year ended on that date, as considered in the consolidated financial statements. The consolidated financial statements also include the Group's share of total comprehensive income (comprising of profit and other comprehensive income) of ₹ 10 crores and ₹ * crore for the year ended March 31, 2023 as considered in the consolidated financial statements, in respect of four associate companies and one joint venture respectively, whose financial statements have not been audited by us. These financial statements/ consolidated financial information have been audited by other auditors whose reports have been furnished to us by the Management / other auditors, and our opinion on the consolidated financial statements insofar as it relates to the amounts and disclosures included in respect of these subsidiaries, joint operations, trusts, joint venture and associate companies and our report in terms of sub-section (3) of Section 143 of the Act including report on Other Information insofar as it relates to the subsidiary companies which are incorporated in India, joint operations, trusts, joint venture and associate companies, is based solely on the reports of the other auditors. In respect of one joint operation an emphasis of matter paragraph with regard to going concern and in respect of one joint operation and one subsidiary, a material uncertainty related to going concern has been reported by the auditors of the respective entities vide their audit report, however, the same is not considered to be material to the consolidated financial statements of the Group.

* Represent figures below the rounding off convention used in the Consolidated Financial Statements.

17. We did not audit the financial information of four subsidiaries included in the consolidated financial statements of the Holding Company, which constitute total assets of ₹ 7 crores and net liabilities of ₹ 6 crores as at March 31, 2023, total revenue of ₹ 16 crores, total comprehensive loss (comprising of loss and other comprehensive income) of ₹ 6 crores and net cash inflows amounting to ₹ 1 crore for the year ended on that date. The consolidated financial statements also include the Group's share of total comprehensive loss (comprising of loss and other comprehensive loss) of ₹ * crore for the year ended March 31, 2023 as considered in the consolidated financial statements, in respect of one joint venture whose financial information has not been audited by us. These financial information are unaudited and have been furnished to us by the Management, and our opinion on the consolidated financial statements insofar as it relates to the amounts and disclosures included in respect of these subsidiaries and joint venture and our report in terms of sub-section (3) of Section 143 of the Act including report on Other Information insofar as it relates to the aforesaid subsidiaries and joint venture, is based solely on such unaudited financial information. In our opinion and according to the information and explanations given to us by the Management, the financial information of the above subsidiaries and joint venture are not material to the consolidated financial statements.

* Represent figures below the rounding off convention used in the Consolidated Financial Statements.

Our opinion on the consolidated financial statements, and our report on Other Legal and Regulatory Requirements below, is not modified in respect of the matters reported in paragraphs 16 and 17 above with respect to our reliance on the work done and the reports of the other auditors and the financial statements/ financial information certified by the Management.

Report on Other Legal and Regulatory Requirements

18. As required by the Companies (Auditor's Report) Order, 2020 ("CARO 2020"), issued by the Central Government of India in terms of sub-section (11) of Section 143 of the Act, we give in the **"Annexure B"**, a statement on the matter specified in paragraph 3(xxi) of CARO 2020.

19. As required by Section 143(3) of the Act, we report, to the extent applicable, that:

    (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid consolidated financial statements.

    (b) In our opinion, proper books of account as required by law relating to preparation of the aforesaid consolidated financial statements have been kept so far as it appears from our examination of those books and the reports of the other auditors.

    (c) The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss (including other comprehensive income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows dealt with by this Report are in agreement with the relevant books of account and records maintained for the purpose of preparation of the consolidated financial statements.

    (d) In our opinion, the aforesaid consolidated financial statements comply with the Accounting Standards specified under Section 133 of the Act.

    (e) On the basis of the written representations received from the directors of the Holding Company as on March 31, 2023 taken on record by the Board of Directors of the Holding Company and the reports of the statutory auditors of its joint operations, its subsidiary companies, joint venture and associate companies incorporated in India, none of the directors of the Holding Company, its joint operations, its subsidiary companies, joint venture and associate companies incorporated in India is disqualified as on March 31, 2023 from being appointed as a director in terms of Section 164(2) of the Act.

    (f) With respect to the adequacy of internal financial controls with reference to consolidated financial statements of the Holding Company, its joint operations, its subsidiary companies, joint venture and associate companies incorporated in India and the operating effectiveness of such controls, refer to our separate report in "**Annexure A**".

    (g) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditor's) Rules, 2014, in our opinion and to the best of our information and according to the explanations given to us:

        i. The consolidated financial statements disclose the impact of pending litigations on the consolidated financial position of the Group, its joint ventures and associate companies – Refer Note 11C, 24 and 46A to the consolidated financial statements.

        ii. Provision has been made in the consolidated financial statements, as required under the applicable law or accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts as at March 31, 2023 – Refer Note 9 and 24 to the consolidated financial statements in respect of such items as it relates to the Group, its joint ventures and associate companies.

        iii. Except as stated in Note 23(a) to the consolidated financial statements, there has been no delay during the year in transferring amounts required to be transferred to the Investor Education and Protection Fund by the Holding Company and its joint operations, subsidiary companies, joint ventures and associate companies incorporated in India.

        iv. (a) The respective Managements of the Holding Company, joint operations, subsidiaries, joint venture and associate companies, which are companies incorporated in India whose financial statements have been audited under the Act have represented to us and the other auditors of such joint operations, subsidiaries, joint venture and associate companies respectively that, to the best of their knowledge and belief, no funds (which are material either individually or in the aggregate) have been advanced or loaned or invested (either from borrowed funds or share premium or any other sources or kind of funds) by the Holding Company or any of such joint operations, subsidiaries, joint venture and associate companies to or in any other persons or entities, including foreign entities ("Intermediaries"), with the understanding, whether recorded in writing or otherwise, that the Intermediary shall, directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Holding Company or any of such joint operations, subsidiaries, joint venture and associate companies ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries (Refer Note 56(b) to the consolidated financial statements).

(b) The respective Managements of the Holding Company and its joint operations, subsidiaries, joint venture and associate companies which are companies incorporated in India whose financial statements have been audited under the Act have represented to us and the other auditors of such joint operations, subsidiaries, joint venture and associate companies respectively that, to the best of their knowledge and belief, no funds (which are material either individually or in the aggregate) have been received by the Holding Company or any of such joint operations, subsidiaries, joint venture and associate companies from any persons or entities, including foreign entities ("Funding Parties"), with the understanding, whether recorded in writing or otherwise, that the Holding Company or any of such joint operations, subsidiaries, joint venture and associate companies shall, directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries (Refer Note 56(b) to the consolidated financial statements).

(c) Based on the audit procedures, that has been considered reasonable and appropriate in the circumstances, performed by us and those performed by the auditors of the joint operations, subsidiaries, joint ventures and associate companies, which are companies incorporated in India whose financial statements have been audited under the Act, nothing has come to our or other auditor's notice that has caused us or the other auditors to believe that the representations under sub-clause (i) and (ii) of Rule 11(e) of the Companies (Audit and Auditors) Rules, 2014 contain any material misstatement.

v. The dividend declared and paid during the year by the Holding Company is in compliance with Section 123 of the Act. The joint operations, subsidiary companies, associate companies and joint venture, incorporated in India has not declared / or paid any dividend during the year.

vi. As proviso to Rule 3(1) of the Companies (Accounts) Rules, 2014 (as amended), which provides for books of account to have the feature of audit trail, edit log and related matters in the accounting software used by the Group, its joint ventures and associate companies, incorporated in India is applicable to the Group, its joint ventures and associate companies incorporated in India only with effect from financial year beginning April 1, 2023, the reporting under clause (g) of Rule 11 of the Companies (Audit and Auditors) Rules, 2014 (as amended), is currently not applicable.

20. The Holding Company, its joint operations, subsidiary companies, joint ventures and associate companies incorporated as public companies in India have paid/ provided for managerial remuneration in accordance with the requisite approvals mandated by the provisions of Section 197 read with Schedule V to the Act.

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership Number: 045255
UDIN: 23045255BGYVVR9215

Mumbai
May 24, 2023

Annexure A to Independent Auditor's Report

Referred to in paragraph 19(f) of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the Consolidated Financial Statements as of and for the year ended March 31, 2023.

Report on the Internal Financial Controls with reference to the Consolidated Financial Statements under clause (i) of sub-section 3 of Section 143 of the Act

1. In conjunction with our audit of the consolidated financial statements of the Holding Company as of and for the year ended March 31, 2023, we have audited the internal financial controls with reference to consolidated financial statements of Hindalco Industries Limited (hereinafter referred to as "the Holding Company"), its joint operations, its subsidiary companies, its joint venture and its associate companies, which are companies incorporated in India, as of that date.

Management's Responsibility for Internal Financial Controls

2. The respective Board of Directors of the Holding Company, its joint operations, its subsidiary companies, its joint venture and associate companies, to whom reporting under clause (i) of sub section 3 of Section 143 of the Act in respect of the adequacy of the internal financial controls with reference to financial statements is applicable, are responsible for establishing and maintaining internal financial controls based on internal control over financial reporting criteria established by the respective companies considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting ("the Guidance Note") issued by the Institute of Chartered Accountants of India ("ICAI"). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditor's Responsibility

3. Our responsibility is to express an opinion on the Holding Company's internal financial controls with reference to consolidated financial statements based on our audit. We conducted our audit in accordance with the Guidance Note issued by the ICAI and the Standards on Auditing deemed to be prescribed under Section 143(10) of the Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both applicable to an audit of internal financial controls and both issued by the ICAI. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to financial statements was established and maintained and if such controls operated effectively in all material respects.

4. Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial controls system with reference to consolidated financial statements and their operating effectiveness. Our audit of internal financial controls with reference to consolidated financial statements included obtaining an understanding of internal financial controls with reference to consolidated financial statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error.

5. We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors in terms of their reports referred to in the Other Matters paragraph below is sufficient and appropriate to provide a basis for our audit opinion on the Holding Company's internal financial controls system with reference to consolidated financial statements.

Meaning of Internal Financial Controls with reference to financial statements

6. A company's internal financial control with reference to financial statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control with reference to financial statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (3) provide reasonable

Annexure A to Independent Auditor's Report

Referred to in paragraph 19(f) of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the Consolidated Financial Statements as of and for the year ended March 31, 2023.

assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Financial Controls with reference to financial statements

7. Because of the inherent limitations of internal financial controls with reference to financial statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to financial statements to future periods are subject to the risk that the internal financial control with reference to financial statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

8. In our opinion, the Holding Company, its joint operations, its subsidiary companies, its joint venture and associate companies, have, in all material respects, an adequate internal financial controls system with reference to financial statements and such internal financial controls with reference to financial statements were operating effectively as at March 31, 2023, based on the internal control over financial reporting criteria established by the respective companies considering the essential components of internal control stated in the Guidance Note issued by the ICAI.

Other Matters

9. Our aforesaid reports under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to financial statements insofar as it relates to eleven subsidiary companies, two joint operations, one joint venture and four associate companies, which are companies incorporated in India, is based on the corresponding reports of the auditors of such companies incorporated in India. Our opinion is not modified in respect of this matter.

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership Number: 045255
UDIN: 23045255BGYVVR9215

Mumbai
May 24, 2023

Annexure B to Independent Auditor's Report

Referred to in paragraph 18 of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the Consolidated Financial Statements as of and for the year ended March 31, 2023.

As required by paragraph 3(xxi) of the CARO 2020, we report that the auditors of the following companies have given qualification or adverse remarks in their CARO report on the standalone financial statements of the respective companies included in the Consolidated Financial Statements of the Holding Company:

S. No.	Name of the Company	CIN	Relationship with the Holding Company	Date of the respective auditors' report	Paragraph number and comment in the respective CARO report reproduced below
1	Renukeshwar Investments & Finance Limited	U65910UP1994PLC017080	Subsidiary	April 19, 2023	xvi. (a) In our opinion and according to the information and explanations given to us, the Company is required to be Registered with the Reserve Bank of India (RBI) as a Non-Banking Finance Company under section 45-IA of the Reserve Bank of India Act, 1934 to carry on the business of a Non-Banking Financial Company (NBFC) and accordingly the Company has applied for registration under section 45-IA of the Reserve Bank of India Act, 1934 (2 of 1934) to carry on the business of a NBFC, in the office of RBI, Kanpur which was initially rejected on 29th April 2000 as the Company had failed to inform the Reserve Bank of India on the criteria of Net Owned Funds, the Company had filed fresh application to General Manager / Dy General Manager, Department of Supervision (Financial Company Wing) Reserve Bank of India for registration under section 45-IA of the Reserve Bank of India Act, 1934 (2 of 1934) on 13th August 2002 but the registration number is still awaited. xvi. (b) According to the information and explanations given to us, the Company has applied for registration under section 45-IA of the Reserve Bank of India Act, 1934 (2 of 1934) to carry on the business of a NBFC, in the office of RBI, Kanpur which was initially rejected on 29th April 2000 as the Company had failed to inform the Reserve Bank of India on the criteria of Net Owned Funds , the Company had filed fresh application to General Manager / Dy General Manager, Department of Supervision (Financial Company Wing) Reserve Bank of India for registration under section 45-IA of the Reserve Bank of India Act, 1934 (2 of 1934) on 13th August 2002 but the registration number is still awaited.

Annexure B to Independent Auditor's Report

Referred to in paragraph 18 of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the Consolidated Financial Statements as of and for the year ended March 31, 2023.

S. No.	Name of the Company	CIN	Relationship with the Holding Company	Date of the respective auditors' report	Paragraph number and comment in the respective CARO report reproduced below
2	MNH Shakti Limited	U10100OR2008GOI010171	Joint Venture	April 25, 2023	(xvii) The company has not commenced any business/service during the year. It has incurred cash loss during the financial year covered by our audit and also in the immediately preceding financial year on account of preoperative expenses incurred by the company.
3.	East Coast Bauxite Mining Company Private Ltd	U13203OR2007PTC009597	Subsidiary	April 26, 2023	xvii) Cash Losses - In our opinion and on the basis of available Financial Statements subjected to audit, the company has incurred cash losses in the current Financial Year and in the immediately preceding Financial Year. The figures of Current financial Year and the previous Financial Year are ₹ 76,759/- & ₹ 47,305/- respectively. xix) Material uncertainty - As per the information and explanations obtained and on the basis of reasonable scrutiny of books of account and available records, we are of the opinion that there exists material uncertainty on the date of the audit report that the company is not capable of meeting its liabilities existing at the date of Balance Sheet as and when they fall within a period of one year from the balance sheet date. In our opinion there is no possibility that the Company would ever be able to pursue its object in future also because of prevailing material uncertainty with respect to operations. The Net worth of the Company has also been eroded fully and the Company is only thriving on the funds of the holding company for its expenses.
4.	Mahan Coal Limited	U01010MP2006PLC018586	Joint Operation	May 17, 2023	xiv. The Company did not have an internal audit system for the year under Audit. xvii. The Company has incurred cash losses during the current financial year as well as in the immediately preceding financial year. The amount of cash loss during the current year is ₹ 2,065.01 and Rs. 3,361.71 (₹ In hundreds) in the immediately preceding financial year.
5.	Tubed Coal Mines Limited	U10100MH2007PLC174466	Joint Operation	May 17, 2023	vii. (b) According to the information and explanations provided by management and the records examined by us, the Company is yet to pay Professional Tax of ₹ 4,600 for FY 18-19, ₹ 4,600/- for FY 19-20, ₹ 4,600/- for FY 20-21, ₹ 3,700/- for FY 21-22 and ₹ 2,500/- for FY 22-23. xvii. The Company has not incurred cash losses during the financial year, however the Company had incurred cashloss in the immediately preceding financial year.

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership Number: 045255
UDIN: 23045255BGYVVR9215

Mumbai
May 24, 2023

Consolidated Balance Sheet

as at March 31, 2023

(₹ in Crore)

	Page No.	Note	As at 31/03/2023	As at 31/03/2022
ASSETS				
Non-Current Assets				
Property, Plant and Equipment	384	2A	75,849	74,547
Capital Work-in-Progress	386	2B	7,340	4,727
Right of Use Assets	387	3A	2,681	1,923
Investment Properties	389	4	20	21
Goodwill	390	5	25,745	23,965
Other Intangible Assets	393	6A	6,331	6,418
Intangible Assets under Development	394	6B	360	218
Equity Accounted Investments	490	51D	79	51
Financial Assets				
Investments	395	7A	8,180	8,616
Loans	397	8	47	50
Derivatives	398	9	181	305
Other Financial Assets	407	10	3,069	786
Non-Current Tax Assets (Net)	414	11C	8	8
Deferred Tax Assets (Net)	409	11B	1,328	1,207
Other Non-Current Assets	414	12	4,288	1,677
Total Non-Current Assets			**135,506**	**124,519**
Current Assets				
Inventories	415	13	42,958	44,483
Financial Assets				
Investments	397	7B	5,857	5,452
Trade Receivables	415	14	16,214	21,076
Cash and Cash Equivalents	417	15	12,840	11,639
Bank Balances other than Cash and Cash Equivalents	417	16	2,528	5,753
Loans	397	8	8	7
Derivatives	398	9	1,710	3,366
Other Financial Assets	407	10	1,397	2,193
Current Tax Assets (Net)	414	11C	109	186
Other Current Assets	414	12	5,639	4,300
			89,260	**98,455**
Non-Current Assets or Disposal Group Classified as Held for Sale	417	17A	51	88
Total Current Assets			**89,311**	**98,543**
Total Assets			**224,817**	**223,062**
EQUITY AND LIABILITIES				
Equity				
Equity Share Capital	418	18	222	222
Other Equity	420	19	94,584	77,969
Equity attributable to Owners of the Company			**94,806**	**78,191**
Non-Controlling Interest			11	11
Total Equity			**94,817**	**78,202**

(₹ in Crore)

	Page No.	Note	As at 31/03/2023	As at 31/03/2022
Liabilities				
Non-Current Liabilities				
Financial Liabilities				
Borrowings	423	20A	51,434	51,635
Lease Liabilities	389	3B	1,491	972
Derivatives	398	9	56	464
Other Financial Liabilities	431	23	207	139
Provisions	431	24	586	661
Employee Benefit Obligations	434	25	5,305	6,124
Contract Liabilities	453	26	-	10
Deferred Tax Liabilities (Net)	409	11B	8,650	5,631
Other Non-Current Liabilities	454	27	1,814	1,888
Total Non-Current Liabilities			**69,543**	**67,524**
Current Liabilities				
Financial Liabilities				
Borrowings	428	20B	6,901	11,600
Lease Liabilities	389	3B	465	279
Supplier's Credit	429	21	5,635	2,456
Trade Payables	430	22		
(I) Outstanding dues of Micro and Small Enterprises			192	105
(II) Outstanding dues other than Micro and Small Enterprises			35,668	41,277
Derivatives	398	9	1,257	10,657
Other Financial Liabilities	431	23	2,913	3,607
Provisions	431	24	2,077	1,726
Employee Benefit Obligations	434	25	1,129	1,178
Contract Liabilities	453	26	340	365
Current Tax Liabilities (Net)	414	11C	2,187	2,120
Other Current Liabilities	454	27	1,693	1,873
			60,457	**77,243**
Liability Associated with Disposal Group Classified as Held for Sale	418	17B	-	93
Total Current Liabilities			**60,457**	**77,336**
Total Liabilities			**130,000**	**144,860**
Total Equity and Liabilities			**224,817**	**223,062**
Basis of Preparation and Significant Accounting Policies	356	1		

The accompanying Notes are an integral part of the Consolidated Financial Statements

This is the Consolidated Balance Sheet referred in our report of even date

For and on behalf of the Board of **Hindalco Industries Limited**

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration No. 304026E/E-300009

Praveen Kumar Maheshwari
Whole-time Director and
Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Sarah George
Partner
Membership No. 045255

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN-00026078

Place: Mumbai
Date: May 24, 2023

Consolidated Statement of Profit and Loss

for the year ended March 31, 2023

(₹ in Crore)

	Page No.	Note	Year ended 31/03/2023	Year ended 31/03/2022
CONTINUING OPERATIONS:				
INCOME				
Revenue from Operations	454	28	223,202	195,059
Other Income	456	29	1,257	1,136
Total Income			**224,459**	**196,195**
EXPENSES				
Cost of Materials Consumed	456	30	135,976	125,335
Trade Purchases	457	31	1,553	1,958
Changes in Inventories of Finished Goods, Work-in-Progress and Stock-in-Trade	457	32	3,241	(9,753)
Employee Benefits Expense	458	33	13,063	12,023
Power and Fuel	458	34	17,346	11,146
Finance Cost	459	35	3,646	3,768
Depreciation and Amortization Expense	459	36	7,086	6,729
Impairment Loss/ (Reversal) on Non-Current Assets (Net)	460	37	208	155
Impairment Loss/ (Reversal) on Financial Assets (Net)	460	38	11	155
Other Expenses	461	39	29,138	25,693
Total Expenses			**211,268**	**177,209**
Profit/ (Loss) before Share in Profit/ (Loss) in Equity Accounted Investments, Exceptional Items and Tax			13,191	18,986
Share in Profit/ (Loss) in Equity Accounted Investments (Net of Tax)	490	51D	9	6
Profit/ (Loss) before Exceptional Items and Tax			13,200	18,992
Exceptional Income/ (Expenses) (Net)	461	40	41	582
Profit/ (Loss) before Tax			**13,241**	**19,574**
Tax Expense	408	11A		
Current Tax Expense			2,856	3,801
Deferred Tax Expense			288	1,572
Profit/ (Loss) for the year from Continuing Operations			**10,097**	**14,201**
DISCONTINUED OPERATIONS:	492	53		
Profit/ (Loss) for the year from Discontinued Operations			-	(464)
Tax Expense/ (Benefit) of Discontinued Operations			-	7
Profit/ (Loss) for the year from Discontinued Operations			**-**	**(471)**
Profit/ (Loss) for the year			**10,097**	**13,730**
Other Comprehensive Income/ (Loss)	462	41		
Items that will not be reclassified to Statement of Profit and Loss				
Remeasurement of Defined Benefit Obligation			969	1,172
Change in Fair Value of Equity Instruments Designated as FVTOCI			(494)	1,211
Income Tax effect			(199)	(537)

(₹ in Crore)

	Page No.	Note	Year ended 31/03/2023	Year ended 31/03/2022
Items that will be reclassified to Statement of Profit and Loss				
Change in Fair Value of Debt Instruments Designated as FVTOCI			(13)	(9)
Effective Portion of Cash Flow Hedges			7,773	(4,867)
Cost of Hedging Reserve			64	(75)
Foreign Currency Translation Reserve			1,704	525
Income Tax effect			(2,344)	1,432
Other Comprehensive Income/ (Loss) for the year			**7,460**	**(1,148)**
Total Comprehensive Income/ (Loss) for the year			**17,557**	**12,582**
Profit/ (Loss) attributable to:				
Owners of the Company			10,097	13,730
Non-Controlling Interests			-	-
Other Comprehensive Income/ (Loss) attributable to:				
Owners of the Company			7,460	(1,148)
Non-Controlling Interests			-	-
Total Comprehensive Income/ (Loss) attributable to:				
Owners of the Company			17,557	12,582
Non-Controlling Interests			-	-
Total Comprehensive Income/ (Loss) attributable to Owners of the Company from:				
Continuing Operations			17,557	13,053
Discontinued Operations			-	(471)
Earnings Per Share:	463	42		
Basic - Continuing Operations (₹)			45.42	63.85
Diluted - Continuing Operations (₹)			45.36	63.77
Basic - Discontinued Operations (₹)			-	(2.12)
Diluted - Discontinued Operations (₹)			-	(2.12)
Basic - Continuing and Discontinued Operations (₹)			45.42	61.73
Diluted - Continuing and Discontinued Operations (₹)			45.36	61.65
Basis of Preparation and Significant Accounting Policies	356	1		

The accompanying Notes are an integral part of the Consolidated Financial Statements

This is the Consolidated Statement of Profit and Loss referred in our report of even date

For and on behalf of the Board of **Hindalco Industries Limited**

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration No. 304026E/E-300009

Praveen Kumar Maheshwari
Whole-time Director and
Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Sarah George
Partner
Membership No. 045255

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN-00026078

Place: Mumbai
Date: May 24, 2023

Consolidated Statement of Changes in Equity

for the Year ended March 31, 2023

A. Equity Share Capital

(₹ in Crore)

Particulars	Note	Amount
Balance as at April 01, 2021	18	222
Changes in Equity Share Capital	-	-
Balance as at March 31, 2022	18	222
Changes in Equity Share Capital	-	-
Balance as at March 31, 2023	18	222

B. Other Equity

(₹ in Crore)

Particulars	Note	Equity Component of Other Financial Instruments	Reserves and Surplus										Other Reserves					Attributable to Owners of the Company	Attributable to Non Controlling Interests	Total Other Equity
			Capital Reserve	Capital Redemption Reserve	Business Reconstruction Reserve	Securities Premium	Debenture Redemption Reserve	Employee Stock Options	Treasury Shares held by ESOP Trust	Special Reserve	General Reserve	Retained Earnings	Gain/ (Loss) on Equity Instruments FVTOCI	Gain/ (Loss) on Debt Instruments FVTOCI	Effective portion of Cash Flow Hedge	Cost of Hedging Reserve	Foreign Currency Translation Reserve			
Balance as at April 01, 2021		**4**	**147**	**104**	**5,799**	**8,225**	**1,350**	**54**	**(129)**	**20**	**21,370**	**22,777**	**4,673**	**1**	**(1,246)**	**10**	**3,152**	**66,311**	**10**	**66,321**
Profit/ (Loss) for the year		-	-	-	-	-	-	-	-	-	-	13,730	-	-	-	-	-	13,730	-	13,730
Other Comprehensive Income/(Loss) for the year		-	-	-	-	-	-	-	-	-	-	883	963	(6)	(3,464)	(49)	525	(1,148)	-	(1,148)
Total Comprehensive Income/(Loss) for the year		-	-	-	-	-	-	-	-	-	-	14,613	963	(6)	(3,464)	(49)	525	12,582	-	12,582
Hedging (Gain)/ Loss and cost of hedging transferred to non-financial assets		-	-	-	-	-	-	-	-	-	-	-	-	-	(151)	-	-	(151)	-	(151)
Realised Gain/(Loss) on Equity FVTOCI transferred to Retained Earnings		-	-	-	-	-	-	-	-	-	-	302	(302)	-	-	-	-	-	-	-
Transfer to Debenture Redemption Reserve		-	-	-	-	-	150	-	-	-	-	(150)	-	-	-	-	-	-	-	-
Transfer to Special Reserve		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Changes		-	-	-	-	-	-	-	-	-	-	(67)	-	-	(33)	-	32	(68)	1	(67)
Transactions with owners in their capacity as owners																				
Shares Acquired by the Trust		-	-	-	-	-	-	-	(94)	-	-	-	-	-	-	-	-	(94)	-	(94)
Shares Issued by the Trust		-	-	-	-	-	-	(11)	24	-	-	2	-	-	-	-	-	15	-	15
Employee Share Based Transactions		-	-	-	-	9	-	(3)	-	-	-	-	-	-	-	-	-	6	-	6
Employee Share Options Expenses		-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	35	-	35
Dividend Paid		-	-	-	-	-	-	-	-	-	-	(667)	-	-	-	-	-	(667)	-	(667)
Balance as at March 31, 2022	**19**	**4**	**147**	**104**	**5,799**	**8,234**	**1,500**	**75**	**(199)**	**20**	**21,370**	**36,810**	**5,334**	**(5)**	**(4,894)**	**(39)**	**3,709**	**77,969**	**11**	**77,980**

Particulars	Note	Equity Component of Other Financial Instruments	Reserves and Surplus										Other Reserves					Attributable to Owners of the Company	Attributable to Non Controlling Interests	Total Other Equity
			Capital Reserve	Capital Redemption Reserve	Business Reconstruction Reserve	Securities Premium	Debenture Redemption Reserve	Employee Stock Options	Treasury Shares held by ESOP Trust	Special Reserve	General Reserve	Retained Earnings	Gain/ (Loss) on Equity Instruments FVTOCI	Gain/ (Loss) on Debt Instruments FVTOCI	Effective portion of Cash Flow Hedge	Cost of Hedging Reserve	Foreign Currency Translation Reserve			
Profit/ (Loss) for the year		-	-	-	-	-	-	-	-	-	-	10,097	-	-	-	-	-	10,097	-	10,097
Other Comprehensive Income/(Loss) for the year		-	-	-	-	-	-	-	-	-	-	700	(424)	(9)	5,447	42	1,704	7,460	-	7,460
Total Comprehensive Income/(Loss) for the year		-	-	-	-	-	-	-	-	-	-	10,797	(424)	(9)	5,447	42	1,704	17,557	-	17,557
Hedging (Gain)/ Loss and cost of hedging transferred to non-financial assets		-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	23	-	23
Realised Gain/(Loss) on Equity FVTOCI transferred to Retained Earnings		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer from Debenture Redemption Reserve		-	-	-	-	-	(1,500)	-	-	-	-	1,500	-	-	-	-	-	-	-	-
Transfer to Special Reserve		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Changes		-	-	-	-	-	-	-	-	-	-	2	-	-	(120)	-	120	2	-	2
Transactions with owners in their capacity as owners																				
Shares Acquired by the Trust		-	-	-	-	-	-	-	(131)	-	-	-	-	-	-	-	-	(131)	-	(131)
Shares Issued by the Trust		-	-	-	-	-	-	(15)	24	-	-	(3)	-	-	-	-	-	6	-	6
Employee Share Based Transactions		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employee Share Options Expenses		-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-	48	-	48
Dividend Paid		-	-	-	-	-	-	-	-	-	-	(890)	-	-	-	-	-	(890)	-	(890)
Balance as at March 31, 2023	**19**	**4**	**147**	**104**	**5,799**	**8,234**	**-**	**108**	**(306)**	**20**	**21,370**	**48,216**	**4,910**	**(14)**	**456**	**3**	**5,533**	**94,584**	**11**	**94,595**
Basis of Preparation and Significant Accounting Policies	1																			

The accompanying Notes are an integral part of the Consolidated Financial Statements

This is the Consolidated Statement of Changes in Equity referred in our report of even date

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership No. 045255

Place : Mumbai
Dated : May 24, 2023

For and on behalf of the Board of Directors of Hindalco Industries Limited

Praveen Kumar Maheshwari
Whole-time Director & Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN No.: 00026078

Consolidated Statement of Cash Flows

for the Year ended March 31, 2023

(₹ in Crore)

	Note	Year ended 31/03/2023	Year ended 31/03/2022
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit/ (Loss) before Tax from Continuing Operations		13,241	19,574
Adjustment for :			
Finance Cost	35	3,646	3,768
Depreciation and Amortization Expense	36	7,086	6,729
Impairment Loss/ (Reversal) of Non-Current Assets (Net)	37	208	155
Impairment Loss/ (Reversal) on Financial Assets (Net)	38	11	155
Equity Settled Share-Based Payment	33	48	35
Share in (Profit)/ Loss in Equity Accounted Investments (Net of Tax)	51D	(9)	(6)
Unrealised Foreign Exchange (Gain)/ Loss (Net)		(92)	(113)
Unrealised (Gain)/ Loss on Derivative Transactions (Net)		(631)	353
Fair Value (Gain)/ Loss on Modification of Borrowings (Net)		(48)	(183)
(Gain)/ Loss on Assets Held for Sale (Net)		5	-
(Gain)/ Loss on Property, Plant and Equipment and Intangible Assets Sold/ Discarded (Net)	29	41	100
Interest Income	29	(559)	(225)
Dividend Income	29	(34)	(32)
Gains/(Loss) on Investments Measured at FVTPL (Net)	29	(202)	(359)
Exceptional (Income)/ Expenses (Net)		(41)	(5)
Changes in Cash Flow Hedges net of reclassification from OCI		1	(34)
Amortisation of government grants		(230)	(255)
Other Non-Operating (Income)/ Expenses (Net)		4	69
Operating Profit before Working Capital Changes		22,445	29,726
Changes in Working Capital:			
(Increase)/ Decrease in Inventories		2,839	(13,690)
(Increase)/ Decrease in Trade Receivables		5,751	(7,886)
(Increase)/ Decrease in Other Financial Assets		198	(285)
(Increase)/ Decrease in Non-Financial Assets		(1,372)	(1,434)
Increase/ (Decrease) in Trade Payables		(6,409)	12,683
Increase/ (Decrease) in Other Financial Liabilities		(1,280)	983
Increase/ (Decrease) in Non-Financial Liabilities (including contract liabilities)		(184)	497
Cash Generated from Operation before Tax		21,988	20,594
Refund/ (Payment) of Income Tax (Net)		(2,733)	(3,773)
Net Cash Generated/ (Used) - Operating Activities - Continuing Operations		**19,255**	**16,821**
Net Cash Generated/ (Used) - Operating Activities - Discontinued Operations		**(47)**	**17**
Net Cash Generated/ (Used) - Operating Activities		**19,208**	**16,838**
B. CASH FLOW FROM INVESTMENT ACTIVITIES			
Payments to acquire Property, Plant and Equipment, Intangible Assets and Investment Property		(9,842)	(5,426)
Proceeds from disposal of Property, Plant and Equipment, Intangible Assets and Investment Property		100	71
Net cash inflow on disposal of Subsidiaries/ Business		24	66
Acquisition of business, net of cash acquired		-	(412)
Investment in equity accounted investees		(17)	(1)
Return of Capital from Subsidiary		-	-
Investment in Equity Shares at FVTOCI		(57)	363
(Purchase)/ Sale of Other Investments (Net)		(214)	4,226
Loans and Deposits given		(3,222)	(6,214)
Receipt of Loans and Deposits given		4,615	5
Interest Received		445	207
Dividend Received		34	32
Lease payments received from finance lease		13	9
Net Cash Generated/ (Used) - Investing Activities - Continuing Operations		**(8,121)**	**(7,074)**
Net Cash Generated/ (Used) - Investing Activities - Discontinued Operations		**-**	**-**
Net Cash Generated/ (Used) - Investing Activities		**(8,121)**	**(7,074)**

(₹ in Crore)

	Note	Year ended 31/03/2023	Year ended 31/03/2022
C. CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from issue of Equity Shares (Including Share Application Money)		-	6
Treasury Shares acquired by ESOP Trust		(131)	(94)
Proceeds from shares issued by ESOP Trust		6	15
Proceeds from Non-Current Borrowings		701	14,197
Pre-payment of Non-Current Borrowings		(3,451)	(17,321)
Repayment of Non-Current Borrowings		(6,174)	(623)
Increase/ (Decrease) in Supplier's Credit (Net)		3,214	2,161
Principal Payments of Lease Liabilities		(512)	(337)
Proceeds from/ (Repayment) of Current Borrowings (Net)		737	(852)
Finance Cost Paid		(3,845)	(3,250)
Dividend Paid		(890)	(667)
Net Cash Generated/ (Used) - Financing Activities - Continuing Operations		**(10,345)**	**(6,765)**
Net Cash Generated/ (Used) - Financing Activities - Discontinued Operations		**-**	**-**
Net Cash Generated/ (Used) - Financing Activities		**(10,345)**	**(6,765)**
Net Increase/ (Decrease) in Cash and Cash Equivalents		**742**	**2,999**
Add : Opening Cash and Cash Equivalents		11,639	8,339
Add : Effect of exchange variation on Cash and Cash Equivalents		457	301
Closing Cash and Cash Equivalents		**12,838**	**11,639**
Reconciliation of Closing Cash and Cash Equivalents with Balance Sheet:			
Cash and Cash Equivalents as per Balance Sheet	15	12,840	11,639
Less: Temporary Overdraft Balance in Current Accounts		(2)	-
Cash and Cash Equivalents as per Statement of Cash Flows		**12,838**	**11,639**
Supplemental Information			
(i) Non Cash Transaction from Investing and Financing Activities:			
Acquisition of Right of Use Assets		1,148	412
Basis of Preparation and Significant Accounting Policies	1		

The accompanying Notes are an integral part of the Consolidated Financial Statements

This is the Consolidated Statement of Cash Flows referred in our report of even date

For and on behalf of the Board of **Hindalco Industries Limited**

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration No. 304026E/E-300009

Praveen Kumar Maheshwari
Whole-time Director and
Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Sarah George
Partner
Membership No. 045255

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN-00026078

Place: Mumbai
Date: May 24, 2023

Company Information:

Hindalco Industries Limited ("the Company/ Parent"), bearing Corporate Identity Number (CIN) L27020MH1958PLC011238, is a public limited company incorporated in India in the year 1958. The company is domiciled in India and its registered office is at Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road, Andheri (East), Mumbai - 400093. The equity shares of the Company are listed on National Stock Exchange of India Limited (NSE) and BSE Limited (BSE) and its Global Depositary Receipts (GDR) are listed on the Luxembourg Stock Exchange.

The Company along with it's two Joint Operations, two Trusts and its Subsidiaries (collectively referred to as"the Group") and its interest in Associates and Joint Ventures has manufacturing operations in ten countries including India spread over four continents viz. North America, South America, Asia and Europe. The Group is primarily engaged in two streams of business namely Aluminium and Copper. In Aluminium business, the Group has presence across the entire value chain starting from mining of bauxite and coal through production of primary aluminium and value added products like flat rolled product, extrusion and light gauge products for use in various applications like packaging, can, foil, food and beverage as well as products for use in aerospace, automotive, electronic, transportation, building and construction and other industrial segments.

In Copper business, the Group has one of the largest single location Copper smelting facility in India. The Group produces copper cathode, copper rods and precious metals.

The consolidated financial statements ("the financial statements") presents the financial position of the Group as well as its interest in associate companies and joint arrangements. The list of entities incorporated in the consolidated financial statements are provided in Note 51.

The consolidated financial statements for the year ended March 31, 2023 have been approved for issue by the Board of Directors of the Company in their meeting held on May 24, 2023.

1. Basis of Preparation and Significant Accounting Policies

The basis of preparation and the accounting policies have been applied consistently to all the periods presented in the consolidated financial statements, unless otherwise stated. The accounting policies adopted are the same as those which were applied for the previous financial year.

Statement of Compliance

The consolidated financial statements comply in all material aspects with the Indian Accounting Standards ("Ind-AS") as prescribed under section 133 of the Companies Act 2013 ("the Act"), other relevant provisions of the Act as notified under the Companies (Indian Accounting Standards) Rules, 2015, (including subsequent amendments) and other accounting principles generally accepted in India.

1A. Basis of Preparation

The consolidated financial statements have been prepared and presented on the going concern basis using accrual basis of accounting and under the historical cost convention except for following assets and liabilities:

- Derivative Financial Instruments; see Note 1B(Q) for accounting policy
- Certain financial assets and liabilities; see Note 1B(P) for accounting policy
- Assets held for sale; see Note 1B(H) for accounting policy
- Employee's defined benefit plan assets; see Note 1B(U) for accounting policy
- Liability for cash based share-based payments; see Note 1B(V) for accounting policy
- Assets and liabilities acquired under business combination; see Note 1B(B) for accounting policy
- Inventories those are designated in a fair value hedge relationship; see Note 1B (M), (Q) for accounting policy
- Assets and liabilities designated as hedged items in fair value hedges that would otherwise be carried at cost; see Note 1B (Q) for accounting policy

Historical cost is generally based on the fair value of the consideration in exchange for goods and services.

The Group has determined current and non-current classification of its assets and liabilities in the financial statements as per the Group's normal operating cycle, and other criteria set out in Schedule III of the Companies Act, 2013. Based on the nature of products and the time lag between the acquisition of assets for processing and their realisation in cash and cash equivalents, the Group has ascertained its normal operating cycle as 12 months for the purpose of current and non-current classification of its assets and liabilities.

The consolidated financial statements are presented in Indian Rupees ("₹") which is the functional currency of the Company and the currency of the primary economic environment in which the Company operates. All values presented in Indian Rupees has been rounded off to nearest Crore (₹ 1 Crore = ₹ 10,000,000) without any decimal, unless otherwise stated. Amounts below rounding off convention are considered as Nil in the consolidated financial statements.

1B. Significant Accounting Policies

(A) Principles of Consolidation

The consolidated financial statement incorporate the financial statements of the parent and entities controlled by the parent i.e. subsidiaries and unstructured entities. It also includes the Group's share of profits, net assets and retained post acquisition reserves of joint arrangements and associates that are consolidated using the equity or proportionate method of consolidation, as applicable.

Subsidiaries

Subsidiaries are the entities (including structured and unstructured entities) over which the Group has control. The Group controls an entity when the group 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 to direct the relevant activities of the entity. Consolidation of subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated financial statements from the date the Group gains the control until the date the Group ceases to control the subsidiary.

The Group combines the financial statements of the parent and its subsidiaries line by line adding together like items of assets, liabilities, equity, income and expenses. Intra-group transactions, balances and unrealised profits on transactions between group companies are eliminated in full. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred assets. Appropriate adjustments for deferred taxes are made for temporary differences that arise from the elimination of unrealised profits and losses from intra-group transactions or undistributed earnings of Group's entity included in consolidated statement of profit and loss, if any.

The consolidated financial statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances. If any entity within the Group uses accounting policies other than those adopted in the consolidated financial statements for like transactions and events in similar circumstances, appropriate adjustments are made to that group entity's financial statements to ensure conformity with the Group's accounting policies. The financial statements of all entities used for the purpose of consolidation are drawn up to the same reporting date as that of the parent company. When the end of the reporting period of the parent is different from that of a subsidiary, the subsidiary prepares additional financial information as of the same date as the financial statements of the parent to enable the parent to consolidate the financial information of the subsidiary, unless it is impractical to do so.

Non-controlling interest in the profit / loss and equity of the subsidiaries are shown separately in the consolidated statement of profit and loss and the consolidated balance sheet, respectively.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. This results in an adjustment between the carrying amounts of the controlling and non-controlling interests to reflect their relative interests in the subsidiary. Any difference between the amount of the adjustment to non-controlling interests and any consideration paid or received is recognised within equity attributable to owners of the parent.

In case the Group ceases to consolidate a subsidiary because of a loss of control, any retained interest in the entity is re-measured to its fair value. This fair value becomes the initial carrying amount for the purpose of subsequently accounting for the retained interest as an associate, joint venture or financial assets. When the Group loses control over a subsidiary, it derecognises the assets, including goodwill, and liabilities of the subsidiary, carrying amount of any non-controlling interests, cumulative translation differences recorded in equity and recognise resulting difference between the fair value of the investment retained and the consideration received and total of amount derecognised as gain or loss attributable to the Parent.

In addition, amounts, if any, previously recognised in other comprehensive income in relation to that entity are reclassified to profit or loss as would be required if the parent had directly disposed of the related assets or liabilities.

Interest in Associates and Joint Ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies, generally accompanying a shareholding between 20% and 50% of the voting rights.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The Group's interest in its associates or joint ventures are accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. Under equity method, the investment in an associate or a joint venture is initially recognised at cost and adjusted thereafter to recognise the changes in the Group's share of net assets of the associate or joint venture since the acquisition date. Dividends received or receivable from associates and joint ventures are recognised as a reduction in the carrying amount of the investment. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as Goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment is recognised in equity as Capital Reserve in the period in which the investment is acquired.

The consolidated statement of profit and loss reflects the Group's share of the results of operations of the associate or joint venture. Any change in other comprehensive income (OCI) is presented as part of the Group's OCI. In addition, when there has been a change recognised directly in the equity of the associate or joint venture, the Group recognises its share of that changes, when applicable, in the consolidated statement of changes in equity. Unrealised gains or losses resulting from transactions between the Group and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture.

When the Group's share of losses of an associate or a joint venture equals or exceeds its interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture. If the associate or joint venture subsequently reports profits, the group resumes recognising its share of those profits only after its share of the profit equals the share of losses not recognised.

At each reporting date, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, and then recognises the impairment loss in the consolidated statement of profit and loss. Any reversal of that impairment loss is recognised to the extent that the recoverable amount of the investment subsequently increases. Goodwill relating to associate or joint venture is included in the carrying amount of the investment and is not separately tested for impairment.

The Group continues to use the equity method when an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate.

If ownership interest in an associate or a joint venture is reduced but significant influence or joint control is retained, the Group continues to use the equity method, and only proportionate share of the amount previously recognised in other comprehensive income are reclassified to consolidated statement of profit and loss where appropriate.

When the Group classified its investments, or a portion thereof, in associate or joint venture as held for sale, it discontinues the use of the equity method in relation to the portion that is classified as held for sale. Any retained portion of an investment in an associate or a joint venture that has not been classified as held for sale continues to be accounted for using the equity method. The Group discontinues the use of the equity method at the time of disposal when the disposal results in the Group losing significant influence over the associate or joint venture.

Upon loss of significant influence over the associate or joint venture, the group measures and recognises any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture and the fair value of retained investment and proceeds from disposal is recognised in the consolidated statement of profit and loss.

Interest in Joint Operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When a Group entity undertakes its activities under joint operations, the Group as a joint operator recognises in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the standard applicable to the particular assets, liabilities, revenues and expenses.

When a Group entity transacts with a joint operation in which a group entity is a joint operator (such as a sale or contribution of assets), the Group is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognised in the financial statements only to the extent of other parties' interests in the joint operation.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a purchase of assets), the Group does not recognise its share of the gains and losses until it resells those assets to a third party.

See Note 51 - Interest in Other Entities for further details.

See Note 54 - Disposal of Subsidiaries for further details.

(B) Business Combination

Business combinations are accounted for using the acquisition method. The consideration transferred in a business combination comprises the fair values of the assets transferred, liabilities incurred to the former owners of the acquired business, equity interests issued by the Group and fair value of any assets or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred.

At the acquisition date, the identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured at their acquisition date fair values. However, certain assets and liabilities i.e. deferred tax assets or liabilities, assets or liabilities related to employee benefit arrangements, liabilities or equity instruments related to share-based payment arrangements, lease liabilities under Ind AS 116 and assets or disposal groups that are classified as held for sale, acquired or assumed in a business combination are measured as per the applicable Ind-AS.

The Group recognises any non-controlling interest in the acquired entity on an acquisition-by-acquisition basis either at fair value or at the non-controlling interest's proportionate share of the acquired entity's net identifiable assets.

The excess of the sum of the consideration transferred; the amount of any non-controlling interests in the acquired entity; and the acquisition-date fair value of any previous equity interest in the acquired entity, over the acquisition-date fair value of the net identifiable assets acquired is recognised as goodwill. Any gain on a bargain purchase is recognised is in other comprehensive income and accumulated in equity as Capital Reserve if there exists clear evidence of the underlying reasons for classifying the business combination as resulting in a bargain purchase, otherwise the gain is recognised directly in equity as Capital Reserve.

Where settlement of any part of cash consideration is deferred, the amounts payable in future are discounted to their present value as at the date of exchange. The discount rate used is entity's incremental borrowing rate, being the rate at which similar borrowing could be obtained from an independent financier under comparable terms and conditions.

Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not re-measured subsequently and settlement is accounted for within equity. Other contingent consideration is re-measured at fair value at each reporting date and changes in the fair value of contingent consideration are recognised in profit or loss.

When a business combination is achieved in stages, any previously held equity interest in the acquiree is re-measured at its acquisition-date fair value and the resulting gain or loss, if any, is recognised in the consolidated statement of profit and loss or other comprehensive income, as appropriate.

Where it is not possible to complete the determination of fair values by the end of the reporting period in which the combination occurs, a provisional assessment of fair values is made and any adjustments required to those provisional values, and the corresponding adjustments to goodwill, are finalised within 12 months of the acquisition date.

See Note 52 - Business Combination for further details.

(C) Property, Plant and Equipment

Property, plant and equipment held for use in the production or/and supply of goods or services, or for administrative purposes, are stated in the consolidated balance sheet at cost, less any subsequent accumulated depreciation and subsequent accumulated impairment losses except for freehold land which is carried at historical cost.

The initial cost at cash price equivalent of property, plant and equipment acquired comprises its purchase price, including import duties and non-refundable purchase taxes, any directly attributable costs of bringing the assets to its working condition and location and present value of any obligatory decommissioning costs for its intended use. Cost may also include effective portion on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment transferred from hedge reserve as basis adjustment.

In case of self-constructed assets, cost includes the costs of all materials used in construction, direct labour, allocation of overheads, directly attributable borrowing costs and effective portion of cash flow hedges of foreign currency transferred from the hedge reserve as basis adjustment.

Subsequent expenditure on major maintenance or repairs includes the cost of the replacement of parts of assets and overhaul costs. Where an asset or part of an asset is replaced and it is probable that future economic benefits associated with the item will be available to the Group, the expenditure is capitalised and the carrying amount of the item replaced is derecognised. Similarly, overhaul costs associated with major maintenance which can be measured reliably are capitalised and depreciated over their useful lives where it is probable that future economic benefits will be available and any remaining carrying amounts of the cost of previous overhauls are derecognised. All other costs are charged to consolidated statement of profit and loss during the reporting period in which they are incurred.

Capital work-in-progress

Capital work-in-progress comprises of tangible items in the course of construction for production or/and supply of goods or services or administrative purposes are carried at cost, less any accumulated impairment loss. At the point when an asset is capable of operating at management's intended use, the cost of construction is transferred to the appropriate category of property, plant and equipment. Costs associated with the commissioning of an asset are capitalised.

Depreciation

Depreciation is charged so as to write off the cost or value of assets, net off their residual values, over their estimated useful lives. Depreciation is recorded using the straight line basis. The estimated useful lives and residual values are reviewed at each year end, with the effect of any changes in estimate accounted for on a prospective basis. Each component of an item of property, plant and equipment with a cost that is significant in relation to the total cost of that item is depreciated separately if its useful life differs from the others components of the asset.

Depreciation commences when the assets are ready for their intended use. Depreciated assets and accumulated depreciation accounts are retained fully until they are removed/retired from active use.

Leasehold improvements are depreciated over the shorter of their useful life or the lease term, unless the entity expects to use the assets beyond the lease term.

The useful life of the items of Property, Plant and Equipment estimated by the management for the current and comparative period are in line with the useful life as per Schedule II of the Companies Act, 2013, other than those of foreign subsidiaries. (refer Note 2).

Disposal of assets

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between net disposal proceeds and the carrying amount of the asset and is recognised in the consolidated statement of profit and loss.

See Note 2 - Property, Plant and Equipment and Capital Work-in-Progress for further details.

See Note 36 - Depreciation and Amortization Expense for further details.

(D) Investment Properties

Investment properties held to earn rentals or for capital appreciation or both are stated in the consolidated balance sheet at cost, less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Subsequent expenditure on major maintenance or repairs includes the cost of the replacement of parts of assets. Where an asset or part of an asset is replaced and it is probable that future economic benefits associated with the item will be available to the Company, the expenditure is capitalised and the carrying amount of the item replaced is derecognised. All other repairs and maintenance costs are recognised in the statement of profit and loss. Depreciation is charged on a straight line basis over their estimated useful lives. Any gain or loss on disposal of investment property is determined as the difference between net disposal proceeds and the carrying amount of the property and is recognised in the consolidated statement of profit and loss. Transfer to, or from, investment property is at the carrying amount of the property.

See Note 4 - Investment Properties for further details.

See Note 36 - Depreciation and Amortization Expense for further details.

(E) Intangible Assets (Other than Goodwill)

Intangible assets acquired separately

Intangible assets acquired are reported at cost less accumulated amortization and accumulated impairment losses. Amortization is charged on a straight line basis over their estimated useful lives other than 'Mining Rights' and 'Carbon Emission Rights'. The estimated useful life and amortization method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Internally-generated intangible assets

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if all of the following have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- management's intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset is recognised.

Where no internally-generated intangible asset can be recognized, development expenditure is charged to the consolidated statement of profit and loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets acquired separately.

Intangible assets acquired in a business combination

Identified intangible assets acquired in a business combination and recognised separately from goodwill are initially recognised at their fair values at the acquisition date.

Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets acquired separately.

Mining Reserves, Resources and Rights (Mining Rights)

Mineral reserves, resources and rights (together referred to as 'mining rights') which can be reasonably valued, are recognised in the assessment of fair values on acquisition. Exploitable mineral rights are amortised using the unit of production basis over the commercially recoverable reserves. Mineral resources are included in amortisation calculations where there is a high degree of confidence that they will be extracted in an economic manner. Commercially recoverable reserves are proved and probable reserves. Changes in the commercial recoverable reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

Exploration for and evaluation of mineral resources

Expenditures associated with exploration for and evaluation of mineral resources after obtaining of legal rights to explore a specific area but before technical feasibility and commercial viability of extracting mineral resources are demonstrable are recognized as Exploration and Evaluation assets.

If a project does not prove viable, all irrecoverable exploration and evaluation expenditure associated with the project net of any related impairment allowances is written off to the consolidated statement of profit and loss.

The Group measure its Exploration and Evaluation assets at cost and classifies it as Property, Plant and Equipment or Intangible Assets according to the nature of assets acquired and applies the classification consistently.

As the assets are not available for use, it is not depreciated but are monitored for indication of impairment. An exploration and evaluation asset is no longer classified as such when the technical feasibility and commercial viability of extracting minerals resources are demonstrable and the development of the deposit is intended by the management. The carrying value of such exploration and evaluation asset is reclassified as Mining Rights.

Derecognition of intangible assets

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset are recognised in the consolidated statement of profit and loss when the asset is derecognised.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment annually, and whenever there is an indication that the asset may be impaired.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 36 - Depreciation and Amortization Expense for further details.

(F) Goodwill

Goodwill arising on acquisition is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units expected to benefit from the synergies of the combination.

Cash-generating units to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognised for goodwill is not reversed in a subsequent period.

On disposal of a subsidiary the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

The Group's policy for goodwill arising on the acquisition of an associate is detailed in Note 1B(A).

See Note 5 - Goodwill for further details.

(G) Stripping Cost

Stripping costs incurred during the mining production phase are allocated between cost of inventory produced and the existing mine asset. The stripping ratio, as approved by the regulatory authority, for the life of the mine is obtained by dividing the estimated quantity of overburden by the estimated quantity of mineable coal / bauxite reserve to be extracted over the life of the mine. This ratio is periodically reviewed and changes, if any, are accounted for prospectively.

Stripping costs are allocated and included as a component of the mine asset when they represent significantly improved access to ore, provided all the following conditions are met:

- it is probable that the future economic benefit associated with the stripping activity will be realised;
- the component of the ore body for which access has been improved can be identified; and
- the costs relating to the stripping activity associated with the improved access can be reliably measured.

The overburden removal costs are included in Mining Rights under Intangible assets and amortised based on stripping ratio on the quantity of coal / bauxite excavated.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 36 - Depreciation and Amortization Expense for further details.

(H) Non-Current Assets or Disposal Groups Held for Sale and Discontinued Operations

Non-Current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the asset (or disposal group) is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such asset (or disposal group) and its sale is highly probable. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-Current assets and disposal groups classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell except for those assets that are specifically exempt under relevant Ind AS. Once the assets are classified as "Held for sale", those are not subjected to depreciation till disposal.

An impairment loss is recognised for any initial or subsequent write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognised.

A gain or loss not previously recognised by the date of the sale of the non-current asset (or disposal group) is recognised at the date of derecognition.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the consolidated balance sheet.

Discontinued Operations

A discontinued operation is a component of an entity that either has been disposed off, or is classified as held for sale and that represents a separate line of business or geographical area of operations, is part of a single coordinated plan to dispose of such a line of business or area of operations, or is a subsidiary acquired exclusively with a view to resale. The results of discontinued operations are presented separately in the consolidated statement of profit and loss.

See Note 17 - Non-Current Assets or Disposal Group Classified as Held For Sale for further details.

See Note 53 - Discontinued Operations for further details.

(I) Impairment of Non-Current Assets (excluding Goodwill)

At the end of each reporting period, the Group reviews the carrying amounts of its tangible, intangible and other 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/ cash-generating unit is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Recoverable amount is the higher of fair value less cost to sell and Value in use. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

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 for which the estimates of future cash flows have not been adjusted.

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 immediately in the consolidated statement of profit and loss.

Non-current assets (other than Goodwill) that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period. Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in the consolidated statement of profit and loss.

See Note 2 - Property, Plant and Equipment and Capital Work-in-Progress for further details.

See Note 3A - Right of Use Assets for further details.

See Note 4 - Investment Properties for further details.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 37 - Impairment Loss/ (Reversal) of Non-Current Assets (Net) for further details.

(J) Foreign Currency Transactions and Translation

Transactions in foreign currencies are recorded by the Group entities at their respective functional currency at the exchange rates prevailing at the date of the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currency are translated to the functional currency at the exchange rates prevailing at the reporting date.

Exchange differences arising on settlement or translation of monetary items are recognised in the consolidated statement of profit and loss with the exception of the following:

- eligible exchange differences on foreign currency borrowings relating to qualifying assets under construction are included in the cost of those assets when they are regarded as an adjustment to interest costs;
- exchange differences on transactions entered into in order to hedge certain foreign currency risks (see below for hedge accounting policies); and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognised initially in other comprehensive income and reclassified from equity to the consolidated statement of profit and loss on repayment of the monetary items.

Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rates at the date of initial transactions. Non-monetary items measures at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. The gain or loss arising on translation of non-monetary items measured at fair value is treated in line with the recognition of gain or loss on change in fair value of the item (i.e. translation differences on items whose fair value gain or loss is recognised in OCI or profit or loss are also recognised in OCI or profit or loss, respectively).

For the purposes of presenting consolidated financial statements, the assets, liabilities and equity (except retained earnings) of foreign operations are translated into Indian Rupees at the rate of exchange prevailing at the reporting date and their income and expenses are translated at the exchange rates prevailing at the date of transactions. For practical reason, the Group uses an average rate to translate income and expense items, if the average rate approximates the exchange rates at the dates of the transactions. The exchange differences arising on translation for consolidation are recognised in other comprehensive income and accumulated in equity. Accumulated exchange differences arising from translation and attributable to non-controlling interests are allocated to, and recognised as part of, non-controlling interests in the consolidated balance sheet.

On the disposal of a foreign operation all of the exchange differences accumulated in OCI relating to that particular foreign operation attributable to the owners of the Group is reclassified in the consolidated statement of profit and loss.

In addition, in relation to a partial disposal of a subsidiary that includes a foreign operation that does not result in the Group losing control over the subsidiary, the proportionate share of accumulated exchange differences are re-attributed to non-controlling interests and are not recognised in the consolidated statement of profit and loss. For partial disposals of investment in associates or joint arrangements that do not result in the Group losing significant influence or joint control, the proportionate share of the accumulated exchange differences is reclassified in the consolidated statement of profit and loss.

Any goodwill and fair value adjustments arising in business combinations or acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the exchange rates prevailing at the reporting date and resulting exchange differences are recognised in other comprehensive income.

See Note 39 - Other Expenses for further details.

See Note 41 - Other Comprehensive Income/ (Loss) for further details.

(K) Provisions and Contingencies

Provisions are recognized when there is a present obligation (legal or constructive) as a result of a past event and it is probable ("more likely than not") that it is required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the estimated cash flows to settle the present obligation, its carrying amount is the present value of those cash flows. The discount rate used is a pre-tax rate that reflects current market assessments of the time value of money in that jurisdiction and the risks specific to the liability.

Onerous contracts

An onerous contract is considered to exist when a contract under which the unavoidable costs of meeting the obligations exceed the economic benefits expected to be received from it.

A provision for onerous contracts is recognised when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract.

Restructurings

A restructuring provision is recognised when there is a detailed formal plan for the restructuring which has raised a valid expectation in those affected that the Group will carry out the restructuring by stating to implement the plan or announcing its main feature to those affected by it. The measurement of a restructuring provision includes only the direct expenditures arising from the restructuring which are both necessarily entailed by the restructuring and not associated with the ongoing activities of the Group.

Contingent liabilities acquired in a business combination

Contingent liabilities acquired in a business combination are initially measured at fair value at the acquisition date. At the end of subsequent reporting periods, such contingent liabilities are measured at the higher of the amount that would be recognised in accordance with Ind-AS 37 and the amount initially recognised less cumulative amortisation recognised in accordance with Ind AS 115 - Revenue from contracts with customers. This does not apply to financial guarantee contracts or otherwise to those contracts that are within the scope of Ind AS 109.

Restoration (including Mine closure), rehabilitation and decommissioning

Close-down and restoration costs are provided for in the accounting period when the obligation arising from the related disturbance occurs, based on the net present value of the estimated future costs of restoration to be incurred during the life of the mining operation and post closure. Provisions for close-down and restoration costs do not include any additional obligations which are expected to arise from future disturbance.

The initial close-down and restoration provision is capitalised. Subsequent movements in the close-down and restoration provisions for ongoing operations, including those resulting from new disturbance related to expansions or other activities qualifying for capitalisation, updated cost estimates, changes to the estimated lives of operations, changes to the timing of closure activities and revisions to discount rates are also capitalised within "Property, plant and equipment". The effect of time value of money on the restoration, rehabilitation and decommissioning liabilities is recognised in the statement of profit and loss as interest expense.

Environmental liabilities

Environment liabilities are recognised when the group becomes obliged, legally or constructively to rectify environmental damage or perform remediation work. The effect of time value of money on the environmental liabilities is recognised in the statement of profit and loss as interest expense.

Litigation

Provision relating to legal, tax and other matters is recognised once it has been established that the group has a present obligation based on consideration of the information which becomes available up to the date on which the consolidated financial statements of the Group are approved and may in some cases entail seeking expert advice in making the determination on whether there is a present obligation.

Contingent Liabilities and Assets

A contingent liability is a possible obligation that arises from a past event, with the resolution of the contingency dependent on uncertain future events, or a present obligation where no outflow is probable. Material contingent liabilities are disclosed in the consolidated financial statements unless the possibility of an outflow of economic resources is remote. Contingent assets are not recognized in the consolidated financial statements unless it is virtually certain that the future event will confirm the asset's existence and the asset will be realised.

Enterprise Social Commitment

Enterprise Social Commitment is the amount to be spent on social and economic development of the surrounding area over a period of time where any new project is set up. Such obligation arises out of conditions mentioned in the Environment Clearance Certificate given by the Government for new projects and are generally defined as a percentage of total project cost. Present value of such future cash flows discounted at appropriate and applicable discount rates are capitalised against the obligation created. Actual cash flows that happen over the period are adjusted against the obligation. The effect of time value of money on the environmental liabilities is recognised in the statement of profit and loss as interest expense.

Renewable Power Obligation

Provision towards Renewable Power obligation is created to the extent any obligated unit is unable to source renewable energy as a replacement to carbon energy as per requirement of the applicable regulation during the reporting period and is carried in books till the obligation is discharged by purchasing Renewable Energy Certificate from any of the authorised exchanges.

See Note 24 - Provisions for further details.

See Note 46 - Contingent Liabilities and Commitments for further details.

(L) Leases

The Group as lessee

The Group assesses whether a contract is or contains a lease, at inception of the contract. The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets. For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the lease term, unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed. Contingent and variable rentals are recognized as expense in the periods in which they are incurred.

Lease Liability

The lease payments that are not paid at the commencement date are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases in the Group, the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions.

To determine the incremental borrowing rate, the Group uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk and makes adjustments specific to the lease, e.g. term, security etc.

Lease payments included in the measurement of the lease liability comprise:

- Fixed lease payments (including in-substance fixed payments) payable during the lease term and under reasonably certain extension options, less any lease incentives;
- Variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- The amount expected to be payable by the lessee under residual value guarantees;
- The exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- Payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the consolidated Balance Sheet. Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) to reflect any reassessment, lease modification or revised in-substance fixed lease payments.

Right of Use (ROU) Assets

The ROU assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

Whenever the Group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under Ind AS 37- Provisions, Contingent Liabilities and Contingent Assets. The costs are included in the related right-of-use asset.

For the certain class of assets, the Group allocates lease or non-lease components on the basis of their relative stand-alone prices while assessing a contract at its inception or on reassessment.

The Group applies Ind AS 36 - Impairment of Assets to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as per its accounting policy on 'Property, Plant and Equipment'.

Extension and termination options are included in many of the leases. In determining the lease term the management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option.

ROU assets are depreciated over the shorter period of the lease term and useful life of the underlying asset. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life. The depreciation starts at the commencement date of the lease.

Deferred tax on the deductible temporary difference and taxable temporary differences in respect of carrying value of right of use assets and lease liability and their respective tax bases are recognised separately.

Sale and Leaseback

When Group (seller-lessee) sells an asset to another entity (the buyer-lessor) and leases it back from the buyer lessor, the Group determines if the transaction qualifies as a sale under Ind AS 115 or whether the transaction is a collateralised borrowing.

A sale and leaseback qualifies as a sale if the buyer-lessor obtains control of the underlying asset. The Group measures a right-of-use asset arising from the leaseback as the proportion of the previous carrying amount of the asset that relates to the right-of-use retained. The gain/ (loss) that the Group recognises is limited to the proportion of the total gain/ (loss) that relates to the rights transferred to the buyer-lessor.

Any difference between the sale consideration and the fair value of the asset is either a prepayment of lease payments (if the purchase price is below market terms) or an additional financing (if the purchase price is above market terms), and this is applied if the lease payments are not at market rates.

If the transfer does not qualify as a sale under Ind AS 115, the Group does not derecognise the transferred asset, and it accounts for the cash received as a financial liability.

The Group as lessor

The Group enters into lease arrangements as a lessor with respect to some of its investment properties and buildings.

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as finance lease. All other leases are classified as operating leases.

When the Group is an intermediate lessor, it accounts for the head lease and sublease as two separate contracts. The sublease is classified as finance or operating lease by reference to the right-of-use asset arising from the head lease.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the lease term.

Amounts due from lessees under finance leases are recognised as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

When a contract includes lease and non-lease components, the Group applies Ind AS 115, Revenue from Contracts with Customers to allocate the consideration under the contract to each component.

See Note 3 - Right of Use Assets and Lease Liabilities recognised against Right of Use assets for further details.

See Note 35 - Finance Cost for further details.

See Note 39 - Other Expenses for further details.

(M) Inventories

Inventories are stated at the lower of cost and net realizable value. The cost of finished goods and work in progress includes raw materials, direct labour, other direct costs and related production overheads. Costs of inventories include the transfer from equity any gains/ losses on qualifying cash flow hedges for purchases of raw materials.

Cost of raw material and traded goods comprises of Cost of purchases and also include all other costs incurred in bringing the inventories to their present location and condition and are net of rebates and discounts.

The Inventories are measured at Fair Value only in those cases where the Inventories are designated into a fair value hedge relationship.

Cost is determined using the weighted average cost basis. However, the same cost basis is applied to all inventories of a particular class. Inventories of stores and spare parts are valued at weighted average cost basis after providing for cost of obsolescence and other anticipated losses, wherever considered necessary.

Net realizable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

Materials and other supplies held for use in the production of inventories (finished goods, work-in-progress) are not written down below the cost if the finished products in which they will be used are expected to sell at or above cost.

See Note 13 - Inventories for further details.

(N) Trade Receivable

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. If receivable is expected to be collected within a period of 12 months or less from the reporting date (or in the normal operating cycle of the business if longer), they are classified as Current Assets otherwise as Non-Current Assets.

Trade receivables are measured at their transaction price on initial recognition, unless it contains a significant financing component or pricing adjustments embedded in the contract in which cases it is recognised at fair value. Trade receivables, which are not subject to factoring arrangements are held with the objective of collecting the contractual cash flows and therefore are subsequently measured at amortised cost less loss allowance.

Trade receivables which are subject to a factoring arrangement without recourse are de-recognized from the consolidated balance sheet. Under this arrangement, the Group transfers relevant receivables to the factor in exchange for cash and does not retain late payment and credit risk. The Group considers the held to collect and sell business model to remain appropriate for such trade receivables and hence measures such trade receivables at fair value through other comprehensive income.

Trade receivables which arise from contracts where the sale price is provisional and revenue model have the character of a commodity derivative are measured at fair value. The fair value is measured at forward rate and subsequent changes are recognised as Other Operating Revenue.

See Note 14 - Trade Receivables for further details.

(O) Trade and Other Payables

These amounts represent liabilities for goods and services provided to the Group and are unpaid at the end of the financial year. The amounts are unsecured and usually paid within time limits as contracted. Trade and other payables are presented as current liabilities unless the payment is not due within 12 months after the reporting period.

They are recognised initially at their transactional value which represents the fair value and subsequently measured at amortised cost using the effective interest method wherever applicable.

See Note 22 - Trade Payables for further details.

(P) Financial Instruments

All financial assets are recognised on trade date when the purchase of a financial asset is under a contract whose term requires delivery of the financial asset within the timeframe established by the market concerned. Financial assets are initially measured at fair value, plus transaction costs, except for those financial assets which are classified as at fair value through profit or loss (FVTPL) at inception. All recognised financial assets are subsequently measured in their entirety at either amortised cost or fair value.

Classification of financial assets

Financial assets are classified as 'equity instrument' if it is a non-derivative and meets the definition of 'equity' for the issuer. All other non-derivative financial assets are 'debt instruments'.

Financial assets at amortised cost and the effective interest method

Debt instruments are measured at amortised cost if both of the following conditions are met:

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

Debt instruments meeting these criteria are subsequently measured at amortised cost using the effective interest method less any impairment, with interest recognised on an effective yield basis in other income.

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest over the relevant period. The effective interest rate is the rate that exactly discounts the estimated future cash receipts (including all fees or points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

The Group may irrevocably elect at initial recognition to classify a debt instrument (on an instrument-by-instrument basis) that meets the amortised cost criteria above as at FVTPL if that designation eliminates or significantly reduces an accounting mismatch had the financial asset been measured at amortised cost.

Financial assets at fair value through other comprehensive income (FVTOCI)

Debt instruments are measured at FVTOCI if both of the following conditions are met:

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

Debt instruments meeting these criteria are subsequently measured at fair value with any gains or losses arising on re-measurement recognised in other comprehensive income, except for impairment gains or losses, interest income and foreign exchange gains or losses which are recognised in the consolidated statement of profit and loss. Interest calculated using the effective interest method is recognised in the Consolidated statement of profit and loss as Other income. When the debt instrument is derecognised the cumulative gain or loss previously recognised in other comprehensive income is reclassified to the consolidated statement of profit and loss as a reclassification adjustment.

At initial recognition, an irrevocable election is made (on an instrument-by-instrument basis) to designate investments in equity instruments (other than held for trading purpose) at FVTOCI.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has evidence of a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated in an effective hedge relationship as a hedging instrument or a financial guarantee.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognised in other comprehensive income and accumulated in the 'Gain/ (Loss) on Equity Instruments FVTOCI'. Where the asset is disposed of, the cumulative gain or loss previously accumulated in the 'Gain/ (Loss) on Equity Instruments FVTOCI' is directly reclassified to retained earnings.

For equity instruments measured at fair value through other comprehensive income no impairments are recognised in the consolidated statement of profit and loss.

Financial assets at fair value through profit and loss (FVTPL)

Financial assets that do not meet the criteria of classifying as amortised cost or fair value through other comprehensive income described above, or that meet the criteria but the entity has chosen to designate as at FVTPL at initial recognition, are measured at FVTPL.

Investments in equity instruments are classified as at FVTPL, unless the Group designates an investment that is not held for trading at FVTOCI at initial recognition.

Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on re-measurement recognised in the consolidated statement of profit and loss. Interest income from these financial assets is included in other income.

Impairment of financial assets

On initial recognition of the financial assets, a loss allowance for expected credit loss is recognised for debt instruments carried at amortised cost and FVTOCI. For debt instruments that are measured at FVTOCI, the loss allowance is recognised in the consolidated statement of profit and loss.

Expected credit losses of a financial instrument is measured in a way that reflects:

- an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- the time value of money; and
- reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

At each reporting date, the Group assesses whether the credit risk on a financial instrument has increased significantly since initial recognition.

When making the assessment, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition and consider reasonable and supportable information, that is available without undue cost or effort, that is indicative of significant increases in credit risk since initial recognition.

If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If, the credit risk on that financial instrument has increased significantly since initial recognition, the Group measures the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses.

For Trade Receivables and Contract Assets, the Group applies the simplified approach required by Ind AS 109, which requires expected life time losses to be recognized from initial recognition of the receivables.

The amount of expected credit losses (or reversal) that is required to adjust the loss allowance at the reporting date is recognised as an impairment gain or loss in the consolidated statement of profit and loss.

De-recognition of financial assets

The Group derecognises a financial asset on trade date only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity or when it retains contractual rights to retain contractual cash flows from financial assets, but assumes a contractual obligation to pay the cash flows to one or more recipient. 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 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.

On de-recognition of a financial asset other than in its entirety (e.g. when the Group retains an option to repurchase part of a transferred asset), the Group allocates the previous carrying amount of the financial asset between the part it continues to recognise under continuing involvement, and the part it no longer recognises on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognised and the sum of the consideration received for the part no longer recognised and any cumulative gain or loss allocated to it that had been recognised in other comprehensive income is recognised in the consolidated statement of profit and loss. A cumulative gain or loss that had been recognised in other comprehensive income is allocated between the part that continues to be recognised and the part that is no longer recognised on the basis of the relative fair values of those parts.

Financial liabilities and equity instruments issued by the Group

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognised at the proceeds received, net of direct issue costs.

Compound instruments

The component parts of compound instruments (convertible instruments) issued by the Group are classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangement. At the date of issue, the fair value of the liability component is estimated using the prevailing market interest rate for a similar non-convertible instrument. This amount is recorded as a liability on an amortised cost basis using the effective interest method until extinguished upon conversion or at the instrument's maturity date. The equity component is determined by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This is recognised and included in equity, net of income tax effects, and is not subsequently re-measured.

Financial guarantee contract liabilities

Financial guarantee contract liabilities are initially measured at their fair values and, if not designated as at FVTPL, are subsequently measured at the higher of:

- the amount of loss allowance is determined by using expected credit loss model ; and
- the amount initially recognised less, where appropriate, cumulative amount of income recognised in accordance with the revenue recognition policies.

Financial liabilities

Financial liabilities are classified as either financial liabilities 'at FVTPL' or 'other financial liabilities'.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- it has been acquired or incurred principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and for which there is evidence of a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading may also be designated as at FVTPL upon initial recognition if:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the Group is provided internally on that basis; or
- it forms part of a contract containing one or more embedded derivatives, and Ind-AS 109 Financial Instruments permits the entire combined contract to be designated as at FVTPL.

Financial liabilities at FVTPL are stated at fair value, with any gains or losses arising on re-measurement recognised in the consolidated statement of profit and loss, except for the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability which is recognised in other comprehensive income.

The net gain or loss recognised in the consolidated statement of profit and loss incorporates any interest paid on the financial liability.

Other financial liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs.

Other financial liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis.

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 payments through the expected life of the financial liability, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

De-recognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit or loss.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the consolidated balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Group or the counterparty.

See Note 7 - Investments for further details.

See Note 8 - Loans for further details.

See Note 10 - Other Financial Assets for further details.

See Note 16 - Bank Balances other than Cash and Cash Equivalents for further details.

See Note 20 - Borrowings for further details.

See Note 23 - Other Financial Liabilities for further details.

See Note 29 - Other Income for further details.

See Note 38 - Impairment Loss/ (Reversal) on Financial Assets (Net) for further details.

See Note 48 - Financial Instruments for further details.

See Note 49 - Financial Risk Management for further details.

See Note 50 - Offsetting Financial Liabilities and Financial Assets for further details.

(Q) Derivatives and Hedge Accounting

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value at the end of each reporting date. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The Group designates certain derivatives as either:

- hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedge); or
- hedges of a particular risk associated with the cash flow of recognised assets or liabilities or a highly probable forecast transaction (cash flow hedge).

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Group also documents the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements (including its analysis of the sources of hedge ineffectiveness and how it determines the hedge ratio).

Change in Fair value of derivatives that are not designated in any hedge relationship as mentioned above are accounted through the consolidated statement of profit and loss at each reporting date.

The Group also identifies embedded derivatives in certain transactions. Embedded derivatives closely related to the host contracts are not separated. Derivatives embedded in a host contract that is an asset within the scope of Ind AS 109 are not separated. Derivatives embedded in all other host contract are separated only if the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host and are measured at fair value through profit or loss. Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest. These derivatives are designated into a hedge relationship if they meet hedge accounting criteria. Change in fair value of such embedded derivatives are accounted in Other Comprehensive Income if they are designated in a cash flow hedge relationship. Fair Value change of all other embedded derivatives including those that are not designated in any hedge relationship are accounted through the consolidated statement of profit and loss.

The full fair value of a hedging derivative is classified as a Non-Current asset or liability when the residual maturity of the derivative is more than 12 months and as a current asset or liability when the residual maturity of the derivative is less than 12 months.

Fair value hedge

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the consolidated statement of profit and loss, together with any changes in the fair value of the hedged item that are attributable to the hedged risk.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer qualifies for hedge accounting. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortised to the consolidated statement of profit and loss from that date except for inventory that is charged to the consolidated statement of profit and loss on sale of goods.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated under the heading cash flow hedging reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in the consolidated statement of profit and loss, and is included in the '(Gain) / Loss in Fair Value of Derivatives' line item.

Amounts previously recognised in other comprehensive income and accumulated in equity are reclassified to the Consolidated statement of profit and loss in the periods when the hedged item affects the consolidated statement of profit and loss, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in other comprehensive income and accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability as a basis adjustment.

If the hedge ratio for risk management purposes in no longer optimal but the risk management objective remains unchanged and the hedge continues to qualify for hedge accounting, the hedge relationship will be rebalanced by adjusting either the volume of the hedging instrument or the volume of the hedged item so that the hedge ratio aligns with the ratio used for risk management purposes. Any hedge ineffectiveness is calculated and accounted for in the consolidated statement of profit and loss at the time of the hedge relationship rebalancing.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer qualifies for hedge accounting. Any gain or loss recognised in other comprehensive income and accumulated in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the consolidated statement of profit and loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognised immediately in the Consolidated statement of profit and loss.

See Note 9 - Derivative Financial Instruments for further details.

See Note 49 - Financial Risk Management for further details.

(R) Cash and Cash Equivalents

Cash and cash equivalents comprise of cash at bank and in hand, short-term deposits and short term highly liquid investments with an original maturity of three months or less that are readily convertible to known amounts of cash and are subject to insignificant risk of changes in value.

See Note 15 - Cash and Cash Equivalents for further details.

(S) Borrowing Cost

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. The Group considers a period of twelve months or more as a substantial period of time. Qualifying assets are assets that necessarily take a substantial period of time to get ready for their intended use or sale.

Transaction cost in respect of long-term borrowings are amortised over the tenure of respective loans using effective interest method. All other borrowing costs are expensed in the period in which they are incurred.

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

See Note 2 - Property, Plant and Equipment and Capital Work-in-Progress for further details.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 35 - Finance Cost for further details.

(T) Government Grants

Government grants are recognized at fair value when there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in the consolidated statement of profit and loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Government grants whose primary condition is that the Group should purchase, construct or otherwise acquire Non-Current assets are recognized in the consolidated balance sheet by setting up the grant as deferred income and its amortization is recognised in 'Other Income' on straight line basis over expected useful lives of related assets.

Other government grants (grants related to income) are recognized as income over the periods necessary to match them with the costs for which they are intended to compensate, on a systematic basis. Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of providing immediate financial support with no future related costs are recognized in the consolidated statement of profit and loss in the period in which they become receivable.

Grants related to income are presented under Other Income or Other Operating Revenue in the consolidated statement of profit and loss depending upon the nature of the underlying grant, except for grants received in the form of rebate or exemptions related to expenditures, which are deducted in reporting the related expense.

The benefit of a government loan at a below-market rate of interest is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

Emission allowances are initially recognised as an intangible asset measured at fair value when the Group is granted the allowances and able to exercise control with a corresponding recognition of a grant at the same amount under deferred income. As carbon dioxide is emitted, the corresponding tons of emission allowances initially recognised under deferred income is reclassified and recognized in the consolidated statement of profit and loss on a systematic basis.

Emission allowances are not amortised as their carrying value equals their residual value and therefore the depreciable basis zero, as their value is constant until delivery to the authorities. Emission allowances are subject to impairment test.

The provision for the liability to deliver allowances is recognised based on actual emission. The provision is measured at the carrying amount of allowances to the extent that the provision will be settled using allowances on hand with any excess emission being measured at the market value of the allowances at the period end. The group records the expense in the consolidated statement of profit and loss under other expenses.

When the emission allowances for the carbon dioxide emitted are delivered to the authorities, the intangible asset as well as the corresponding provision are de-recognized from the consolidated balance sheet without any effect on the consolidated statement of profit and loss.

See Note 28 - Revenue from Operations for further details.

See Note 29 - Other Income for further details.

(U) Employee Benefits

Retirement benefit, medical costs and termination benefits

A defined contribution plan is a pension plan under which the group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Payments to defined contribution retirement benefit plans are recognised as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement and medical plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each annual reporting period. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market yields of government bonds having terms approximating to the terms of related obligation. In countries where there is a deep market in high-quality corporate bonds, the market rate on those bonds that are denominated in the currency in which the benefits will be paid, and that have terms

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to maturity approximating to the terms of the related pension obligation are used.

Re-measurement, comprising of actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected in the consolidated balance sheet with a charge or credit recognised in other comprehensive income in the period in which they occur. Re-measurement recognised in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to the Consolidated statement of profit and loss. Past service cost is recognised in the consolidated statement of profit and loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are categorised as follows:

- service cost (including current service cost, past service cost, as well as gains and losses on curtailments and settlements);
- net interest expense or income; and
- re-measurement.

The Group presents the first two components of defined benefit costs in the consolidated statement of profit and loss in the line item employee benefits expense. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognised in the consolidated balance sheet represents the actual deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

A liability for a termination benefit is recognised at the earlier of when the Group can no longer withdraw the offer of the termination benefit or when the entity recognises any related restructuring costs which involves the payment of terminations benefits.

In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

Short-term and other long-term employee benefits

A liability is recognised for benefits accruing to employees in respect of wages and salaries in the period the related service is rendered at the undiscounted amount of the benefits expected to be paid in exchange for that service.

Liabilities recognised in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

Liabilities recognised in respect of other long-term employee benefits such as annual leave and sick leave are measured at the present value of the estimated future cash outflows expected to be made by the Group in respect of services provided by employees up to the reporting date. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit retirement plans. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to the consolidated statement of profit and loss in the period in which they arise. These obligations are valued annually by independent qualified actuaries.

The obligations are presented as current liabilities in the balance sheet if the entity does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

See Note 25 - Employee Benefit Obligations for further details.

See Note 33 - Employee Benefits Expense for further details.

(V) Employee Share-based Payments

Equity settled share-based payments to employees are measured at the fair value of options at the grant date.

The fair value of options at the grant is expensed over the respective vesting period in which all of the specified vesting conditions are to be satisfied with a corresponding increase in equity as "Employee Stock Options Account". In case of forfeiture of unvested option, portion of amount already expensed is reversed. In a situation where the vested options are forfeited or expires unexercised, the related balance standing to the credit of the "Employee Stock Options Account" are transferred to the "Retained Earnings".

When the options are exercised, the Company issues new equity shares of the Company of ₹ 1/- each fully paid-up. The proceeds received and the related balance standing to credit of the Employee Stock Options Account are credited to share capital (nominal value) and Securities Premium Account.

Share appreciation rights which are cash settled, are recognised as employee benefit expense over the relevant service period. The liability is fair valued at each reporting date and are presented as employee benefit obligations in the consolidated balance sheet.

Employee Stock Option Scheme administered by any independent trust is deemed as extended arm of the Company and is consolidated in the standalone financial statements. When the options are exercised, the trust transfers the appropriate number of shares to the employee. The proceeds received, net of any directly attributable transaction costs, are credited directly to equity.

See Note 25 - Employee Benefit Obligations for further details.

See Note 33 - Employee Benefits Expense for further details.

(W) Income Taxes

Income tax expense represents the sum of the tax currently payable and deferred tax.

Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from 'profit before tax' as reported in the consolidated statement of profit and loss because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Group's entities operate and generate taxable income using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax

Deferred tax is recognised on differences between the carrying amounts of assets and liabilities in the consolidated balance sheet and the corresponding tax bases used in the computation of taxable profit. Where the local currency is not the functional currency, deferred tax is recognised on temporary difference arising from exchange rate changes between the closing rate and the historical purchase price of non-monetary assets translated at the exchange rate at the date of purchase if those non-monetary assets have tax consequences.

Deferred tax liabilities are generally recognised for all taxable temporary differences.

Deferred tax assets are generally 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. Such assets and liabilities are not recognised if the temporary difference arises from initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint arrangements, except where 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. Generally, the group is unable to control the reversal of the temporary difference for associates.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from 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 when they relate to income taxes levied by the same taxation authority. Current tax assets and current tax liabilities are offset where the Group has legally enforceable right and intends to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Minimum Alternative Tax (MAT) is recognized as an asset only when and to the extent there is convincing evidence that the Group will pay normal income tax during the specified period. In the year in which the MAT credit becomes eligible to be recognized as an asset, the said asset is created by way of credit to the consolidated statement of profit and loss and included in deferred tax assets. The Group reviews the same at each balance sheet date and writes down the carrying amount of MAT entitlement to the extent there is no longer convincing evidence to the effect that Group will pay normal income tax during the specified period.

Current and deferred tax for the period

Current and deferred tax are recognised in the consolidated statement of profit and loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

The Group applies significant judgement in identifying uncertainties over income tax treatments. Uncertain tax positions are reflected in the overall measurement of tax expense of respective group entities and are based on the most likely amount or the expected value arrived at by the Group companies which provides better prediction of the resolution of uncertainty. Uncertain tax positions are monitored and updated as and when new information becomes available, typically upon examination or action by the taxing authorities or through statute expiration and judicial president.

The Group considers when a particular amount payable for interest and penalties on income taxes is determined to be within the scope of Ind AS 37, it is presented as part of financing cost or other expenses, respectively unless when there is an overall settlement with tax authority and the interest and penalties cannot be identified separately in which case it is determined to be part of income taxes and accounted under Ind AS 12 Income Taxes.

See Note 11 - Income Taxes for further details.

(X) Revenue Recognition

The Group derives revenue principally from sale of hydrate, speciality alumina, aluminium and aluminium value added products, di-ammonium phosphate, copper, precious metals (gold and silver) and other materials.

The Group recognizes revenue when it satisfies a performance obligation in accordance with the contract with the customer. This is achieved when control of the product has been transferred to the customer, which is generally determined when legal title, physical possession, risk of obsolescence, loss and rewards of ownership pass to the customer and the Group has the present right to payment, all of which occurs at a point in time upon shipment or delivery of the product. The Group considers shipping and handling activities as costs to fulfil the promise to transfer the related products and the customer payments for shipping and handling costs are recorded as a component of revenue.

In situations where revenue is recognized on shipment of goods, shipping and handling services are treated as a distinct separate performance obligation and the Group recognises revenue for such services when the performance obligation is completed.

The Group considers the terms of the contract in determining the transaction price. The transaction price is based upon the amount the Group expects to be entitled to in exchange for transferring of promised goods and services to the customer after deducting incentive programs, including but not limited to discounts, volume rebates etc. Transaction price excludes taxes and duties collected on behalf of the government.

For incentives offered to customers, the Group makes estimates related to customer performance and sales volume to determine the total amounts earned and to be recorded as deductions from "Revenue from contracts with customers". In making these estimates, the Group considers historical results that have a predictive value of the amount that the Group expects to be entitled to for the transferred goods and services. If historical results have limited predictive value or the Group has limited experience with similar types of incentives, the estimate is made in such a manner, which ensures that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The actual amounts may differ from these estimates and are accounted for prospectively. No element of significant financing is deemed present as the sales are made with a credit term, which is consistent with market practice. The Group's obligation to repair or replace faulty products under the standard warranty terms is recognised as a cost with a corresponding provision.

For certain customer contracts, final prices are determined based on the underlying market index of commodity prices at a future date, for example prices on the London Metal Exchange Limited (LME) or London Bullion Markets Association (LBMA). In such contracts, the Group records revenue on a provisional basis considering current market price when control is transferred to the customer. At the end of each period, prior to final settlement date, adjustments are made to the provisional sale price based on movements in the underlying market index of commodity prices up to the date of final price determination. Such variable price movement is accounted as other operating revenue.

Revenue from irrevocable bill and hold/ holding certificate contracts is recognised when it is probable that delivery will be made, goods have been identified and kept separately, are ready for delivery in the present condition and the Company does not have the ability to use the product or to direct it to another customer. Under these arrangements, revenue is recognised once legal title has passed and control of the asset sold is transferred to the customer.

Export incentives and subsidies are recognized when there is reasonable assurance that the Group will comply with the conditions and the incentive will be received.

Claim on insurance companies, railway authorities and others are accounted for on acceptance basis.

Revenue excludes any taxes and duties collected on behalf of the government.

See Note 28 - Revenue from Operations for further details.

(Y) Contract Liability

Contract liability is recognised when a payment is received from the customer before the Company transfers goods or services to the customer.

As these are contracts that the Group expects, and has the ability, to fulfil through delivery of a non-financial item, these are presented as advance from customers and are recognised as revenue as and when control of respective commodities is transferred or service is provided to the customers under the agreements. The portion of the advance where either the Group does not have a unilateral right to defer settlement beyond twelve months or expects settlement within twelve months from the balance sheet date is classified as a current liability.

See Note 26 - Contract Liabilities for further details.

(Z) Dividend and Interest Income

Dividend Income

Dividend income on investments are recognised in the consolidated statement of profit and loss when the Group's right to receive payment is established, it is probable that the economic benefits associated with the dividend will flow to the entity; and the amount of the dividend can be measured reliably.

Interest Income

Interest income from a financial asset is recognised when it is probable that the economic benefits will flow to the Group and the amount of income can be measured reliably. Interest income is accrued on a time proportion basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

See Note 29 - Other Income for further details.

(AA) Segment Reporting

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the Group's Chief Operating Decision Maker ("CODM") to make decisions for which discrete financial information is available. The Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Group as a whole. The CODM assesses the financial performance and position of the Group and makes strategic decisions. Operating segments are reported in a manner consistent with the internal reporting provided to the CODM.

Allocation of Common Costs

Common allocable costs are allocated to each segment according to the relative contribution of each segment to the total common costs.

Inter-segment Transfers

Inter-segment revenue has been accounted for based on the transaction price agreed to between segments which is based on current market prices.

Unallocated Items

Item of income, expenses, assets and liabilities which are part of more than one operating segments are not allocated to individual segment as they does not attributable to any specific segment. Such items are presented as separate line item or clubbed under 'Corporate/ Unallocated Income and Expenses/ Assets / Liabilities' as part of reconciliation.

See Note 44 - Segment Information for further details.

(AB) Exceptional Items

Exceptional items include income or expense that are considered to be part of ordinary activities, however are of such significance and nature that separate disclosure enables the user of the financial statements to understand the impact in a more meaningful manner. Exceptional items are identified by virtue of their size, nature and incidence so as to facilitate comparison with prior periods and to assess underlying trends in the financial performance of the Group.

See Note 40 - Exceptional Income/ (Expenses) (Net) for further details.

(AC) Earnings Per Share

Basic earnings per share is computed by dividing the net profit for the period attributable to the equity shareholders of the Company by the weighted average number of equity shares outstanding during the period. The weighted average number of equity shares outstanding during the period and for all periods presented is adjusted for events, such as bonus shares, other than the conversion of potential equity shares that have changed the number of equity shares outstanding, without a corresponding change in resources. Partly paid-up shares are included as fully paid equivalents according to the fraction paid-up.

Diluted earnings per share adjusts the figures used in the determination of basic earnings per share to take into account the after income tax effect of interest and other financing costs associated with dilutive potential equity shares and the weighted average number of additional equity shares that would have been outstanding assuming the conversion of all dilutive potential equity shares.

Treasury shares are excluded from weighted average numbers of equity shares used as a denominator in the calculation of basic as well as diluted earnings per share.

See Note 42 - Earnings Per Share for further details.

(AD) Statement of Cash Flows

Cash flows are reported using the indirect method, whereby the profit before tax is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments and item of income or expenses associated with investing or financing cash flows. The cash flows from operating, investing and financing activities of the Group are segregated.

For the purposes of the statement of cash flow, cash and cash equivalents is net of outstanding bank overdrafts which are integral part of cash management activities. In the consolidated balance sheet, bank overdrafts are shown within borrowings in current liabilities.

(AE) Treasury Shares

Treasury shares are the own equity instruments of the Company that are re-acquired by the Company. Treasury shares are recognised at cost and the par value of treasury shares is reduced from equity share capital whereas the difference between cost and par value is deducted from other equity. No gain or loss is recognised in the statement of profit or loss on the purchase, sale, issue, or cancellation of a Company's own equity instruments. Consideration received on issue or sale is recognised directly in equity.

(AF) Fair Value Measurement of Financial Instruments

The estimated fair value of the financial instruments is based on market prices and valuation techniques. Valuations are made with the objective to include relevant factors that market participants would consider in setting a price, and to apply accepted economic and financial methodologies for the pricing of financial instruments. References for less active markets are carefully reviewed to establish relevant and comparable data.

Marketable and non-marketable Equity Securities

Fair value for listed shares is based on quoted market prices as of the reporting date. Fair value for unlisted shares is calculated based on commonly accepted valuation techniques utilizing significant unobservable data, primarily cash flow based models.

Derivatives

Fair value of financial derivatives is estimated as the present value of future cash flows, calculated by reference to quoted price curves and exchange rates as of the balance sheet date. Options are valued using appropriate option pricing models and credit spreads are applied where deemed to be significant.

Embedded Derivatives

Embedded derivatives that are separated from the host contract are valued by comparing the forward curve at contract inception to the forward curve as of the balance sheet date. Changes in the present value of the cash flows related to the embedded derivative are recognized in the consolidated balance sheet and in the consolidated statement of profit and loss.

1C. Critical Accounting Judgments and Key Sources of Estimation Uncertainty

The preparation of consolidated financial statements requires judgements, estimates and assumptions to be made, that affect reported amounts of assets and liabilities and the disclosure of contingent liabilities as at the date of the financial statements and the amounts of revenue and expenses during the reported period. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. Any revision to such estimates is recognised in the period in which the same is determined. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and future periods affected.

Key source of estimation of uncertainty at the date of financial statements, that have significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial year, are given below:

(a) Impairment of Goodwill

Goodwill represents the excess of the purchase price over the fair value of the identifiable net assets of acquired companies. Goodwill is not amortized; instead, it is tested for impairment at least annually. The recoverable amount is determined based on value in use or fair value less cost to sell calculations which require the use of assumptions as directly observable market prices are generally not exist for the Group's assets. However, fair value may be estimated based on recent transactions on comparable assets, internal models used by the Group for transactions involving the same type of assets or other relevant information. Calculation of value in use is a discounted cash flow calculation based on continued use of the assets in its present condition, excluding potential exploitation of improvement or expansion potential. (The policy has been detailed in Note 1B (F) and further information are set out in Note 5).

(b) Impairment Loss/ (Reversal) of Non-Current Assets (excluding Goodwill)

Ind AS 36 requires that the Group assesses conditions that could cause an asset or a Cash Generating Unit (CGU) to become impaired and to test recoverability of potentially impaired assets. These conditions include changes resulting from market and economic environment, including internal and external factors such as the Group's market capitalization, significant changes in the Group's planned use of the assets or a significant adverse change in the expected prices, sales volumes or raw material cost. The identification of CGUs involves judgment, including assessment of where active markets exist, and the level of interdependency of cash inflows. CGU is usually the individual plant, unless the asset or asset group is an integral part of a value chain where no independent prices for the intermediate products exist, a group of plants is combined and managed to serve a common market, or where circumstances otherwise indicate significant interdependencies.

Determination of the recoverable amount involves management estimates on highly uncertain matters, such as commodity prices and their impact on markets and prices for upgraded products, development in demand, inflation, operating expenses and tax and legal environment. The Group uses internal business plans, quoted market prices and the Group's best estimate of commodity prices, currency rates, discount rates and other relevant information. A detailed forecast is developed for a period of three to five years with projections thereafter. (The policy has been detailed in Note 1B (I) and further information are set out in Note 37).

(c) Inventory Measurement

Measurement of bulk inventory quantities (such as coal, bauxite, copper concentrates, etc.) lying at yards and work in progress of precious metals at smelter and refinery is material, complex and involves significant judgement and estimate resulting from measuring the surface area, dip measurement of materials in tanks/silos, etc.

The Group performs physical counts of above inventory on a periodic basis using internal/external experts to perform volumetric surveys and assessments, basis which the estimate of quantity for these inventories is determined. The variations noted between book records and physical quantities of above inventories are evaluated and appropriately accounted in the books of accounts. (The policy has been detailed in Note 1B (M) and further information are set out in Note 13)

(d) Employee's Retirement Benefit Obligations

The Group provides both defined benefit employee retirement plans and defined contribution plans. Measurement of pension and other superannuation costs and obligations under such plans require numerous assumptions and estimates that can have a significant impact on the recognized costs and obligation, such as future salary level, discount rate, attrition rate and mortality.

The Group provides defined benefit plans to its employees. The discount rate is based on Government bond yield. Assumptions for salary increase in the remaining service period for active plan participants are based on expected salary increase in India. Changes in these assumptions can influence the net asset or liability for the plan as well as the pension cost. (The policy has been detailed in Note 1 B(U) and further information are set out in Note 25)

(e) Tax Uncertainties and Valuation Allowances

The Group calculates income tax expense based on reported income. Deferred income tax expense is calculated based on the differences between the carrying value of assets and liabilities for financial reporting purposes and their respective tax basis that are considered temporary in nature. Valuation of deferred tax assets is dependent on management's assessment of future recoverability of the deferred tax benefit. Expected recoverability may result from expected taxable income in the future, planned transactions or planned tax optimizing measures. Economic conditions may change and lead to a different conclusion regarding recoverability. (The policy has been detailed in Note 1B (W) and further information are set out in Note 11)

(f) Contingent Liabilities and Provisions

There are various legal, direct and indirect tax matters and other obligations including environmental, mining, local and state levies, income tax holiday, availing input tax credits etc., which may impact the Group. Evaluation of uncertain liabilities and contingent liabilities and assets arising out of above matters require management judgment and assumptions, regarding the probability of outflow or realization of economic resources and the timing and amount, or range of amounts, that may ultimately be determined. Such estimates may vary from the ultimate outcome as a result of differing interpretations of laws and facts, or application of relevant judicial precedents. (The policy has been detailed in Note 1B(K) and further information are set out in Note 46)

(g) Fair Value Measurement of Financial Instruments

The Group applies valuation techniques to determine the fair value of financial instruments (where active market quotes are not available) and non-financial assets. This involves developing estimates and assumptions consistent with the market participants to price the instrument. The Group's assumptions are based on observable data as far as possible, otherwise on the best information available. Estimated fair values may vary from the actual prices that would be achieved in an arm's length transaction at the reporting date. (The policy has been detailed in Note 1B (AF) and further information are set out in Note 48)

(h) Supplier Financing Arrangements

Group participate in various supply chain finance programs under which participating suppliers may voluntarily elect to sell some or all of their Group receivables to third-party financial institutions. Supplier participation in the programs is solely up to the supplier, and participating suppliers enter their arrangements directly with the financial institutions. The Group derecognise financial liability when the obligation under the liability is discharged or canceled or expires. A significant amount of management judgment is involved in such arrangements to determine when an existing financial liability is replaced by another on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. (Further information are set out in Note 22)

1D. Recent Accounting Pronouncements

(A) New and amended standards adopted by the Group

The Ministry of Corporate Affairs had vide notification dated March 23, 2022 notified Companies (Indian Accounting Standards) Amendment Rules, 2022 which amended certain accounting standards, and are effective April 1, 2022. These amendments did not have any impact on the amounts recognised in prior periods and are not expected to significantly affect the current or future periods.

(B) New and amended standards issued but not effective

The Ministry of Corporate Affairs has vide notification dated March 31, 2023 notified Companies (Indian Accounting Standards) Amendment Rules, 2023 (the 'Rules') which amends certain accounting standards, and are effective April 1, 2023.

The Rules predominantly amend Ind AS 12, Income taxes, and Ind AS 1, Presentation of financial statements. The other amendments to Ind AS notified by these rules are primarily in the nature of clarifications.

These amendments are either not applicable to the Group or not expected to have a material impact on the Group in the current or future reporting periods and on foreseeable future transactions.

2. Property, Plant and Equipment and Capital Work-in-Progress

Refer Note 1B(C) for accounting policy on Property, Plant and Equipment
Refer Note 1B(I) for accounting policy on Impairment of Non-Current Assets (excluding Goodwill)
Refer Note 1B(S) for accounting policy on Borrowing Cost

A. Property, Plant and Equipment

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Property, Plant and Equipment - Cost	137,209	128,752
Less: Accumulated Depreciation and Impairment	(61,360)	(54,205)
Net Carrying amount	**75,849**	**74,547**

(₹ in Crore)

Particulars	ORIGINAL COST						ACCUMULATED DEPRECIATION AND IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2022	Additions	Addition due to acquisition	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 01/04/2022	Depreciation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 31/03/2023	As at 31/03/2022
Freehold Land	3,253	113	-	(94)	133	3,405	177	4	-	-	13	194	3,211	3,076
Leasehold Improvements	481	153	-	(38)	32	628	240	21	-	(3)	19	277	351	241
Buildings	25,081	1,072	-	(133)	985	27,005	8,746	953	4	(128)	394	9,969	17,036	16,335
Plant and Machinery	95,508	3,709	-	(986)	3,067	101,298	42,347	4,554	135	(892)	1,776	47,920	53,378	53,161
Vehicles and Aircraft	762	84	-	(35)	22	833	465	65	-	(28)	15	517	316	297
Railway Wagons	356	51	-	-	-	407	179	22	-	-	-	201	206	177
Railway Sidings	773	2	-	-	-	775	365	43	-	-	-	408	367	408
Furniture and Fixtures	1,389	171	-	(33)	63	1,590	932	104	-	(30)	41	1,047	543	457
Office Equipment	1,149	126	-	(66)	59	1,268	754	87	-	(55)	41	827	441	395
Total	**128,752**	**5,481**	**-**	**(1,385)**	**4,361**	**137,209**	**54,205**	**5,853**	**139**	**(1,136)**	**2,299**	**61,360**	**75,849**	**74,547**

(₹ in Crore)

Particulars	ORIGINAL COST						ACCUMULATED DEPRECIATION AND IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2021	Additions	Addition due to acquisition	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 01/04/2021	Depreciation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 31/03/2022	As at 31/03/2021
Freehold Land	3,138	132	42	(64)	5	3,253	167	4	-	-	6	177	3,076	2,971
Leasehold Improvements	432	37	-	-	12	481	200	33	-	-	7	240	241	232
Buildings	22,419	2,401	116	(226)	371	25,081	7,929	875	14	(172)	100	8,746	16,335	14,490
Plant and Machinery	88,002	7,318	252	(953)	889	95,508	38,428	4,290	63	(802)	368	42,347	53,161	49,574
Vehicles and Aircraft	724	93	1	(64)	8	762	445	57	-	(42)	5	465	297	279
Railway Wagons	336	20	-	-	-	356	159	20	-	-	-	179	177	177
Railway Sidings	752	21	-	-	-	773	322	43	-	-	-	365	408	430
Furniture and Fixtures	1,345	128	2	(81)	(5)	1,389	927	89	-	(75)	(9)	932	457	418
Office Equipment	1,021	134	3	(22)	13	1,149	658	104	-	(20)	12	754	395	363
Total	**118,169**	**10,284**	**416**	**(1,410)**	**1,293**	**128,752**	**49,235**	**5,515**	**77**	**(1,111)**	**489**	**54,205**	**74,547**	**68,934**

(a) The Group's share in jointly owned assets has been grouped together with the relevant class of property, plant and equipment. The cost and net carrying amounts included in relevant class of assets are given below:

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Original Cost	Net Carrying Amount	Original Cost	Net Carrying Amount
Freehold Land	52	52	52	52
Buildings	54	40	54	40
Plant and Machinery	6	1	6	1
Furniture & Fixtures	29	19	27	22
Office Equipment	8	1	9	2

(b) Refer Note 20A(a), (b) for details of Property, Plant and Equipments (except Jointly owned assets) pledged and hypothecated against borrowings.

(c) Useful life of items of Property, Plant and Equipment is given below:

Items of Property, Plant and Equipment	Useful Life*
Freehold Land	Infinite $
Leasehold Improvements	7 - 90 Years
Buildings	3 - 60 Years
Plant and Machinery	2 - 40 Years
Vehicles and Aircraft	2 - 25 Years
Railway Wagons	15 Years
Railway Sidings	15 Years
Furniture and Fixtures	3 - 10 Years
Office Equipment	2 - 25 Years

$ Freehold land used for mining is depreciated over 8 - 30 years.

* Cost incurred subsequent to capitalisation, accounted as a separate component, is depreciated over the remaining useful life of the underlying asset.

(d) The Property, Plant and Equipment residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period. The Group has not revalued its Property, Plant and Equipment during the current or previous year.

(e) Refer Note 37 for details of impairment charge/(reversal).

B. Capital Work-in-Progress

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Capital Work-in-Progress (CWIP)	7,340	4,727
	7,340	4,727

(a) The Group's share in Capital Work-in-Progress of jointly owned assets has been included in Capital Work-in-Progress which is given below:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Jointly Owned Assets	135	101

(b) CWIP comprise of various routine, non-routine and expansion projects spread over across the Group which relates to following segments:

(₹ in Crore)

	As at	
Segment	31/03/2023	31/03/2022
Novelis	4,202	3,087
Aluminium Upstream	1,608	918
Aluminium Downstream	1,155	500
Copper	228	119
Others - Not Allocable to segment	147	103
Total	**7,340**	**4,727**

(c) **CWIP ageing schedule as at 31/03/2023:**

(₹ in Crore)

Particulars	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	3,935	2,171	497	499	7,102
Projects temporarily suspended	104	1	-	133	238
Total	**4,039**	**2,172**	**497**	**632**	**7,340**

CWIP ageing schedule as at 31/03/2022:

(₹ in Crore)

Particulars	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	2,133	1,845	430	118	4,526
Projects temporarily suspended	1	2	21	177	201
Total	**2,134**	**1,847**	**451**	**295**	**4,727**

(d) **CWIP completion schedule for projects, whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2023 are given below:**

(₹ in Crore)

Projects	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Project in Progress					
Strategic Projects	226	5	-	-	231
Environmental and Occupational Health and Safety Projects	211	-	-	-	211
(ii) Project temporarily suspended					
Strategic Projects	-	-	4	73	77
Environmental and Occupational Health and Safety Projects	-	-	-	-	-
Total	**437**	**5**	**4**	**73**	**519**

CWIP completion schedule for projects, whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2022 are given below:

(₹ in Crore)

Projects	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Project in Progress					
Strategic Projects	1,245	-	163	-	1,408
Environmental and Occupational Health and Safety Projects	79	-	-	-	79
(ii) Project temporarily suspended					
Strategic Projects	-	69	-	73	142
Environmental and Occupational Health and Safety Projects	-	-	-	-	-
Total	**1,324**	**69**	**163**	**73**	**1,629**

(e) Refer Note 46(B)(a) for capital expenditures contracted but not incurred.

(f) During the year, interest capitalised on qualifying assets is ₹ 105 Crore (31/03/2022: ₹ 179 Crore), Refer Note 35(e) for further details.

(g) The Group has tested the carrying value of CWIP for impairment as at reporting date and recorded impairment of ₹ 65 Crore (31/03/2022: ₹ 19 Crore), Refer Note 37 for for further details.

3. Right of Use Assets and Lease Liabilities

Refer Note 1B (M) for accounting policy on Leases

Refer Note 1B(I) for accounting policy on Impairment of Non-Current Assets (excluding Goodwill)

A. Right of Use Assets

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Cost	3,733	2,767
Less: Accumulated Depreciation and Impairment	(1,052)	(844)
Net carrying amount	**2,681**	**1,923**

(₹ in Crore)

Particulars	ORIGINAL COST						ACCUMULATED DEPRECIATION AND IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2022	Additions	Additions due to acquisition	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 01/04/2022	Depreciation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 31/03/2023	As at 31/03/2022
Leasehold Land	1,181	195	-	(3)	11	1,384	100	45	-	(3)	-	142	1,242	1,081
Buildings	642	350	-	(86)	42	948	262	121	16	(69)	16	346	602	380
Stadium Suite	43	-	-	-	4	47	12	3	-	-	4	19	28	31
Plant and Machinery	204	384	-	(86)	5	507	114	52	-	(84)	(2)	80	427	90
Vehicles and Aircraft	421	210	-	(62)	22	591	191	107	-	(14)	12	296	295	230
Boats	59	-	-	-	-	59	34	12	-	-	-	46	13	25
Railway Wagons	135	3	-	-	3	141	73	6	-	-	2	81	60	62
Railway Sidings	2	-	-	-	-	2	-	-	-	-	-	-	2	2
Waterfront	1	-	-	-	-	1	-	-	-	-	-	-	1	1
Furniture and Fixtures	33	-	-	(15)	2	20	26	1	-	(14)	1	14	6	7
Office Equipment	46	6	-	(22)	3	33	32	12	-	(17)	1	28	5	14
Total	**2,767**	**1,148**	**-**	**(274)**	**92**	**3,733**	**844**	**359**	**16**	**(201)**	**34**	**1,052**	**2,681**	**1,923**

(₹ in Crore)

Particulars	ORIGINAL COST						ACCUMULATED DEPRECIATION						NET CARRYING AMOUNT	
	As at 01/04/2021	Additions	Additions due to acquisition	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 01/04/2021	Depreciation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 31/03/2022	As at 31/03/2021
Leasehold Land	1,146	57	-	(40)	18	1,181	74	46	-	(22)	2	100	1,081	1,072
Buildings	535	112	-	(22)	17	642	165	109	-	(20)	8	262	380	370
Stadium Suite	41	-	-	-	2	43	9	4	-	-	(1)	12	31	32
Plant and Machinery	208	63	-	(69)	2	204	115	37	-	(45)	7	114	90	93
Vehicles and Aircraft	279	174	-	(30)	(2)	421	107	95	-	(9)	(2)	191	230	172
Boats	59	-	-	-	-	59	22	12	-	-	-	34	25	37
Railway Wagons	176	1	-	(39)	(3)	135	74	24	-	(25)	-	73	62	102
Railway Sidings	2	-	-	-	-	2	-	-	-	-	-	-	2	2
Waterfront	1	-	-	-	-	1	-	-	-	-	-	-	1	1
Furniture and Fixtures	36	-	-	(3)	-	33	22	7	-	(3)	-	26	7	14
Office Equipment	41	5	-	(2)	2	46	21	11	-	(1)	1	32	14	20
Total	**2,524**	**412**	**-**	**(205)**	**36**	**2,767**	**609**	**345**	**-**	**(125)**	**15**	**844**	**1,923**	**1,915**

(a) Refer Note 37 for impairment charge/(reversal).

B. Lease Liabilities

(a) Lease Liabilities recognised against Right of Use Assets are as follows:

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Lease Liabilities against Right of Use Assets	1,491	465	972	279
	1,491	**465**	**972**	**279**

4. Investment Properties

Refer Note 1B(D) for accounting policy on Investment Properties

Refer Note 1B(I) for accounting policy on Impairment of Non-Current Assets (excluding Goodwill)

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Cost	35	35
Less: Accumulated Depreciation and Impairment	(15)	(14)
Net Carrying amount	**20**	**21**

(₹ in Crore)

Particulars	ORIGINAL COST					ACCUMULATED DEPRECIATION AND IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2022	Addition	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 01/04/2022	Depreciation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 31/03/2023	As at 31/03/2022
Freehold Land	1	-	-	-	1	-	-	-	-	-	-	1	1
Buildings	34	-	-	-	34	14	1	-	-	-	15	19	20
Total	**35**	**-**	**-**	**-**	**35**	**14**	**1**	**-**	**-**	**-**	**15**	**20**	**21**

(₹ in Crore)

Particulars	ORIGINAL COST					ACCUMULATED IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2021	Addition	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 01/04/2021	Depreciation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 31/03/2022	As at 31/03/2021
Freehold Land	1	-	-	-	1	-	-	-	-	-	-	1	1
Buildings	33	-	1	-	34	13	1	-	-	-	14	20	20
Total	**34**	**-**	**1**	**-**	**35**	**13**	**1**	**-**	**-**	**-**	**14**	**21**	**21**

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
(a) Amount recognised in Statement of Consolidated Profit and Loss for Investment Properties are as under:		
Rental income	6	6
Less: Direct operating expenses (including repair and maintenance) on properties generating rental income	(1)	-
Profit/ (Loss) from Investment Properties before Depreciation	**5**	**6**

(b) The Group has no contractual obligations to purchase, construct or develop investment properties or for repairs, maintenance and enhancements. There are no restrictions on the realisability of investment properties or the remittance of income and proceeds of disposal on the Group.

(c) Fair value of Investment properties:

The fair value of the Group's investment properties as at March 31, 2023 and March 31, 2022 have been arrived on the basis of valuation carried out by an external independent valuer who is registered under Rule 2 of the Companies (Registered Valuers and Valuation) Rules, 2017.

The fair value measurement for all the investments properties has been categorised as Level 2 fair value based on the inputs to the valuation technique used. Considering the type of the assets, market approach (sales comparable method is adopted) to estimate the fair value of the subject properties. Fair value of investment properties is given below:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Freehold Land	4	4
Buildings	103	100

(d) Useful life of items of Investment Properties are given below:

	Useful Life
Freehold Land	Infinite
Buildings	60 Years

5. Goodwill

Refer Note 1B(F) for accounting policy on Goodwill

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Cost	25,745	23,965
Less: Accumulated Impairment	-	-
Net Carrying amount	**25,745**	**23,965**

(₹ in Crore)

	Year ended	
Cost	31/03/2023	31/03/2022
Balance at the beginning of the year	23,965	23,317
Addition through business combination, Refer Note 52	-	67
Exchange differences	1,780	581
Balance at the end of the year	25,745	23,965
Accumulated Impairment	-	-
Balance at the beginning of the year	-	-
Impairment loss for the period	-	-
Exchange differences	-	-
Balance at the end of the year	-	-
Net Carrying amount	25,745	23,965

(a) Impairment testing of Goodwill

For the purpose of impairment testing, the Group allocated goodwill to cash-generating units (CGU) that are expected to benefit from the synergies of the acquisition. The carrying value of goodwill for each of CGU and associated operating segments are given below:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Novelis segment		
Novelis - North America	11,852	10,949
Novelis - Europe	8,847	8,281
Novelis - South America	3,006	2,778
Novelis - Asia	1,863	1,780
Aluminium Upstream segment		
Utkal Alumina International Limited (Utkal)	110	110
Minerals and Minerals Limited (M&M)	*	*
Aluminium Downstream segment		
Kuppam, Refer Note 52(B)	4	4
Copper segment		
Birla Copper Asoj Private Limited - Refer Note 52(A)	63	63
	25,745	**23,965**

* it represents Goodwill on acquisition of M&M ₹ 0.12 Crore.

Goodwill is not amortized, instead, it is tested for impairment annually or more frequently if indicators of impairment exist. Impairment is identified by comparing the recoverable amount of each CGU to it carrying amount. If the carrying value exceeds the recoverable amount, management records an impairment charge in an amount equal to that excess. The recoverable amount of a CGU for the years ended 31/03/2023 and 31/03/2022 is determined based on fair value (Level 3) less cost to sell calculations, which require the use of assumptions.

The estimate of fair value less cost to sell for each CGU is based on weighted average of discounted cash flows (the income approach) and guideline public company method which considers enterprise Value ("EV")/EBITDA multiples of comparable companies adjusted with control premium (the market approach)

Under the income approach, the fair value of each CGU is based on the present value of estimated future cash flows. The income approach is dependent on a number of significant management assumptions including markets and market share, sales volumes and prices, costs to produce, capital spending, working capital changes and the discount rate. The Group estimate future cash flows for each of the CGU based on their respective projections. These projected cash flows are discounted to the present value using a weighted average cost of capital (discount rate) The projections are based on both past performance and the expectations of future performance and assumptions used in current operating plan.

Under the market approach, fair value is calculated based on guideline public company model. Under this model, the fair value of each CGU is determined based upon comparisons to public companies engaged in similar businesses. The Group uses the trailing and forward EV/EBITDA multiples. EV is defined as the total of equity capital plus debt capital. The trailing multiples have been based on the EBITDA of the trailing twelve months preceding the valuation date and the forward multiples have been based on the one-year and two-year forward consensus analyst EBITDA estimates as on the valuation date and has been adjusted for control premium.

The calculations use cash flow projections based on financial budgets approved by management covering three to five-year period depending upon CGU's/ segment financial budgeting process. Cash flows beyond the five-year period are extrapolated using the estimated growth rates stated below.

The key assumptions used in the estimation of the recoverable amount of CGU's/ segment set out below. The values assigned to the key assumptions represent management's assessment of future trends in the relevant industries and economic environment and have been based on historical data from both external and internal sources.

	Novelis		Aluminium Upstream		Aluminium Downstream		Copper	
	31/03/2023	31/03/2022	31/03/2023	31/03/2022	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Discount rate (i)	9.57%	8.93%	10.90%	13.20%	10.90%	13.20%	10.90%	12.00%
Terminal growth rate (ii)	2.25%	2.25%	4.50%	4.50%	4.50%	4.50%	2.00%	2.00%
EV/EBITDA multiple in times	6 to 9	5.5 to 10.5	NA	NA	NA	NA	NA	NA

(i) The projected cash flows are discounted to the present value using a post-tax weighted average cost of capital (discount rate) The discount rate is commensurate with the risk inherent in the projected cash flows and reflects the rate of return required by an investor in the current economic conditions.

(ii) The group uses specific growth assumptions for each reporting unit based on history and economic conditions.

(iii) Cost of disposal is assumed to be 4% (previous year 4%) of the fair value.

As a result of the Management annual goodwill impairment test for the year ended 31/03/2023 and 31/03/2022, no goodwill impairment was identified as the recoverable value of the CGUs to whom goodwill was allocated exceeded their respective carrying amounts as of 31/03/2023 and 31/03/2022.

(b) **Impact of possible changes in key assumptions**

The carrying value of goodwill predominantly (approximately 99% of the total goodwill) relates to the goodwill that arose on the acquisition of Novelis Inc. wherein goodwill has been allocated in four CGUs. The recoverable amount of each of these four CGUs would not fall below the the carrying value if the key assumptions were to change as follow:

	As at 31/03/2023		As at 31/03/2022	
	From	To	From	To
Long-term growth rate (%)				
Novelis - North America	2.25%	**	2.25%	**
Novelis - Europe	2.25%	2.02%	2.25%	**
Novelis - South America	2.25%	**	2.25%	**
Novelis - Asia	2.25%	**	2.25%	**
Post-tax discount rate (%)				
Novelis - North America	9.57%	**	8.93%	**
Novelis - Europe	9.57%	9.73%	8.93%	**
Novelis - South America	9.57%	**	8.93%	**
Novelis - Asia	9.57%	**	8.93%	**
EV/EBITDA multiple (in times)				
Novelis - North America	6 - 9	**	5.5 - 7.5	**
Novelis - Europe	6 - 9	6 - 8.50	7.5 - 10.5	**
Novelis - South America	6 - 9	**	7.5 - 10.5	**
Novelis - Asia	6 - 9	**	5.5 - 7.5	**

** Management believes that there is no reasonably possible change in any of the above key assumptions that would cause the recoverable amount to fall below the carrying value of any of the CGU having allocated goodwill.

6. Other Intangible Assets and Intangible Assets under Development

Refer Note 1B(E) for accounting policy on Intangible Assets (Other than Goodwill)
Refer Note 1B(G) for accounting policy on Stripping Cost
Refer Note 1B(I) for accounting policy on Impairment of Non-Current Assets (excluding Goodwill)
Refer Note 1B(S) for accounting policy on Borrowing Cost

A. Other Intangible Assets

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Cost	15,728	14,392
Less: Accumulated Amortisation and Impairment	(9,397)	(7,974)
Net Carrying amount	**6,331**	**6,418**

(₹ in Crore)

Particulars	ORIGINAL COST						ACCUMULATED AMORTISATION AND IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2022	Additions	Additions due to acquisition	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 01/04/2022	Amortisation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2023	As at 31/03/2023	As at 31/03/2022
Mining Rights	864	130	-	-	-	994	459	85	-	-	-	544	450	405
Trade Name	1,180	-	-	-	96	1,276	889	73	-	-	74	1,036	240	291
Technology and Software	4,703	437	-	(83)	327	5,384	3,844	413	-	(77)	313	4,493	891	859
Customer related Intangible Assets	6,499	-	-	-	512	7,011	2,782	301	-	1	239	3,323	3,688	3,717
Favourable Contracts	6	-	-	-	-	6	-	1	-	-	-	1	5	6
Carbon Emission Rights	1,140	1	-	(174)	90	1,057	-	-	-	-	-	-	1,057	1,140
Total	**14,392**	**568**	**-**	**(257)**	**1,025**	**15,728**	**7,974**	**873**	**-**	**(76)**	**626**	**9,397**	**6,331**	**6,418**

(₹ in Crore)

Particulars	ORIGINAL COST						ACCUMULATED AMORTISATION AND IMPAIRMENT						NET CARRYING AMOUNT	
	As at 01/04/2021	Additions	Additions due to acquisition	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 01/04/2021	Amortisation	Impairment/ (Reversal)	Disposal/ Adjustments	Exchange differences	As at 31/03/2022	As at 31/03/2022	As at 31/03/2021
Mining Rights	803	87	-	(27)	1	864	406	89	-	(37)	1	459	405	397
Trade Name	1,138	-	-	-	42	1,180	777	82	-	-	30	889	291	361
Technology and Software	4,295	300	9	(4)	103	4,703	3,332	406	-	(4)	110	3,844	859	963
Customer related Intangible Assets	6,275	4	15	-	205	6,499	2,411	295	-	-	76	2,782	3,717	3,864
Favourable Contracts	-	-	6	-	-	6	-	-	-	-	-	-	6	-
Carbon Emission Rights	497	833	-	(220)	30	1,140	-	-	-	-	-	-	1,140	497
Total	**13,008**	**1,224**	**30**	**(251)**	**381**	**14,392**	**6,926**	**872**	**-**	**(41)**	**217**	**7,974**	**6,418**	**6,082**

(a) Addition in Mining Rights includes ₹ 86 Crore (31/03/2022: ₹ 57 Crore) and amortization expense includes ₹ 67 Crore (31/03/2022: ₹ 76 Crore) towards stripping activity assets.

(b) Carbon emission credits are recognised at fair value upon receipt of government grants for operations in Europe and Asia, which becomes their cost basis. These credits are utlised on a systematic basis over the applicable grant life (Annual basis for Asia and over the seven year period for Europe).

(c) Useful life of items of Intangible Assets and their remaining useful lives are given below:

Items of Other Intangible Assets	Useful Life (Years)	Remaining useful life (Years)
Mining Rights	8 - 41	3 - 33
Trade Name	3 - 20	0 - 17
Technology and Software	3 - 10	0 - 8
Customer related Intangible Assets	20 - 22	4 - 19
Favourable Contracts	3	3

(d) The residual value and useful life of intangible assets are reviewed, and adjusted if appropriate, at the end of each reporting period.

B. Intangible Assets under Development

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Intangible Assets under Development (IAUD)	360	218
	360	**218**

(a) Intangible asset under development ageing schedule as at 31/03/2023:

(₹ in Crore)

Particulars	Amount in IAUD for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	208	129	21	2	360
Projects temporarily suspended	-	-	-	-	-
Total	**208**	**129**	**21**	**2**	**360**

Intangible asset under development ageing schedule as at 31/03/2022:

(₹ in Crore)

Particulars	Amount in IAUD for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	191	25	2	-	218
Projects temporarily suspended	-	-	-	-	-
Total	**191**	**25**	**2**	**-**	**218**

(b) The projects whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2023 are as folows:

(₹ in Crore)

Particulars	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) Project in Progress					
Strategic Projects	3	-	-	-	3
Environmental and Occupational Health and Safety Projects	-	-	-	-	-
(ii) Project temporarily suspended					
Strategic Projects	-	-	-	-	-
Environmental and Occupational Health and Safety Projects	-	-	-	-	-
Total	**3**	**-**	**-**	**-**	**3**

Further, there are no projects, whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2022.

(c) The Group has tested the carrying value of IAUD for impairment as at reporting date and has not identified any impairment.

(d) During the year, interest capitalised on qualifying assets is ₹ Nil (31/03/2022: ₹ 8 Crore), Refer Note 35(e) for further details.

7. Investments

Refer Note 1B(P) for accounting policy on Financial Instruments

A. Investments, Non-Current

(Fully paid-up unless otherwise stated)

(₹ in Crore)

Equity Instruments at FVTOCI	Face Value	Numbers as at		Value as at	
Quoted	**Per Unit**	**31/03/2023**	**31/03/2022**	**31/03/2023**	**31/03/2022**
Grasim Industries Limited	₹ 2	28,464,653	28,464,653	4,646	4,736
Ultra Tech Cement Limited	₹ 10	1,258,515	1,258,515	959	831
Vodafone Idea Limited	₹ 10	751,119,164	751,119,164	436	725
Aditya Birla Fashion and Retail Limited	₹ 10	50,239,794	50,239,794	1,077	1,518
Gujarat Narmada Valley Fertilizers & Chemicals Limited	₹ 10	-	100	-	-
Gujarat State Fertilizers & Chemicals Limited	₹ 2	-	500	-	-
Southern Petrochemical Industries Limited	₹ 10	-	100	-	-
Madras Fertilizer Limited	₹ 10	-	100	-	-
Rashtriya Chemicals and Fertilizers Limited	₹ 10	-	100	-	-
Aditya Birla Capital Limited	₹ 10	39,850,514	39,850,514	611	429
				7,729	**8,239**

(₹ in Crore)

Equity Instruments at FVTOCI	Face Value	Numbers as at		Value as at	
Unquoted	Per Unit	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Sai Wardha Power Generation Limited	₹ 10	2,830,352	2,830,352	-	-
Birla International Limited	CHF 100	2,500	2,500	6	5
Bharuch-Dahej Railway Company Limited	₹ 10	13,530,000	13,530,000	19	10
Birla Management Centre Services Limited	₹ 10	9,500	9,500	15	11
Saras Micro Devices Inc, Refer Note 54(B)	USD 13.33	100,000	100,000	11	10
Addionics Limited	USD 9.25	162,246	162,246	13	12
Sortera Alloys, Inc.	USD 11.31	397,709	-	37	-
Multiscale Technologies, Inc.	USD 2.67	540,275	-	12	-
DTE ehf.	USD 14.11	141,665	-	16	-
Woodlands Multi Speciality Hospital Limited	₹ 10	7,200	-	-	-
				129	**48**
Debt Instruments at FVTOCI					
Quoted					
Government Securities - (b)					
6.83% Government of India Bond, 2039		2,000,000	2,000,000	19	20
6.57% Government of India Bond, 2033		5,000,000	5,000,000	47	48
6.45% Government of India Bond, 2029		5,000,000	5,000,000	48	49
5.79% Government of India Bond, 2030		10,000,000	10,000,000	93	94
6.19% Government of India Bond, 2034		10,000,000	10,000,000	91	92
				298	**303**
Debt Instruments at FVTPL					
Unquoted					
Preference Shares					
Aditya Birla Health Services Limited - 7% Redeemable, Non Cumulative	₹ 100	2,500,000	2,500,000	24	24
				24	**24**
Unquoted					
Mutual Funds					
Investments in Debt Schemes of Mutual Funds				-	2
				-	**2**
				8,180	**8,616**

(a) Aggregate amount of Quoted and Unquoted Investments, Market value of Quoted Investments are given below:

(₹ in Crore)

Debit Instruments at FVTPL	Value as at	
	31/03/2023	31/03/2022
Aggregate Cost of Quoted Investments	2,990	2,990
Aggregate Market value of Quoted Investments	8,027	8,542
Aggregate Cost of Unquoted Investments	134	75
Aggregate amount of impairment in value of investments	3	3
Aggregate Carrying value of Quoted and Unquoted Investments	8,180	8,616

(b) Investment in Government Securities includes ₹ 24 Crore (31/03/2022: ₹ 25 Crore) being placed as margin money with counter parties for derivative transactions.

B Investments, Current

(₹ in Crore)

	Value as at	
	31/03/2023	31/03/2022
Quoted		
Investment in Government Securities at FVTOCI	5	72
Investment in Debentures and Bonds at FVTPL	130	152
Investment in Debt Schemes of Mutual Funds at FVTPL - (b)	5,625	5,228
Investment in Commercial Papers at FVTPL	97	-
	5,857	5,452

(a) Aggregate amount of Quoted and Unquoted Investments, Market value of Quoted investments are given below:

Aggregate cost of Quoted Investments	5,732	5,302
Aggregate Market value of Quoted Investments	5,857	5,452
Aggregate Cost of Unquoted Investments	-	-
Aggregate Carrying value of Quoted and Unquoted Investments	5,857	5,452

(b) Investment in Debt Schemes of Mutual Funds includes ₹ 338 Crore (31/03/2022: ₹ 320 Crore) being placed as margin money with counter parties for derivative transactions.

8. Loans

(Unsecured, Considered Good unless otherwise stated)

Refer Note 1B(P) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Loan to Related Parties - (a), (b), (c)	29	-	36	-
Loan to Employees	16	8	13	7
Loan to Others	2	-	1	-
	47	**8**	**50**	**7**

(a) There are no Loans or Advances in the nature of loans granted to promoters, directors, Key Managerial Personnel (KMPs) and the related parties, that are repayable on demand as on 31/03/2023 and 31/03/2022.

(b) Refer Note 45 for details of balances with related parties.

(c) Refer Note 56(a)(i) and (ii) for disclosure as per section 186(4)of the Companies Act 2013 and SEBI (LODR) 2015.

9. Derivatives

Refer Note 1B(Q) for accounting policy on Derivatives and Hedge Accounting

The Group uses derivative financial instruments such as forwards, futures, swaps, options etc. to hedge its risks associated with foreign exchange fluctuation and price risk movement. Risks associated with fluctuation in the price of the products (copper, aluminium, coal, furnace oil, natural gas, electricity, diesel and precious metals) are minimized by undertaking appropriate derivative instruments. Derivatives embedded in other contracts are treated as separate derivatives when their risks and characteristics are not closely related to their host contracts. In some cases, the embedded derivatives may be designated in a hedge relationship. The fair values of all such derivative financial instruments are recognized as assets or liabilities at the balance sheet date.

The Group also applies hedge accounting using certain foreign currency non-derivative monetary items which are used as hedging instruments for hedging foreign exchange risk.

(a) The Asset and Liability position of various outstanding derivative financial instruments is given below:

(₹ in Crore)

Particulars	Nature of Risk being Hedged	As at 31/03/2023			As at 31/03/2022		
		Liability	Asset	Net Fair Value	Liability	Asset	Net Fair Value
Current							
Cash flow hedges							
Commodity contracts	Price Risk Component	(288)	634	346	(6,832)	260	(6,572)
Foreign currency contracts	Exchange rate movement risk	(190)	274	84	(220)	442	222
Fair Value Hedge							
Commodity contracts	Price Risk Component	(197)	-	(197)	(183)	67	(116)
Foreign currency contracts	Exchange rate movement risk	(5)	1	(4)	(12)	1	(11)
Non-designated hedges							
Commodity contracts	Price Risk Component	(511)	796	285	(3,239)	2,448	(791)
Foreign currency contracts	Exchange rate movement risk	(181)	120	(61)	(195)	172	(23)
		(1,372)	**1,825**	**453**	**(10,681)**	**3,390**	**(7,291)**
Offsetting		115	(115)	-	24	(24)	-
Total (A)		**(1,257)**	**1,710**	**453**	**(10,657)**	**3,366**	**(7,291)**

(₹ in Crore)

Particulars	Nature of Risk being Hedged	As at 31/03/2023			As at 31/03/2022		
		Liability	Asset	Net Fair Value	Liability	Asset	Net Fair Value
Non - current							
Cash flow hedges							
Commodity contracts	Price Risk Component	(4)	22	18	(442)	51	(391)
Foreign currency contracts	Exchange rate movement risk	(11)	134	123	(5)	235	230
Non-designated hedges							
Commodity contracts	Price Risk Component	(20)	4	(16)	(16)	18	2
Foreign currency contracts	Exchange rate movement risk	(24)	24	-	(1)	1	-
		(59)	**184**	**125**	**(464)**	**305**	**(159)**
Offsetting		**3**	**(3)**	**-**	**-**	**-**	**-**
Total (B)		**(56)**	**181**	**125**	**(464)**	**305**	**(159)**
Current							
Fair Value Hedge							
Embedded Derivatives (i)	Risk of change in Fair Value of unpriced inventory	(428)	23	(405)	(489)	5	(484)
Total (C)		**(428)**	**23**	**(405)**	**(489)**	**5**	**(484)**
Grand Total (A+B+C)		**(1,741)**	**1,914**	**173**	**(11,610)**	**3,676**	**(7,934)**

(i) Fair Value net Loss of Embedded Derivatives of ₹ 405 Crore (31/03/2022: net Loss ₹ 484 Crore) is accounted for as part of Trade Payables.

(b) Outstanding position and fair value of various foreign exchange derivative financial instruments:

Particulars	Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Weighted Strike exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)	Weighted Strike exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Foreign currency options							
Cash flow hedges							
Sell	USD_INR	84.00	204	7	-	-	-
Total				7			-
Foreign currency forwards							
Cash flow hedges							
Buy	CHF_EUR	0.98	101	(4)	0.94	93	30
Buy	USD_CHF	0.93	17	4	0.91	27	-
Buy	BRL_USD	0.17	226	143	0.17	275	245
Buy	EUR_USD	1.09	375	22	1.18	219	(72)

Particulars	Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Weighted Strike exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)	Weighted Strike exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Buy	USD_CAD	1.32	24	(5)	1.25	24	-
Buy	USD_KRW	1,260.13	455	(76)	1,176.23	657	(131)
Buy	EUR_KRW	-	1	-	-	1	-
Buy	JPY_USD	135.80	7	4	-	-	-
Sell	USD_INR	86.87	1,066	112	81.22	1,196	380
Total				**200**			**452**
Fair Value hedges							
Buy	USD_INR	82.64	135	(4)	76.85	189	(11)
Total				**(4)**			**(11)**
Non-Designated hedges							
Buy	EUR_INR	-	-	-	98.96	-	-
Buy	USD_INR	82.43	77	-	77.04	-	-
Buy	GBP_EUR	1.14	308	(2)	1.19	269	(12)
Buy	USD_KRW	1,251.10	267	(45)	1,198.22	282	(21)
Buy	EUR_USD	0.79	305	(25)	1.19	290	(65)
Buy	GBP_USD	1.20	21	(5)	1.35	33	6
Buy	USD_CHF	0.91	23	3	0.92	9	-
Buy	CAD_USD	0.77	18	(6)	0.80	16	1
Buy	USD_BRL	4.87	126	20	4.89	187	27
Buy	EUR_KRW	-	6	2	-	2	-
Buy	CHF_GBP	0.88	9	-	0.82	9	(1)
Buy	CHF_EUR	0.99	552	(12)	0.98	503	32
Buy	USD_CNY	6.99	59	2	6.32	77	3
Buy	EUR_CNY	7.45	11	-	7.33	2	-
Buy	JPY_USD	130.27	1	1	-	-	-
Sell	USD_INR	82.63	261	6	76.35	182	7
Total				**(61)**			**(23)**
Grand Total				**142**			**418**

(c) Outstanding position and fair value of various foreign exchange non-derivative financial instruments used as hedging instruments:

(₹ in Crore)

Particulars	Note No	Currency Pair	As at 31/03/2023			As at 31/03/2022		
			Weighted Strike exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)	Weighted Strike exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Foreign currency monetary items								
Cash flow hedges								
Debt	20B	USD_INR	82.00	-	-	74.55	185	(25)
Liability for Copper Concentrate								
Host Liability		USD_INR	82.39	519	12	75.51	695	(19)
Supplier's credit	21	USD_INR	81.10	560	(20)	74.77	324	(39)
Total					**(8)**			**(83)**

(d) Outstanding position and fair value of various commodity derivative financial instruments

Outstanding position and fair value of various commodity derivative financial instruments as at March 31, 2023:

(₹ in Crore)

Particulars		Currency	Average Price/ Unit	Quantity	Unit	Notional value USD (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Commodity Futures/Forwards/Swaps							
Cash Flow Hedge							
Aluminium	Sell	USD	2,457	612,295	MT	1,505	249
Aluminium	Buy	USD	2,377	187,920	MT	447	121
Furnace Oil	Buy	USD	-	52,000	MT	19	4
Diesel Fuel	Buy	USD	4	996,000	Gallons	4	(4)
Natural gas	Buy	USD	2	6,875,000	MMBtu	15	(6)
Total							**364**
Fair Value Hedge							
Gold	Sell	INR	5,630,292	4,425	KGS	24,914	(140)
Silver	Sell	USD	-	-	TOZ	-	-
Copper	Sell	USD	8,334	10,700	MT	89	(57)
Total							**(197)**
Non Designated hedges							
Aluminium	Buy	USD	2,364	281,427	MT	665	164
Aluminium	Sell	USD	2,421	133,330	MT	323	4
Copper	Buy	USD	8,644	14,000	MT	121	47
Copper	Sell	USD	8,854	14,275	MT	126	(16)
Gold	Buy	INR	5,693,633	3,028	KGS	17,240	75
Silver	Buy	USD	22	909,754	TOZ	20	13
Silver	Sell	USD	24	514,516	TOZ	12	(2)
Zinc	Buy	USD	2,907	2,100	MT	6	(2)
Diesel Fuel	Buy	USD	766	9,600	MT	7	(8)
Natural Gas	Buy	USD	2	625,000	MMBtu	1	(6)
Total							**269**

(₹ in Crore)

Particulars		Currency	Average Price/ Unit	Quantity	Unit	Notional value USD (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Embedded derivatives							
Fair Value Hedge							
Copper	Sell	USD	8,705	130,979	MT	1,140	(300)
Gold	Sell	USD	1,857	98,953	TOZ	184	(98)
Silver	Sell	USD	22	399,859	TOZ	9	(6)
Total							**(405)**
Grand Total							**(32)**

Outstanding position and fair value of various commodity derivative financial instruments as at March 31, 2022:

(₹ in Crore)

Particulars		Currency	Average Price/ Unit	Quantity	Unit	Notional value USD (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Commodity Futures/Forwards/Swaps							
Cash Flow Hedge							
Aluminium	Sell	USD	3,165	1,366,316	MT	4,234	(7,199)
Aluminium	Buy	USD	3,481	6,074	MT	21	20
Diesel Fuel	Buy	USD	5	4,014,924	Gallons	21	26
Natural gas	Buy	USD	6	10,596,346	MMBtu	59	190
Total							**(6,963)**
Fair Value Hedge							
Gold	Sell	INR	4,972,320	7,543	KGS	37,506	(159)
Silver	Sell	USD	23	485,904	TOZ	11	(7)
Copper	Sell	USD	10,552	37,600	MT	397	50
Total							**(116)**
Non Designated							
Aluminium	Buy	USD	3,502	98,034	MT	343	186
Aluminium	Sell	USD	3,041	115,141	MT	350	(1,235)
Copper	Buy	USD	10,160	27,875	MT	283	62
Copper	Sell	USD	10,763	35,500	MT	382	105
Gold	Buy	INR	5,041,209	4,352	KGS	21,939	51
Silver	Buy	USD	25	244,244	TOZ	6	-
Silver	Sell	USD	24	244,244	TOZ	6	(1)
Furnace Oil	Buy	USD	240	3,335	MT	1	10
Furnace Oil	Sell	USD	636	3,335	MT	2	-
Zinc	Buy	USD	4,135	950	MT	4	13
Diesel Fuel	Buy	USD	5	3,600	MT	0	9
Natural Gas	Buy	USD	6	581,486	MMBtu	3	11
Total							**(789)**

(₹ in Crore)

Particulars		Currency	Average Price/ Unit	Quantity	Unit	Notional value USD (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Embedded derivatives							
Fair Value Hedge							
Copper	Sell	USD	9,838	120,552	MT	1,186	(487)
Gold	Sell	USD	1,949	29,697	TOZ	58	3
Silver	Sell	USD	25	371,143	TOZ	9	-
Total							**(484)**
Grand Total							**(8,352)**

(e) The following table presents details of amount held in Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and the period during which these are going to be released and affecting Statement of Profit and Loss.

(₹ in Crore)

Effective portion of cash flow hedges	Products/ Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Closing Value Cash Flow Hedges	Release		Closing Value Cash Flow Hedges	Release	
			Within 12 Months	After 12 Months		Within 12 Months	After 12 Months
		Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)
Cash Flow Hedge							
Hedge Instrument Type							
Commodity Forwards/Future/ Swaps	Aluminium	527	524	3	(7,500)	(7,315)	(185)
	Furnace Oil	5	5	-	-	-	-
	Diesel Fuel	(6)	(3)	(3)	23	23	-
	Electricity	-	-	-	(1)	(1)	-
	Natural Gas	(12)	(14)	2	199	140	59
Total (A)		**514**	**512**	**2**	**(7,279)**	**(7,153)**	**(126)**
Hedge Instrument Type							
Currency Forwards	USD_INR	112	20	92	379	207	172
	EUR_INR	-	-	-	-	-	-
	USD_EUR	45	(3)	48	(74)	(74)	-
	USD_BRL	110	106	4	242	169	73
	USD_CAD	(5)	(5)	-	-	-	-
	USD_KRW	(72)	(72)	-	(132)	(133)	1
	USD_CHF	5	5	-	(1)	(1)	-
	EUR_CHF	(6)	(6)	-	33	31	2
	USD_CNY	6	-	6	-	-	-
Currency Options	USD_INR	(1)	(1)	-	-	-	-
Total (B)		**194**	**44**	**150**	**447**	**199**	**248**

Effective portion of cash flow hedges	Products/ Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Closing Value Cash Flow Hedges	Release		Closing Value Cash Flow Hedges	Release	
			Within 12 Months	After 12 Months		Within 12 Months	After 12 Months
		Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)
Non derivative financial instruments							
Debt	USD_INR	-	-	-	(25)	(25)	-
Liability for Copper							
Host Liability	USD_INR	(5)	(5)	-	(29)	(29)	-
Supplier's credit	USD_INR	(3)	(3)	-	(39)	(39)	-
Total (C)		**(8)**	**(8)**	**-**	**(93)**	**(93)**	**-**
Total (A+B+C)		**700**	**548**	**152**	**(6,925)**	**(7,047)**	**122**
Deferred Tax on above		(244)	(196)	(47)	2,031	2,070	(39)
Total		**456**	**352**	**105**	**(4,894)**	**(4,977)**	**83**

(₹ in Crore)

Cost of Hedging Reserve	Products/ Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Closing Value Cost of Hedge Reserve	Release		Closing Value Cost of Hedge Reserve	Release	
			Within 12 Months	After 12 Months		Within 12 Months	After 12 Months
		Gain/(Loss)	Gain/ (Loss)	Gain/ (Loss)	Gain/(Loss)	Gain/ (Loss)	Gain/ (Loss)
Hedge Instrument Type							
Commodity Forwards/Swaps	Silver	-	-	-	-	-	-
	Copper	(4)	(4)	-	(60)	(60)	-
Commodity Options	Aluminium	-	-	-	-	-	-
Currency Swaps	USD_INR	-	-	-	-	-	-
Currency Options	USD_INR	8	8	-	-	-	-
Total		**4**	**4**	**-**	**(60)**	**(60)**	**-**
Deferred Tax on above		(1)	(1)	-	21	21	-
		3	**3**	**-**	**(39)**	**(39)**	**-**

(f) Gain/(Loss) recognized in OCI, recycled and closing position:

The following tables presents the amount of gain/(loss) recognized in Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and recycled during the financial year 2022-23:

(₹ in Crore)

	Opening Balance	Net Amount recognised	Recycled			CTA	Closing Balance
			Net Amount to P&L	Amount added to Non-Financial Assets	Total Amount recycled		
Cash Flow Hedges							
Commodity	(7,279)	10,641	2,698	(18)	2,680	(168)	514
Forex	355	(1,293)	(1,123)	(12)	(1,135)	(11)	186
Total	**(6,924)**	**9,348**	**1,575**	**(30)**	**1,545**	**(179)**	**700**
Deferred Tax on above	2,030	(2,713)	(387)	7	(380)	59	(244)
Total	**(4,894)**	**6,635**	**1,188**	**(23)**	**1,165**	**(120)**	**456**
Cost of Hedging Reserve							
Commodity	(60)	(71)	(127)	-	(127)	-	(4)
Forex	-	8	-	-	-	-	8
Total	**(60)**	**(63)**	**(127)**	**-**	**(127)**	**-**	**4**
Deferred Tax on above	21	22	44	-	44	-	(1)
Total	**(39)**	**(41)**	**(83)**	**-**	**(83)**	**-**	**3**

The following tables presents the amount of gain/(loss) recognized in Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and recycled during the financial year 2021-22:

(₹ in Crore)

	Opening Balance	Net Amount recognised	Recycled			CTA	Closing Balance
			Net Amount to P&L	Amount added to Non-Financial Assets	Total Amount recycled		
Cash Flow Hedges							
Commodity	(2,168)	(11,726)	(6,742)	80	(6,662)	(47)	(7,279)
Forex	234	(23)	(141)	(1)	(142)	2	355
Total	**(1,934)**	**(11,749)**	**(6,883)**	**79**	**(6,804)**	**(45)**	**(6,924)**
Deferred Tax on above	688	3,397	1,995	72	2,067	12	2,030
Total	**(1,246)**	**(8,352)**	**(4,888)**	**151**	**(4,737)**	**(33)**	**(4,894)**
Cost of Hedging Reserve							
Commodity	15	(360)	(285)	-	(285)	-	(60)
Forex	-	-	-	-	-	-	-
Total	**15**	**(360)**	**(285)**	**-**	**(285)**	**-**	**(60)**
Deferred Tax on above	(5)	124	98	-	98	-	21
Total	**10**	**(236)**	**(187)**	**-**	**(187)**	**-**	**(39)**

(g) The following table presents the amount of gain/ (loss) recycled from Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and reference of the line item in the Statement of Profit and Loss where those amounts are included:

(₹ in Crore)

Note Description	Year Ended 31/03/2023	Year Ended 31/03/2022
Revenue from Operations	1,159	(7,219)
Cost of Materials Consumed	405	206
Other Expenses	(116)	(155)
	1,448	**(7,168)**

(h) The adjustment as part of the carrying value of inventories arising on account of fair value hedges is as follows:

(₹ in Crore)

Increase/ (Decrease) in Inventory Value	As at 31/03/2023			As at 31/03/2022		
Inventory Type	**Raw Material**	**WIP and Finished Goods**	**Total**	**Raw Material**	**WIP and Finished Goods**	**Total**
Copper	300	3	303	486	(48)	438
Gold	98	29	127	(2)	69	67
Silver	7	(0)	7	-	6	6
Total	**405**	**32**	**437**	**484**	**27**	**511**

(i) The Group's hedging policy only allows for effective hedge relationships to be established. The effective portion of hedge is recognised in OCI, while ineffective portion of hedge is recognised immediately in the Statement of Profit and Loss. For Cash flow hedges, the Group uses hypothetical derivative method to assess effectiveness based on "lower off" assessment.

Sources of Hedge ineffectiveness summarised by risk category are as follows :

Risk Category	Sources of Hedge Ineffectiveness	Type of Hedge
Price Risk	Critical terms Mismatch	Cash Flow and Fair Value Hedge
	Basis Risk	Fair Value Hedge
	Credit Risk Adjustment	Cash Flow and Fair Value Hedge
Exchange Risk	Credit Risk Adjustment	Cash Flow Hedge

The amount of gain/ (loss) recognised in the Statement of Profit and Loss on account of hedge ineffectiveness is as follows:

(₹ in Crore)

Note No.	Note Description	Particulars	Type of Hedge	Year Ended 31/03/2023	Year Ended 31/03/2022
39	Other Expenses	Gain/(Loss) on Derivatives	Cash Flow Hedges	590	(1,001)
39	Other Expenses	Gain/(Loss) on Derivatives	Fair Value Hedges	(261)	(130)
				329	**(1,131)**

(j) Certain hedges of forecast sale transaction for hedging currency risk were discontinued during the year since the hedged forecast transaction was not expected to occur.

10. Other Financial Assets

(Unsecured, Considered Good unless otherwise stated)

Refer Note 1B(P) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	**Current**	**Non-Current**	**Current**
Contingent Consideration (measured at fair value through profit and loss), Refer Note 53	-	-	381	-
Derivative matured pending realisation	-	447	-	622
Security Deposits - (a)	147	65	132	53
Deposit with Non-Banking Financial Companies	650	460	60	915
Deposit with Banks - (b)	1,904	-	168	-
Deposit with Others	8	-	7	-
Accrued Interest	-	175	-	57
Other Receivables - (c), (d)				
Unsecured, Considered Good	360	250	38	546
Unsecured, Considered Doubtful	-	2	-	2
Less : Loss Allowances	-	(2)	-	(2)
	3,069	**1,397**	**786**	**2,193**

(a) Includes Security Deposit (Non-current) pledged of ₹ 4 Crore (31/03/2022: ₹ 4 Crore).

(b) Deposit with Banks (Non-current) includes ₹ 154 Crore (31/03/2022: ₹ 148 Crore) towards earmarked balances balance in escrow accounts/ under lien with various authorities for employee benefits related to Novelis.

(c) Other receivables (Current) include ₹ 24 Crore (USD 3 million) (31/03/2022: Current ₹ 24 Crore (USD 3 million); Non-Current ₹ 24 Crore (USD 3 million) of note receivable on sale of Saras. Refer Note 54(B) for further details.

(d) Other receivables (Non-current) includes notes receivable amounting to ₹ 353 Crore ($ 41 million) originated as part of the settlement of Duffel contingent consideration outstanding as at 31/03/2023, Refer Note 53 for further details.

(e) Refer Note 45(e)(ii) for details of balances with related parties.

11. Income Taxes

Refer Note 1B(W) for accounting policy on Income Taxes

A. Tax Expense

The Group's income tax expenses and effective tax rate reconciliation is given below:

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
(a) Amount recognised in Statement of Profit and Loss		
Current Tax Expenses for the year		
Current Tax Expenses for the year	2,804	3,802
Adjustments for current tax of prior periods (Net)	52	(1)
	2,856	**3,801**
Deferred Tax Expense		
Deferred Income Tax (benefits)/expenses for the year	256	1,456
MAT Credit Entitlement (Net)	684	99
Tax Adjustment for earlier years - (i)	(652)	17
	288	**1,572**
Income Tax Expenses related to Continuing Operations	**3,144**	**5,373**
Income Tax Expenses related to Discontinued Operations	**-**	**7**
Total Income Tax Expenses	**3,144**	**5,380**

(i) During the year ended March 31, 2023, the Group have made an assessment of the impact of the Taxation law (Amendment) Ordinance, 2019 and decided to continue with the existing tax structure until utilization of accumulated Minimum Alternate Tax (MAT) Credit and deduction available under section 80IA of the Income Tax Act 1961. However, in accordance with the accounting standards, the Group has remeasured the deferred tax liability that is expected to reverse in future when the Company and it's subsidiary would migrate to the new tax regime. Accordingly, the Group has written back its net deferred tax liability to the extent of ₹ 609 Crore.

(b) Reconciliation of Effective Tax Rate

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Profit/ (Loss) before Tax from Continuing and Discontinued Operation	13,241	19,110
Indian Statutory Income Tax Rate (%) *	34.944%	34.944%
Tax expenses using the Company's domestic tax rate	4,627	6,678
Tax effect of adjustments to reconcile reported income tax expense:		
Tax credits and other concessions	(289)	(341)
Income exempt from tax and deduction	(256)	(152)
Expenses not deductible in determining taxable profit	229	290
Tax on income (domestic and foreign) at rates different from statutory income tax rate	(457)	(404)
Adjustments pertaining to prior years	(72)	(43)
Previously unrecognised tax loss, tax credit or temporary difference of a prior period	(313)	(403)
Uncertain tax positions	23	49
Tax on Undistributed Earnings	(18)	(5)
Tax adjustment for earlier years - Deferred Tax Reversal (refer foot note a (i) above)	(609)	-
Tax adjustment for earlier years - Deferred Tax - Others	(43)	17
Tax adjustment for earlier years - Current tax	52	(1)
Deferred tax not recognised on carry forward losses and benefits	20	(90)
Foreign exchange translation & remeasurement	90	(264)
Others	160	49
Total Tax expenses recognised in the Consolidated Statement of Profit and Loss	**3,144**	**5,380**

*Applicable Indian Statutory Income Tax rate for the year ended March 31, 2023 and March 31, 2022 is 34.944% and 34.944%, respectively.

	Year ended 31/03/2023	Year ended 31/03/2022
(c) Tax (Expense)/ Income Recognised in OCI, Refer Note 41 for further details.	**(2,543)**	**895**
(d) Tax (Expense)/ Income Directly Recognised in Equity - Basis adjustment on Cash flow hedges	**(7)**	**(73)**

B. Deferred Tax Assets and Liabilities

(a) Deferred Tax Assets (Net)

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Deferred Tax Assets	1,732	1,729
Deferred Tax Liabilities	(404)	(522)
	1,328	**1,207**

Major components of Deferred Tax Assets (Net) arising on account of temporary timing differences and movement thereof are given below:

(₹ in Crore)

	As at 01/04/2022	Recognised in Statement of Profit and Loss	Recognised in OCI	Recognised directly in Equity	Exchange Differences	Reclass (DTL/DTA)	As at 31/03/2023
Deferred Tax Assets							
Provisions deductible for tax purposes in future period	730	(238)	(12)	-	**62**	-	542
PPE Depreciation and Intangible Amortisation	70	62	-	-	5	-	137
Tax (losses)/benefits carry forwards, net #	715	29	-	-	**55**	-	799
Inventory valuation reserves	65	3	27	-	-	-	95
Fair value measurements of financial instruments	-	-	-	-	-	-	-
Trade name	149	(4)	-	-	**12**	-	157
Others	-	1	-	-	**1**	-	2
	1,729	**(147)**	**15**	**-**	**135**	**-**	**1,732**

	As at 01/04/2022	Recognised in Statement of Profit and Loss	Recognised in OCI	Recognised directly in Equity	Exchange Differences	Reclass (DTL/DTA)	As at 31/03/2023
Deferred Tax Liabilities							
PPE Depreciation and Intangible Amortisation	354	(164)	-	-	24	-	214
Inventory valuation reserves	22	(20)	-	-	1	-	3
Cash Flow Hedges	11	-	(11)	-	-	-	-
Others	135	35	17	-	-	-	187
	522	**(149)**	**6**	**-**	**25**	**-**	**404**
Net Deferred Tax Assets	**1,207**	**2**	**9**	-	**110**	**-**	**1,328**

(₹ in Crore)

Particulars	As at 01/04/2021	Recognised in Statement of Profit and Loss	Recognised in OCI	Recognised directly in Equity	Exchange Differences	Reclass (DTL/DTA)	As at 31/03/2022
Deferred Tax Assets							
Provisions deductible for tax purposes in future period	722	9	(131)	-	51	79	730
PPE Depreciation and Intangible Amortisation	80	(23)	-	-	13	-	70
Tax (losses)/benefits carry forwards, net #	311	365	-	-	39	-	715
Inventory valuation reserves	52	57	-	-	-	(44)	65
Cash Flow Hedges	-	-	-	-	-	-	-
Fair value measurements of financial instruments	6	-	-	-	(6)	-	-
Trade name	114	30	-	-	5	-	149
Others	-	-	-	-	-	-	-
	1,285	**438**	**(131)**	**-**	**102**	**35**	**1,729**
Deferred Tax Liabilities							
PPE Depreciation and Intangible Amortisation	308	100	-	-	12	(66)	354
Inventory valuation reserves	-	-	-	-	-	22	22
Cash Flow Hedges	4	-	7	-	-	-	11
Others	49	(4)	-	-	11	79	135
	361	**96**	**7**	**-**	**23**	**35**	**522**
Net Deferred Tax Assets	**924**	**342**	**(138)**	**-**	**79**	**-**	**1,207**

Tax Losses/Benefits carry forwards includes deferred income tax asset on unabsorbed depreciation carried forward under tax laws for which there is no expiry period.

(b) Deferred Tax Liabilities (Net)

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Deferred Tax Liabilities	15,709	15,616
Deferred Tax Assets	(7,059)	(9,985)
	8,650	**5,631**

Major components of Deferred Tax Liabilities (Net) arising on account of temporary timing differences and movement therein are given below:

(₹ in Crore)

	As at 01/04/2022	Additions due to Acquisition	Recognised in Statement of Profit and Loss	Recognised in OCI	Recognised directly in Equity	Exchange Differences	Reclass (DTL/DTA)	As at 31/03/2023
Deferred Tax Liabilities								
PPE Depreciation and Intangible Amortisation	12,321	1	169	-	-	290	-	12,781
Inventory Valuation Reserves	1,544	-	(394)	-	-	106	-	1,256
Exchange Differences on Foreign Operations	947	-	2	-	-	78	-	1,027
Fair value measurements of financial instruments	283	-	(5)	(66)	-	-	-	212
Deferred tax on Undistributed earnings	18	-	(18)	-	-	-	-	-
Cash Flow Hedges	1	-	-	156	7	2	-	166
Others	502	-	(1)	145	-	46	-	692
Deferred tax reversal	-	-	(425)	-	-	-	-	(425)
	15,616	**1**	**(672)**	**235**	**7**	**522**	**-**	**15,709**
Deferred Tax Assets								
Tax (losses)/benefits carry forwards, net #	1,828	-	(296)	-	-	126	-	1,658
Retirement Benefits and Compensated Absences	63	1	(48)	3	-	-	-	19
Cash Flow Hedges	2,065	-	-	(2,203)	-	61	-	(77)
Provisions deductible for tax purposes in future period	2,732	-	489	(124)	-	160	-	3,257
MAT Credit entitlement $	2,994	-	(982)	-	-	-	-	2,012
PP&E Depreciation and Intangible Amortisation	2	-	27	-	-	1	-	30
Others	301	-	(152)	7	-	4	-	160
	9,985	**1**	**(962)**	**(2,317)**	**-**	**352**	**-**	**7,059**
Net Deferred Tax Liabilities	**5,631**	**-**	**290**	**2,552**	**7**	**170**	**-**	**8,650**

(₹ in Crore)

	As at 01/04/2021	Additions due to Acquisition	Recognised in Statement of Profit and Loss	Recognised in OCI	Recognised directly in Equity	Exchange Differences	Reclass (DTL/ DTA)	As at 31/03/2022
Deferred Tax Liabilities								
PPE Depreciation and Intangible Amortisation	11,860	23	220	-	-	218	-	12,321
Inventory Valuation Reserves	443	-	1,066	-	-	35	-	1,544
Exchange Differences on Foreign Operations	1,259	-	(354)	-	-	42	-	947
Fair value measurements of financial instruments	45	-	3	240	-	-	(5)	283
Deferred tax on Undistributed earnings	23	-	(5)	-	-	-	-	18
Cash Flow Hedges	3	-	-	-	-	(2)	-	1
Others	406	(3)	46	-	-	27	26	502
	14,039	**20**	**976**	**240**	**-**	**320**	**21**	**15,616**
Deferred Tax Assets								
Tax (losses)/benefits carry forwards, net #	2,707	-	(943)	-	-	63	1	1,828
Retirement Benefits and Compensated Absences	74	-	(13)	3	-	-	(1)	63
Cash Flow Hedges	691	-	-	1,436	(73)	11	-	2,065
Provisions deductible for tax purposes in future period	2,653	-	94	(161)	-	120	26	2,732
MAT Credit entitlement $	3,093	-	(99)	-	-	-	-	2,994
PPE Depreciation and Intangible Amortisation	-	-	2	-	-	-	-	2
Others	291	-	14	(5)	-	1	-	301
	9,509	**-**	**(945)**	**1,273**	**(73)**	**195**	**26**	**9,985**
Net Deferred Tax Liabilities	**4,530**	**20**	**1,921**	**(1,033)**	**73**	**125**	**(5)**	**5,631**

Tax Losses/Benefits carry forwards includes deferred income tax asset on unabsorbed depreciation carried forward under tax laws for which there is no expiry period.

$ MAT credit indudes ₹ 655 Crore (31/03/2022: ₹ 954 Crore) pertaining to Utkal Alumina International Limited. The same has been recognised considering reasonable centainty, supported by convincing evidence, that sufficient profit will be available in future against which the MAT credit will be recovered.

(c) Deferred tax assets and deferred tax liabilities have been offset wherever the Group has a legally enforceable right to set-off current tax assets against current tax liabilities and where the deferred tax assets and deferred tax liabilities relate to income tax levied by the same taxation authority.

(d) The Group has not recognised deferred tax on temporary differences relating to depreciation which originate and reverse during the tax holiday period.

(e) Unrecognised Deferred Taxes

The items on which the Group has not recognised Deferred Tax Assets at the reporting date as it is not probable of recovery are given below:

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
(i) Un-expiring		
i. Unabsorbed Depreciation and other expenses not deductible for tax	719	780
ii. Tax losses carry forwards	127	181
iii. Unused tax credits	649	582
(ii) Expiring		
i. Tax losses carry forwards	4,068	3,975
Period of expiry	FY 2024-42	FY 2023-43
ii. Unused tax credits	278	355
Period of expiry	FY 2024-33	FY 2023-33
iii. Long term capital loss carry forward	218	225
Period of expiry	FY 2024-25	FY 2023-25
(iii) Cumulative undistributed earnings in respect of certain Group entities for which the Group has not provided deferred tax liability. The Group believe that the reversal of such temporary difference is not probable in the foreseeable future.	37,328	34,352

(f) Tax Uncertainties:

As of March 31, 2023 and March 31, 2022 the total amount of unrecognized benefits in that, Novelis Inc., if recognized, would affect the effective income tax rate in future periods based on anticipated settlement dates is ₹ 603 Crore ($ 73 million) and ₹ 541 Crore ($ 71 million), respectively.

Tax authorities continue to examine certain other tax filings of Novelis Inc. for financial years 2005 through 2019. As a result of further settlement of audits, judicial decisions, filing of amended tax returns or the expiration of statutes of limitations, Novelis Inc. reserves for unrecognized tax benefits, as well as its reserves for interest and penalties, are not expected to decrease in the next 12 months. With few exceptions, tax returns for all jurisdictions for all tax years before 2005 are no longer subject to examination by taxing authorities.

As of March 31, 2023 and March 31, 2022, Novelis Inc. had ₹ 77 Crore (USD 9 million) and ₹ 73 Crore (USD 10 million) accrued, respectively, for interest and penalties. For the years ended March 31, 2023 and 2022 Novelis Inc. recognized interest and penalties expense(benefit) of ₹ 2 Crore (USD 0 million) and interest and penalties expense of ₹ (12) Crore (USD (2) million) respectively.

C. Income Tax Assets and Liabilities with Tax Authorities

(₹ in Crore)

		As at 31/03/2023	As at 31/03/2022
(a)	**Income Tax Assets (Net)**		
	Non-Current Tax Assets (Net)	8	8
	Current Tax Assets (Net)	109	186
		117	**194**
(b)	**Income Tax Liabilities (Net)**		
	Current Tax Liabilities	2,187	2,120
		2,187	**2,120**

The Group is subject to tax assessments and ongoing proceedings, which are pending before various Tax Authorities od respective countries. Management periodically evaluates the positions taken in tax returns with respect to above matters, including unresolved tax disputes, which involves interpretation of applicable tax regulations and judicial precedents. Current tax liability and tax asset balances are presented, after recognising as appropriate, provision for taxes payable and contingencies basis Management's assessment of outcome of such ongoing proceedings and amounts that may become payable to the tax authorities. Considering the nature of such estimates and uncertainties involved, the amount of such provisions may change upon final resolution of the matters with tax authorities, Refer Note 1C(e).

12. Other Non-Current and Current Assets

(Unsecured, Considered Good unless otherwise stated)

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Capital Advance - (a)	3,037	-	547	-
Deposits with Government and Other Authorities	17	35	17	30
Advance to Supplier for Goods and Services	2	1,841	10	1,256
Prepaid Expenses - (d)	320	1,089	103	922
Others - (b), (c)	912	2,674	1,000	2,092
Unsecured, Considered Doubtful				
Advance to Supplier for Goods and Services	12	110	22	108
Others	-	40	-	11
Less : Loss Allowances	(12)	(150)	(22)	(119)
	4,288	**5,639**	**1,677**	**4,300**

(a) Gujarat Industrial Development Corporation ('GIDC') is constructing a common desalination plant (the 'Plant') at Dahej Industrial Area in Gujarat through a SPV, having total estimated cost of ₹ 1,140 crore. The Group participation is 10% of total MLD. The Group has paid an advance of ₹ 91 crore to GIDC (representing 80% of our share out of total planned cost). Pending finalisation of the structure of the SPV, this amount has been recorded under Capital Advance.

(b) Mainly includes unutilised tax credits and claims receivable from Indirect Tax Authorities.

(c) Includes ₹ 192 Crore (Garepalma mines in Chattisgarh ₹ 74 Crore and Kathautia mines in Jharkhand ₹ 118 Crore) (31/03/2022: ₹ 192 Crore (Garepalma ₹ 74 Crore and Kathautia ₹ 118 Crore)) towards appropriation of Performance Bank Guarantee by Nominated Authority, Refer Note 43 for further details.

(d) Prepaid Expenses includes ₹ 220 Crore (31/03/2022: ₹ 208 Crore) towards surplus Plan Assets of Defined Benefit Plans recognised, Refer Note 25A(I)(a)(iii) and 25B(A)(I)(f)(iii) for further details.

13. Inventories

Refer Note 1B(M) for accounting policy on Inventories

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	In Hand	In Transit	Total	In Hand	In Transit	Total
Raw Materials	7,899	5,036	12,935	7,293	5,852	13,145
Work-in-Progress	18,589	246	18,835	20,185	249	20,434
Finished Goods	7,447	294	7,741	6,900	280	7,180
Stock-in-Trade	20	-	20	884	-	884
Stores and Spares	2,884	82	2,966	2,329	18	2,347
Coal and Fuel	265	196	461	474	19	493
	37,104	**5,854**	**42,958**	**38,065**	**6,418**	**44,483**

(a) The Group has applied fair value hedge accounting on certain inventory which forms part of Work-in-Progress and Finished Goods. Fair value hedges are mainly used to hedge the exposure to change in fair value of commodity price risks. The fair value adjustment remains part of the carrying value of inventory and is taken to the Statement of Consolidated Profit and Loss when the inventory is either sold or consumed, Refer Note 9(h) for further details.

(b) For Inventories hypothecated against secured short-term borrowings, Refer Note 20B.

(c) Write down of inventories (net of reversal) to net realizable value related to raw materials, work-in-progress and finished goods amounted to ₹ 588 Crore (31/03/2022: ₹ 560 Crore) These were recognized as expense and included in 'Cost of Material Consumed' and 'Changes in Inventories of Finished Goods, Work-in-Progress and Stock-in-Trade' in the Consolidated Statement of Profit and Loss.

(d) Inventories in hand include bulk material of coal, bauxite and copper concentrate lying at yards, mines, plants, precious metals of gold and silver lying at smelter and refinery aggregating to ₹ 4,232 Crore (31/03/2022: ₹ 4,302 Crore).

14. Trade Receivables

Refer Note 1B(N) for accounting policy on Trade Receivable

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Trade Receivables:		
Secured, Considered Good	1,829	2,083
Secured, Credit Impaired	8	6
Unsecured, Considered Good	14,410	19,011
Unsecured, Credit Impaired	60	60
	16,307	**21,160**
Less: Loss Allowances - (d)	(93)	(84)
	16,214	**21,076**

(a) **Trade Receivables ageing schedule and expected credit loss rate as at 31/03/2023:**

(₹ in Crore)

Particulars	Unbilled	Not due	Outstanding for following periods from due date of receipt					Total
			Less than 6 months	6 months - 1 year	1-2 years	2-3 yrs.	More than 3 yrs.	
(i) Undisputed - Considered good	3	15,818	73	179	75	1	9	16,158
(ii) Undisputed - Significant increase in credit risk	-	-	3	1	-	-	-	4
(iii) Undisputed - Credit impaired	-	-	-	4	7	4	16	31
(iv) Disputed - Considered good	-	-	13	26	-	38	-	77
(v) Disputed - Significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed - Credit impaired	-	-	-	-	-	-	37	37
Total	**3**	**15,818**	**89**	**210**	**82**	**43**	**62**	**16,307**
Less: Loss Allowances								(93)
Net Trade Receivables								**16,214**
Expected credit loss provision	-	1	5	3	16	-	-	**25**
Exepected loss rate	0.00%	0.01%	5.81%	1.46%	21.33%	0.00%	0.00%	**0.15%**

Trade Receivables ageing schedule and expected credit loss rate as at 31/03/2022:

(₹ in Crore)

Particulars	Unbilled	Not due	Outstanding for following periods from due date of receipt					Total
			Less than 6 months	6 months - 1 year	1-2 years	2-3 yrs.	More than 3 yrs.	
(i) Undisputed - Considered good	35	20,708	223	31	24	2	6	21,029
(ii) Undisputed - Significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed - Credit impaired	-	-	-	5	6	3	13	27
(iv) Disputed - Considered good	5	-	31	-	29	-	-	65
(v) Disputed - Significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed - Credit impaired	-	-	-	-	-	3	36	39
Total	**40**	**20,708**	**254**	**36**	**59**	**8**	**55**	**21,160**
Less: Loss Allowances								(84)
Net Trade Receivables								**21,076**
Expected credit loss provision	-	-	11	2	16	-	-	**18**
Exepected loss rate	0.00%	0.00%	4.33%	6.45%	21.33%	0.00%	0.00%	**0.09%**

(b) For trade receivables hypothecated against borrowings, Refer Note 20B.

(c) No trade or other receivable are due from directors or other officers of the Group either severally or jointly with any other person. Further, no trade or other receivable are due from firms or private companies respectively in which any director is a partner, or director or member.

(d) Loss allowances includes provision of ₹ 25 Crore (31/03/2022: ₹ 18 Crore) made on account of expected credit loss on Trade Receivables.

(e) Refer Note 45 for details of balances with related parties.

15. Cash and Cash Equivalents

Refer Note 1B(R) for accounting policy on Cash and Cash Equivalents

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Cash on Hand	-	-
Cheques and Drafts on Hand including remittance in transit- (a)	39	14
Balances with Banks		
Current Accounts	9,231	6,630
Deposit with Initial maturity of less than three months	3,570	4,333
Short term liquid Investments in Mutual Funds	-	662
	12,840	**11,639**

(a) Includes ₹ 38 Crore (31/03/2022: ₹ Nil Crore) remittance in transit.

(b) There is no restriction with regard to cash and cash equivalents as the end of reporting year and previous year.

16. Bank Balances other than Cash and Cash Equivalents

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Balances with Banks		
Earmarked Balances - (a)	15	16
Deposits with Initial Maturity more than three months	2,513	5,737
	2,528	**5,753**

(a) Includes unclaimed dividend of ₹ 6 Crore (31/03/2022: ₹ 5 Crore)

17. Non-Current Assets or Disposal Group Classified as Held for Sale

Refer Note 1B(H) for accounting policy on Non-Current Assets or Disposal Groups Held for Sale and Discontinued Operations

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
A. Assets or Disposal Group Classified as Held for Sale		
Non-Current Assets classified as held for sale - (a)	51	42
Assets of Disposal Group classified as held for sale, Refer Note 53(b)	-	46
	51	**88**
(a) Details of Assets classified as held for sale - (i), (ii), (iii)		
Land and Building	-	1
Plant and Equipment	51	41
	51	**42**

(i) During the previous year ended 31/03/2022, the Group evaluated operational performance along with present environmental norms of its Di Ammonium Phosphate (DAP) Plant and decided to decommission the same. Accordingly it recognised impairment loss amounting to ₹ 76 Crore. During the year ended 31/03/2023, the Group has classified these assets having carrying amount of ₹ 14 Crore as held for sale.

(ii) In earlier years, the Group had impaired certain equipment and accessories classified as held for sale resulting carrying amount ₹ 2 Crore as at 31/03/2022. During the year ended 31/03/2023, the Group has written back impairment loss on determination of its realizable value (Net of cost to sales) amounting to ₹ 12 Crore. Portion of such equipments are disposed during the year and rest with carrying amount ₹ 7 crore lying as at 31/03/2023.

(iii) Include ₹ 30 Crore (31/03/2022: ₹ 40 Crore) relating to one of the hydroelectric power generation facilities in South America, Brecha and land and building of Binh Duong plant in Vietnam.

(b) The fair value of the assets held for sale approximates the carrying value.

(c) The Company is in the process of disposing the above assets.

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
B. Liability Associated with Disposal Group Classified as Held for Sale		
Liabilities associated with Disposal Group classified as held for Sale, Refer Note 53(b)	-	93
	-	**93**

18. Equity Share Capital

(₹ in Crore)

	Numbers as at		As at	
	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Authorised				
Equity Shares of ₹ 1/- each	2,500,000,000	2,500,000,000	250	250
Redeemable Cumulative Preference Shares of ₹ 2/- each	25,000,000	25,000,000	5	5
			255	255
Issued				
Equity Shares of ₹ 1/- each - (a)	2,247,748,231	2,247,726,370	225	225
			225	225
Subscribed and Paid-up				
Equity Shares of ₹ 1/- each fully paid-up	2,247,740,834	2,247,718,973	225	225
Less: Face Value of Equity Shares forfeited	(546,249)	(546,249)	-	-
Add: Forfeited Shares (Amount originally Paid up)	-	-	-	-
	2,247,194,585	2,247,172,724	225	225
Less: Treasury Shares				
Equity Shares - (b)(i)	(16,316,130)	(16,316,130)	(2)	(2)
Equity Shares - (b)(ii)	(9,219,067)	(7,064,997)	(1)	(1)
	2,221,659,388	**2,223,791,597**	**222**	**222**

(a) Issued Equity Share Capital as at 31/03/2023 includes 7,397 Equity Shares (31/03/2022: 7,397) of ₹ 1/- each issued on Rights basis kept in abeyance due to legal case pending.

(b) Treasury shares include :

(i) Shares held by Trident Trust which represents equity shares of ₹ 1/- each fully paid-up of the Company issued, pursuant to a Scheme of Arrangements approved by the Hon'ble High Courts of Mumbai and of Allahabad, vide their Orders dated October 31, 2002, and 18th November, 2002, respectively, to the Trident Trust, created wholly for the benefit of the Company and is being managed by trustees appointed by it. The tenure of the Trust is up to January 23, 2024.

(ii) Shares held by Hindalco Employee Welfare Trust (ESOP Trust) which represents equity shares of ₹ 1/- each fully paid-up of the Company. The Trust buys shares of the Company from the market, for giving shares to employees pursuant to the Employees Stock Option Scheme (ESOS), 2018. Refer note 19 (a) (ix) for further details.

(c) Reconciliation of shares outstanding at the beginning and at the end of the reporting period:

	As at 31/03/2023		As at 31/03/2022	
	Numbers	₹ in Crore	Numbers	₹ in Crore
Equity Shares outstanding at the beginning of the year	2,223,791,597	222	2,224,543,152	222
Equity shares allotted pursuant to exercise of ESOS 2006 & 2013	21,861	-	488,477	-
Equity shares purchased by Hindalco Employee Welfare Trust from market pursuant to ESOS 2018	(2,956,000)	-	(2,119,000)	-
Equity shares allotted pursuant to exercise of ESOS 2018 through Hindalco Employee Welfare Trust	801,930	-	878,968	-
Equity Shares outstanding at the end of the year	2,221,659,388	222	2,223,791,597	222

(d) The Company has one class of equity shares having a par value of ₹ 1/- per share. Each shareholder is eligible for one vote per share held. The dividend proposed by the Board of Directors is subject to the approval of the shareholders in the ensuing Annual General Meeting, except in case of interim dividend. In the event of liquidation, the equity shareholders are eligible to receive the remaining assets of the Company after distribution of all preferential amounts, in proportion to their shareholding.

(e) Details of shareholders holding more than 5% Equity Shares in the Company on reporting date:

	As at 31/03/2023		As at 31/03/2022	
	Number of Shares Held	Percentage of Holding *	Number of Shares Held	Percentage of Holding *
IGH Holdings Private Limited	350,088,487	15.58%	350,088,487	15.58%
Birla Group Holdings Private Limited	228,292,308	10.16%	228,292,308	10.16%
Life Insurance Corporation of India and its Associates	216,823,769	9.65%	189,588,459	8.44%

* Percentage have been calculated on the basis of total number of shares outstanding (before adjusting Treasury shares referred in footnote (b) above)

(f) Shares held by promoters at the end of the year and Movement:

Promoter's Name $	No. of Shares as at 31/03/2023	Percentage of total shares *	No. of Shares as at 31/03/2022	Percentage of total shares *	% Change during the Year
Kumar Mangalam Birla	901,635	0.04%	901,635	0.04%	-
Birla Group Holdings Private Limited	228,292,308	10.16%	228,292,308	10.16%	-
Total	**229,193,943**		**229,193,943**		

$ Promoter here means promoter as defined in Section 2(69) of the Companies Act, 2013.

* Percentage have been calculated on the basis of total number of shares outstanding (before adjusting Treasury shares referred in footnote (b) above)

(g) The Company has reserved equity shares for issue under the Employee Stock Option Schemes. (Refer Note 25(B) for details of Employee Stock Option Scheme)

(h) The Company during the preceding 5 years:

(i) Has not allotted shares pursuant to contracts without payment received in cash.

(ii) Has not issued shares by way of bonus shares.

(iii) Has not bought back any shares.

19. Other Equity

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Equity Component of Other Financial Instruments	**4**	**4**
Reserves and Surplus		
Capital Reserve	147	147
Capital Redemption Reserve	104	104
Business Reconstruction Reserve	5,799	5,799
Securities Premium	8,234	8,234
Debenture Redemption Reserve	-	1,500
Employees Stock Options	108	75
Treasury Shares held by ESOP Trust	(306)	(199)
Special Reserve	20	20
General Reserve	21,370	21,370
Retained Earnings	48,216	36,810
	83,692	**73,860**
Other Reserves		
Gain/ (Loss) on Equity Instruments FVTOCI	4,910	5,334
Gain/ (Loss) on Debt Instruments FVTOCI	(14)	(5)
Effective portion of Cash Flow Hedge	456	(4,894)
Cost of Hedging Reserve	3	(39)
Foreign Currency Translation Reserve	5,533	3,709
	10,888	**4,105**
	94,584	**77,969**

(a) Brief description of items of Other Equity are given below:

(i) **Share Application Money Pending Allotment:**

Share application money pending allotment represents amount received from employees who have exercised Employee Stock Option Scheme (ESOS) for which shares are pending allotment as on balance sheet date.

(ii) **Equity Component of Other Financial Instruments:**

It represents fair valuation gain of inter-corporate deposits taken in earlier years by Associate entities on transition to Ind AS.

(iii) **Capital Reserve:**

The Group has created capital reserve pursuant to past mergers and acquisitions.

(iv) **Capital Redemption Reserve:**

The Group has created capital redemption reserve as per the requirement of the Companies Act.

(v) **Business Reconstruction Reserve**

The Company had formulated a scheme of financial restructuring under sections 391 to 394 of the Companies Act 1956 ("the Scheme") between the Company and its equity shareholders approved by the High Court of judicature of Bombay to deal with various costs associated with its organic and inorganic growth plan. Pursuant to this, a separate reserve account titled as Business Reconstruction Reserve ("BRR") was created during the year 2008-09 by transferring balance standing to the credit of Securities Premium Account of the Company for adjustment of certain expenses as prescribed in the Scheme.

(vi) **Securities Premium:**

Securities premium reserve is used to record the premium on issue of shares. The reserve is utilized in accordance with the provision of the Act.

(vii) **Debenture Redemption Reserve:**

The Group is required to create a debenture redemption reserve out of the profits which is available for payment of dividend, for the purpose of redemption of debentures.

(viii) **Employees Stock Options:**

The employee stock option account is used to recognize the grant date fair value of options issued to employees under stock option schemes.

(ix) **Treasury Shares held by ESOP Trust**

The Company has created a trust, namely "Hindalco Employee Welfare Trust"(ESOP Trust) for providing share-based payments to its employees (including its Subsidiaries' employees) The Company uses this Trust as a vehicle for distributing shares to employees covered under Scheme. The Trust buys shares of the Company from the market, for giving shares to employees under the Employees Stock Option Scheme, 2018.

Shares held by the Trust are treated as Treasury shares. Equity instruments that are reacquired (treasury shares) are recognised at cost and deducted from equity. No gain or loss is recognised in the Consolidated Statement of Profit and Loss on purchase, sale, issue or cancellation of Equity instruments. Share options whenever exercised, would be utilised from these treasury shares. Refer Note 25(C)

(x) **Special Reserve**

Certain subsidiaries of the Group are registered as non-banking financial company and as per requirement of Section 45-IC of the Reserve Bank of India Act, 1934 every non-banking financial company shall create a reserve fund and transfer therein a sum not less than twenty per cent of its net profit every year as disclosed in the profit and loss account and before any dividend is declared.

(xi) **General Reserve**

The Group has created this reserve by transferring certain amount out of the profit at the time of distribution of dividend in the past.

(xii) **Retained Earnings**

Amount of retained earnings represents accumulated profit and losses of the Group as on reporting date. Such profits and losses are after adjustment of payment of dividend, transfer to any reserves as statutorily required and adjustment for realised gain/loss on derecognition of equity instruments measured at FVTOCI. Actuarial Gain/ Loss arising out of Actuarial valuation is immediately transferred to Retained Earnings.

(xiii) **Gain/(Loss) on Equity and Debt Instruments FVTOCI**

The Group has elected to recognize changes in the fair value of certain investments in other comprehensive income. These changes are accumulated within the FVTOCI equity investments reserve and FVTOCI debt investment reserve within equity.

(xiv) **Effective portion of Cash Flow Hedge**

The Group uses hedging instruments as part of its risk management policy for commodity and foreign currency risk as described in Note 49. The Cash Flow hedging reserve is used to recognise the effective portion of gain or loss on designated hedging relationship, Refer Note 9 (e) and 9 (f).

(xv) **Cost of Hedging Reserve**

The Group designates the spot component of cross currency interest rate swap as hedging instruments in fair value hedge relationship and cash flow hedge relationship. The Group defers changes in the forward element of cross currency interest rate swap in the cost of hedging reserve. For fair value hedge forward points at inception is amortized on a straight line basis from OCI based on the remaining life of trade. For cash flow hedge the deferred cost of hedging are included in the initial cost of the related hedged items when it is recognized or reclassified to the Consolidated Statement of Profit and Loss when the hedged item effects the Consolidated Statement of Profit and Loss. The Group also designates the intrinsic value of the option contracts whereas the time value of option contracts is included in the cost of hedging reserve, Refer Note 9 (e) and 9 (f).

(xvi) **Foreign Currency Translation Reserve**

Foreign Currency Translation reserve includes all resulting exchange differences arising from (a) translating the assets and liabilities of the Group's foreign operations into Indian Rupees using exchange rates prevailing at the end of each reporting period and (b) translating income and expense items of the foreign operations at the average exchange rates for the period.

(b) Movement of each item of other equity is presented in Consolidated Statement of Changes in Equity (SOCE)

(c) Shareholders of the Company approved final dividend of ₹ 4 per fully paid-up equity share aggregating to ₹ 890 Crore (net of dividend on treasury shares) for the year ended 31/03/2022 which was paid during this financial year.

(d) The Board of Directors of the Company has recommended dividend of ₹ 3 per fully paid-up equity share aggregating to ₹ 667 Crore (net of dividend on treasuary shares) for the year ended 31/03/2023 which has not been recognised in the consolidated financial statements, and is subject to the approval of shareholders in Annual General Meeting (AGM).

20. Borrowings

Refer Note 1B(P) for accounting policy on Financial Instruments

A. Borrowings, Non-Current

(₹ in Crore)

Particulars	As at 31/03/2023			As at 31/03/2022		
	Non-Current Portion	Current Maturities	Total	Non-Current Portion	Current Maturities	Total
Secured						
Non Convertible Debentures - (a)	-	-	-	-	5,999	5,999
Term Loans:						
From Banks						
Rupee Term Loans - (b)	11,559	50	11,609	14,227	14	14,241
Foreign Currency Term Loans - (c)	9,978	106	10,084	9,274	98	9,372
	21,537	156	21,693	23,501	6,111	29,612
Unsecured						
Non Convertible Debentures - (a)	-	699	699	-	-	-
Senior Notes - (d)	29,445	-	29,445	27,222	-	27,222
Term Loans:						
From Banks						
Foreign Currency Term Loans - (e)	452	482	934	905	48	953
Deferred Payment Liabilities - (f)	-	10	10	7	18	25
	29,897	1,191	31,088	28,134	66	28,200
	51,434	**1,347**	**52,781**	**51,635**	**6,177**	**57,812**

(a) Non Convertible Debentures comprise of following:

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022		Redemption Date
	Gross Amount	Carrying Value	Gross Amount	Carrying Value	
Secured - (i)					
30,000 9.55% Redeemable Non Convertible Debentures of ₹ 10 lakhs each	-	-	3,000	3,000	25/04/2022
15,000 9.55% Redeemable Non Convertible Debentures of ₹ 10 lakhs each	-	-	1,500	1,500	27/06/2022
15,000 9.60% Redeemable Non Convertible Debentures of ₹ 10 lakhs each	-	-	1,500	1,499	02/08/2022
	-	**-**	**6,000**	**5,999**	
Unsecured - (ii)					
70,000 7.60% Redeemable Non-Convertible Debentures of ₹ 1 lakhs each	700	699	-	-	18/03/2024
	700	**699**	**-**	**-**	

(i) Secured Debentures were secured by all the movable items of Property, Plant and Equipment, both present and future (except movable assets of Mahan Aluminium plant, Aditya Aluminium plant, Kalwa plant and Current Assets) and certain immovable properties of the Parent. These debentures were redeemend during the year on their due dates.

(ii) During the year ended March 31, 2023, the Group has issued 70,000 7.60% Redeemable Non-Convertible Debentures amounting to ₹ 700 Crore maturing on March 18, 2024 for working capital requirement. These Non-Convertible debt securities has been issued to comply with provisions of SEBI Circular No. SEBI/HO/DDHS/CIR/P/2018/144 dated November 26, 2018 related to listed large corporate. As of March 31, 2023, the entire proceeds from issue of non-convertible debentures have been utilized for the purpose mentioned in the Debenture Trust Deed.

(b) Secured Rupee Term Loans from Banks comprise of following:

(₹ in Crore)

	Note	Rate of Interest (applicable as on 31/03/2023)	As at 31/03/2023		As at 31/03/2022		Redemption Date
			Gross Amount	Carrying Value	Gross Amount	Carrying Value	
Axis Bank	(i)	Repo Rate + 160 bps	619	603	619	602	31/03/2030
State Bank of India	(i)	MCLR 3 Month + 10 bps	2,239	2,228	2,239	2,216	31/03/2030
ICICI Bank	(i)		-	-	76	75	31/03/2030
Rupee Term Loans : (A)			**2,858**	**2,831**	**2,934**	**2,893**	
State Bank of India	(ii)	MCLR 3 Month + 10 bps	4,672	4,665	4,672	4,665	01/09/2030
PNB Bank	(ii)	Repo Rate + 160 bps*	256	258	256	255	01/09/2030
Axis Bank	(ii)	Repo Rate + 160 bps	1,371	1,355	1,371	1,363	01/09/2030
Rupee Term Loans : (B)			**6,299**	**6,278**	**6,299**	**6,283**	
Axis Bank	(iii)		-	-	635	631	30/09/2030
State Bank of India	(iii)		-	-	1,789	1,784	30/09/2030
State Bank of India	(iii)		-	-	150	150	30/09/2030
Rupee Term Loans : (C)			**-**	**-**	**2,574**	**2,565**	
State Bank of India	(iv)	MCLR 3 Month + 15 bps	2,500	2,500	2,500	2,500	31-12-2031
Rupee Term Loans : (D)			**2,500**	**2,500**	**2,500**	**2,500**	
Total Rupee Term Loans - (A+B+C+D)			**11,657**	**11,609**	**14,307**	**14,241**	

* Benchmark changed, benchmark as at 31/03/2022 was MCLR 1 month.

The Borrowings are subsequently measured at amortised cost and interest accrued thereon is included in Note 23 - Other Financial Liability.

Definition of abbreviation used

100 basis points (bps) is equal to 1%

Repo rate is the rate at which RBI lends funds to commercial banks

Marginal Cost of funds based Lending Rate (MCLR) is a tenor-linked internal benchmark rate of respective bank

(i) The term loans from banks of ₹ 2,858 Crore (gross) (31/03/2022: ₹ 2,934 Crore) are secured by a first ranking charge/ mortgage/ security interest in respect of all the movable and immovable items of Property, Plant and Equipment of Mahan Aluminium plant, both present and future, carrying value ₹ 10,861 Crore (as at 31/03/2022 ₹ 11,238 Crore), Refer Note 2A. Term loan amounting to ₹ 2,858 Crore (gross) (31/03/2022: ₹ 2,934 Crore) is to be repaid in 17 quarterly instalments commencing from June 2026. ICICI Bank loan of ₹ 76 Crore has been prepaid in FY 2023.

(ii) The term loan of ₹ 6,299 Crore (gross) (31/03/2022: ₹ 6,299 Crore) is secured by a first ranking charge/ mortgage/security interest in respect of all the movable and immovable items of Property, Plant and Equipment of Aditya Aluminium plant both present and future, carrying value of ₹ 11,320 Crore (as at 31/03/2022 ₹ 11,693 Crore), Refer Note 2A. Term loan amounting to ₹ 6,299 Crore (gross) (31/03/2022: ₹ 6,299 Crore) is to be repaid in 26 quarterly instalments commencing from 01/06/2024.

(iii) During the year ended March 31, 2023, Utkal Alumina International Limited (Utkal), wholly owned subsidiary of the Group, has prepaid its term loan from banks of ₹ 2574 Crore which were scheduled to repay in September, 2030.

(iv) The term loan of ₹ 2,500 Crore (gross) (31/03/2022: ₹ 2,500 Crore) is secured by a first ranking charge/ mortgage/security interest in respect of all the movable and immovable items of Property, Plant and Equipment of Mahan Aluminium plant both present and future, carrying value ₹ 10,861 Crore (as at 31/03/2022 ₹ 11,238 Crore), Refer Note 2A.Term loan amounting to ₹ 2,500 Crore (gross) (31/03/2022: ₹ 2,500 Crore) is to be repaid in 34 quarterly instalments commencing from October 2023.

(c) **Secured Foreign Currency Term Loans from Banks comprise of following:**

(i) **Floating rate Term Loan facility**

2020 Term Loans:

In April 2020, Novelis Acquisitions LLC borrowed USD 775 million under the Novelis' existing secured term loan credit agreement ("Term Loan Facility") prior to its merger into Aleris Corporation. The proceeds of the incremental term loans were used to pay a portion of the consideration payable in the acquisition of Aleris (including the repayment of Aleris' outstanding indebtedness) as well as fees and expenses related to the acquisition, and the incremental term loans. The incremental term loans will mature on January 21, 2025, subject to 0.25% quarterly amortization payments. The incremental term loans accrue interest at LIBOR (as defined in the Term Loan Facility) plus 1.75%.

As of March 31, 2023 the outstanding amount on 2020 Term loan facility is ₹ 6,111 Crore (USD 745 million) (31/03/2022: ₹ 5,673 Crore, USD 748 million) net of debt issuance cost of ₹ 59 Crore (USD 7 million) (31/03/2022: ₹ 82 Crore, USD 12 million)

2021 Term Loans:

In March 2021, Novelis borrowed USD 480 million of term loans (the "2021 Term Loans") under its Term Loan Facility with an additional USD 20 million being borrowed under the 2021 Term Loans in April 2021. The 2021 Term Loans mature on March 31, 2028 and are subject to 0.25% quarterly amortization payments. The existing loans under the Term Loan Facility accrue interest at LIBOR plus 2%. The proceeds of the 2021 Term Loans were applied to refinance a portion of the 2017 Term Loans.

As of March 31, 2023 the outstanding amount on 2020 Term loan facility is ₹ 3,973 Crore (USD 484 million) (31/03/2022: ₹ 3,699 Crore, USD 487 million) net of debt issuance cost of ₹ 53 Crore (USD 6 million) (31/03/2022: ₹ 58 Crore, USD 8 million)

All the above term loans of Novelis are part of its senior secured credit facilities, which are guaranteed by its direct parent, AV Minerals, and its certain direct and indirect subsidiaries and are secured by a pledge of substantially all of the assets, including Intangible Assets but excluding Right-of-Use Assets, of the Novelis and the guarantor.

(d) **Unsecured Senior Notes comprise of following:**

2026 Senior Notes & 2031 Senior Notes

In August 2021, Novelis Corporation, an indirect wholly owned subsidiary of Novelis Inc., issued USD 750 million in aggregate principal amount of 3.250% Senior Notes due November 2026 (the "2026 Senior Notes") The 2026 Senior Notes mature on November 15, 2026 and are subject to semi-annual interest payments that will accrue at a rate of 3.250% per year. The net proceeds of the offering, together with cash on hand, were used to (i) fund the redemption of a portion of the 5.875% Senior Notes due September 2026, plus the redemption premium and accrued and unpaid interest thereon and (ii) pay certain fees and expenses in connection with the foregoing and the offering of the notes.

In August 2021, Novelis Corporation, a wholly owned subsidiary of Novelis Inc., issued USD 750 million in aggregate principal amount of 3.875% Senior Notes due August 2031 (the "2031 Senior Notes") The 2031 Senior Notes mature on August 15, 2031 and are subject to semi-annual interest payments that will accrue at a rate of 3.875% per year. The net proceeds of the offering, together with cash on hand, were used to (i) fund the redemption a portion of the 5.875% Senior Notes due September 2026, plus the redemption premium and accrued and unpaid interest thereon and (ii) pay certain fees and expenses in connection with the foregoing and the offering of the notes.

The Group had incurred debt issuance costs of ₹ 81 Crore (USD 11 million) for the 2026 Senior Notes and 2031 Senior notes, which is to be amortized as an increase to interest expense and amortization of debt issuance costs over the term of the note. As a result of this transaction, the Group has recorded a loss on extinguishment of debt of ₹ 453 Crore (USD 60.9 million) and gain on modification of ₹ 103 Crore (USD 13.9 million) in the FY 2022, out of which ₹ 378 Crore (USD 51 million) related to redemption premium and was paid with cash on hand.

As of March 31, 2023 outstanding amount on 2026 Senior Notes and 2031 Senior Notes is ₹ 6,042 Crore each (USD 735 million) (31/03/2022: ₹ 5,561 Crore, USD 732 million) respectively.

2029 Senior Notes

In March 2021, Novelis Sheet Ingot GmbH, an indirect wholly owned subsidiary of Novelis Inc., organized under the laws of Ireland, issued € 500 million in aggregate principal amount 3.375% Senior Notes due 2029 (the "2029 Senior Notes" and together with the 2026 Senior Notes and the 2030 Senior Notes, the "Senior Notes") The 2029 Senior Notes are subject to semi-annual interest payments and mature on April 15, 2029. The proceeds were used to pay down a portion of the 2017 Term Loans, plus accrued and unpaid interest. In addition, Novelis intend to allocate an amount equal to the net proceeds received from this issuance to finance and/or refinance new and/or existing eligible green projects, which are currently contemplated to consist of renewable energy or pollution prevention and control type projects.

As of March 31, 2023 outstanding amount on 2029 Senior Notes is ₹ 4,393 Crore (USD 535 million) (31/03/2022: ₹ 4,143 Crore, USD 546 million) net of debt issuance cost of ₹ 71 Crore (USD 13 million) (31/03/2022: ₹ 78 Crore, USD 10 million)

2030 Senior Notes

In January 2020, Novelis Corporation, an indirect wholly owned subsidiary of Novelis Inc., issued USD 1.6 billion in aggregate principal amount of 4.750% Senior Notes due January 2030 (the "2030 Senior Notes") The 2030 Senior Notes are subject to semi-annual interest payments and mature on January 30, 2030.

As of March 31, 2023 outstanding amount on 2030 Senior Notes is ₹ 12,968 Crore (USD 1.58 billion)(31/03/2022: ₹ 11,957 Crore, USD 1.6 billion) net of debt issuance cost of ₹ 177 Crore (USD 22 million) (31/03/2022: ₹ 188 Crore, USD 25 million)

(e) **Unsecured Foreign Currency Term Loan from Banks comprise of following:**

Bank of China Term Loan

In September 2019, the Novelis Inc. entered into a credit agreement with the Bank of China to provide up to CNY 500 million in unsecured loans to support previously announced capital expansion projects in China. As of March 31, 2023, outstanding amount of China bank loans is ₹ 524 Crore (USD 64 million) (31/03/2022: ₹ 573 Crore, USD 76 million).

Brazil Loans

In the third quarter of fiscal 2022, the Novelis Inc. borrowed USD 30 million of bank loans. These bank loans are due June 16, 2023 and are subject to 1.8% interest due in full at the maturity date. The amount outstanding as at March 31, 2023 is ₹ 246 Crore (USD 30 million)(31/03/2022: ₹ 228 Crore, USD 30 million).

In the third quarter of fiscal 2022, the Novelis Inc. also borrowed USD 20 million of bank loans due December 15, 2023. These bank loans are subject to 1.8% interest due in full at the maturity date. The amount outstanding as at March 31, 2023 is ₹ 164 Crore (USD 20 million) (31/03/2022: ₹ 152 Crore, USD 20 million)

(f) **Deferred Payment Liabilities**

On July 23, 2018, Novelis Switzerland, an indirectly wholly owned subsidiary of Novelis Inc acquired real and personal property from Constellium Valais SA for USD 249 million. As of March 31, 2023 out of total purchase price, ₹ 10 Crore (USD 1.3 million) (31/03/2022: ₹ 25 Crore, USD 3.9 million) is to be paid through July 2023.

(g) **Changes in Liabilities arising from Financing Activities as at 31/03/2023:**

(₹ in Crore)

Particulars	Other Assets Cash and Cash Equivalents@	Liabilities from Financing Activities				Net
		Non-Current Borrowings	Current Borrowings	Lease Obligations	Supplier's Credit	
Balance as at April 01, 2022 #	**11,639**	**58,532**	**5,581**	**1,251**	**2,456**	**56,181**
Cash Flows (Net)@	744	(8,120)	(74)	(512)	3,214	(6,236)
Additions	-	-	-	1,148	-	1,148
Foreign Exchange Adjustments	457	2,968	235	149	(32)	2,863
Fair Value Changes - (Refer Note 29 (c))	-	(48)	(25)	-	-	(73)
Debt Issuance Costs and Amortisation (Net)	-	68	-	-	-	68
Interest Expense **	-	2,900	410	88	140	3,538
Interest Paid **	-	(3,301)	(395)	(66)	(74)	(3,836)
Disposal/Modification/Reassessment	-	-	-	(94)	-	(94)
Other Changes	-	5	-	(8)	-	(3)
Balance as at March 31, 2023#	**1,2840**	**53,004**	**5,732**	**1,956**	**5,704**	**53,556**
Less: Accrued interest as at 31/03/2023	-	(223)	(178)	-	(69)	(470)
Balance as at March 31, 2023 as per Balance Sheet	**12,840**	**52,781**	**5,554**	**1,956**	**5,635**	**53,086**

Changes in liabilities arising from financing activities as at 31/03/2022 :

(₹ in Crore)

Particulars	Other Assets -Cash and Cash Equivalents@	Liabilities from Financing Activities				Net
		Non-Current Borrowings	Current Borrowings	Lease Liabilities	Supplier's Credit	
Balance as at April 01, 2021 #	**8,339**	**60,824**	**6,048**	**1,228**	**225**	60,016
Cash Flows (Net)@	2,999	(3,747)	(849)	(337)	2,161	(5,771)
Additions	-	-	-	412	-	412
Foreign Exchange Adjustments	301	1,198	135	14	40	1,086
Fair Value Changes, Refer Note 29 (c)	-	(64)	-	-	-	(64)
Debt Issuance Costs and Amortisation (Net)	-	79	-	-	-	79
Interest Expense **	-	3,381	202	56	8	3,647
Interest Paid **	-	(3,127)	(75)	(50)	(8)	(3,260)
Disposal/Modification/Reassessment	-	-	(4)	(72)	-	(76)
Changes in Liabilities Assumed on Acquisition	-	-	139	-	-	139
Liabilities on Disposal of a Subsidiary	-	(6)	(21)	-	-	(27)
Other Changes/Reclassification	-	(6)	6	-	-	-
Balance as at March 31, 2022 #	**11,639**	**58,532**	**5,581**	**1,251**	**2,456**	**56,181**
Less: Accrued interest as at 31/03/2022	-	(720)	(158)	-	-	(878)
Balance as at March 31, 2022 as per Balance Sheet	**11639**	**57,812**	**5,423**	**1,251**	**2,456**	**55,303**

@ Include temporary overdraft balances in current accounts

Borrowing include Interest accrued on borrowings and current maturities of related borrowings.

** Interest expenses and interest paid relates to borrowings and lease liabilities before interest capitalisation.

B. Borrowings, Current

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Secured		
Loans from Banks		
Rupee Loans - (a), (b), (d)	6	5
Foreign Currency Loans - (f)	3,804	114
Loans from Others		
Foreign Currency Loans - (c)	4	4
	3,814	123
Unsecured		
Loans from Banks		
Rupee Loans	-	-
Foreign Currency Loans - (d), (e), (g), (h)	1,740	5,300
	1,740	5,300
Current Maturities of Long-term Borrowings, Refer Note 20 (A)	1,347	6,177
	6,901	11,600

(a) Working Capital loan for Aluminium business, granted under the Consortium Lending Arrangement, are secured by a first pari-passu charge on entire stocks of raw materials, work-in-process, finished goods, consumable stores and spares and also book debts pertaining to the Company's Aluminium business, both present and future. Working Capital loan for the Copper business is secured by a first pari passu charge on stocks of raw materials, work-in-process, finished goods and consumable stores and spares and also book debts and other movable assets of Copper business, both present and future. (Refer Note 13(b))

(b) Cash Credit facilities for Utkal Alumina International Limited (Utkal) with banks are availed under the consortium lending arrangement and are secured by (a) first pari-passu charge by hypothecation of investments classified as "held for trading", entire stocks of raw materials, semi-finished and finished goods, consumable stores and spares, investments classified as "available for sale", stock-in trade and book debts pertaining to Utkal's business, both present and future and (b) second charge on Utkal's fixed assets. The borrowings carry floating interest rate at MCLR (ranging from 3 months to one year) + Spread (ranging from 25 bps to 55 bps)

(c) Payable under trade financing arrangements in Novelis Inc.

(d) Includes ₹ Nil Crore (31/03/2022: ₹† 1,401 Crore) unsecured Foreign currency loans from Indian Banks and Foreign banks, mainly in nature of Buyers credit which has been availed for Copper business to meet its working capital requirement, mostly to settle the import payments of copper concentrate and certain other raw materials. The loan carry interest rate of 6M SOFR. - Refer Note 9(c) on non-derivative financial instruments used as hedging instruments.

(e) In January 2022, the Group entered into a ₹ 2,390 Crore ($315 million) short-term loan with Axis Bank Limited, IFSC Banking Unit, Gift City, as administrative agent and lender. The proceeds of the short-term loan were applied to voluntarily prepay the 2017 Term Loans. The short-term loan matures on 30/11/2022, is subject to 0.25% quarterly amortization payments, and accrues interest at Secured Overnight Financing Rate (SOFR) plus 0.90%. The short-term loan is unsecured and guaranteed by the Group's certain direct and indirect U.S. and Canadian subsidiaries, and the agreement contains voluntary prepayment provisions, affirmative and negative covenants, and events of default substantially similar to those under our Term Loan Facility, other than changes to reflect the unsecured nature of the short-term loan. During the year ended 31/03/2023, ₹ 797 Crore ($ 100 million) has been paid beyond scheduled quarterly amortization payments on short-term loan due November 2022 and the remaining principal balance of this loan has also been paid in full at the maturity date.

(f) Foreign Currency Loans represents amount of ABL Revolver credit facility in Novelis. The loan carry interest rate LIBOR plus spread of 1.25% to 1.75 %.

As of 31/03/2023, the revolver had a ₹ 3,804 Crore ($463 million) balance; and ₹ 332 Crore ($40 million) was utilized for letters of credit. There was ₹ 7,973 Crore ($970 million) in remaining availability, including ₹ 1,928 Crore ($235 million) of remaining availability that can be utilized for letters of credit, and the Group is in compliance with the covenants of our ABL Revolver facility.

Above credit facility in Novelis is part of its senior secured credit facilities, which are guaranteed by its direct parent, AV Minerals, and its certain direct and indirect subsidiaries and are secured by a pledge of substantially all of the assets, including Intangible Assets but excluding Right-of-Use Assets, of the Novelis and the guarantor.

(g) As of 31/12/2021, the Group added a loan from Citi bank amounting to $50 million due in December 2023 with a rate of 6.2%. As of 31/03/2023, the Group further added a loan from Citi bank amounting to ₹ 411 Crore ($ 50 million) due in March 2024. The outstanding balance as at 31/03/2023 on loan from Citi bank is ₹ 822 Crore ($100 million).

(h) The Group has outstanding balance as at March 31, 2023 from China loans amounted to ₹ 884 Crore ($ 107 million).

21. Supplier's Credit

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Supplier's Credit, Current	5,635	2,456
	5,635	2,456

(a) Supplier's Credit represents the extended interest bearing credit offered by the supplier which is secured against Usance Letter of Credit (LC) Under this arrangement, the supplier is eligible to receive payment from negotiating bank prior to the expiry of the extended credit period. The interest for the extended credit period payable to the bank on maturity of the LC has been presented under Finance Cost.

(b) Supplier's credit also includes amounts payable towards Accounts Receivable Purchase Scheme ("ARPS") entered into with the suppliers. Under this arrangement, the supplier is eligible to receive payment prior to the expiry of extended credit period by assigning such invoices to a third-party purchaser bank based on security in the form of an undertaking issued by the Group to the bank. Further, the supplier charges interest to the Group for the extended credit period which has been presented under Finance Cost.

22. Trade Payables

Refer Note 1B(O) for accounting policy on Trade and Other Payables

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Micro and Small Enterprises	192	105
Other than Micro and Small Enterprises - (b), (c)	35,668	41,277
	35,860	**41,382**

(a) Trade Payables ageing schedule as at 31/03/2023:

(₹ in Crore)

Particulars	Unbilled	Not due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	12	108	61	7	2	2	**192**
(ii) Others	5,075	26,493	3,944	86	17	53	**35,668**
(iii) Disputed - MSME	-	-	-	-	-	-	**-**
(iv) Disputed - Others	-	-	-	-	-	-	**-**
Total	**5,087**	**26,601**	**4,005**	**93**	**19**	**55**	**35,860**

Trade Payables ageing schedule as at 31/03/2022 :

(₹ in Crore)

Particulars	Unbilled	Not due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	14	33	44	10	3	1	**105**
(ii) Others	4,074	29,622	7,261	157	22	54	**41,190**
(iii) Disputed - MSME	-	-	-	-	-	-	**-**
(iv) Disputed - Others	-	-	21	22	44	-	**87**
Total	**4,088**	**29,655**	**7,326**	**189**	**69**	**55**	**41,382**

(b) Refer Note 9(a)(i) on non-derivative financial instruments used as hedging instruments.

(c) Refer Note 45 (e)(i) for details of balances with related parties.

(d) The Group participates in various supply chain finance programs under which participating suppliers may voluntarily elect to sell some or all of their Group receivables to third-party financial institutions. Supplier participation in the programs is solely up to the supplier, and participating suppliers enter their arrangements directly with the financial institutions. The Group and its suppliers agree on the contractual terms for the goods and services it procure, including prices, quantities and payment terms, regardless of whether the supplier elects to participate in these programs. The Group suppliers' voluntary inclusion of invoices in these programs has no bearing on our payment terms. Further, the Group has no economic interest in a supplier's decision to participate in these programs. The payment terms that the Group has with its suppliers range up to 180 days and are considered commercially reasonable. At March 31, 2023 and 2022, confirmed supplier invoices that are outstanding and subject to the third-party programs included in accounts payable on the consolidated balance sheets were ₹ 6,581 Crores and ₹ 6,984 Crores, respectively. The Group do not be-lieve that future changes in the availability of supply chain financing will have a significant impact on the Group's liquidity.

23. Other Financial Liabilities

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Derivative Matured, pending settlement	-	283	-	1,444
Interest Accrued but not due	-	470	-	878
Liability for Capital Expenditure	53	1,963	8	1,057
Security and other Deposits	2	40	2	42
Investor Education and Protection Fund				
Unclaimed Dividends - (a)	-	6	-	5
Debentures - (b)	-	3	-	3
Temporary Overdraft Balance in Current Accounts	-	2	-	-
Others	152	146	129	178
	207	**2,913**	**139**	**3,607**

(a) These amounts do not include any amount, due and outstanding, to be credited to 'Investor Education and Protection Fund' except ₹ 0.09 Crore (31/03/2022: ₹ 0.09 Crore) which is held in abeyance due to legal cases pending.

(b) In terms of Debenture Subscription Agreement between Utkal Alumina International Limited ('UAIL'), a wholly owned subsidiary of the Group, and Orissa Mining Corporation Limited ('OMCL'), during the previous year UAIL issued a Zero Coupon Unsecured Redeemable Non-Convertible Debentures of ₹ 3 Crore to OMCL towards its obligation to pay OMCL an amount equivalent to 15% per annum on ₹ 20 Crore as return up to 31/03/2023, which is due for redemption at par on 30/09/2023.

24. Provisions

Refer Note 1B (L) for accounting policy on Provisions and contingencies

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Assets Retirement Obligations	299	8	307	288	5	293
Environmental Liability - (c)	17	586	603	89	410	499
Enterprise Social Commitment	148	102	250	139	100	239
Renewable Power Obligation - (d)	-	283	283	-	148	148
Legal Cases	-	712	712	-	744	744
Miscellaneous Provisions	122	386	508	145	319	464
	586	**2,077**	**2,663**	**661**	**1,726**	**2,387**

(a) Movements in each class of provisions are set out below:

(₹ in Crore)

Particulars	Assets Retirement Obligations	Environ-mental Liability	Enterprise Social Commitment	Renewable Power Obligation	Legal Cases	Miscellaneous Provisions	Total
Balance as at April 01, 2021	**380**	**205**	**248**	**172**	**525**	**616**	**2,146**
Provision made during the year - (c)	7	317	-	112	200	372	1,008
Reclassified	16	-	-	-	-	(16)	-
Provision utilised during the year	(40)	(4)	(23)	(107)	(10)	(493)	(677)
Provision reversed during the year	-	(26)	-	(29)	(23)	(49)	(127)
Unwinding of discounts	16	1	14	-	-	-	31
Exchange adjustment	9	7	-	-	52	34	102
Reversed on disposal of a subsidiary	(95)	(1)	-	-	-	-	(96)
Balance as at March 31, 2022	**293**	**499**	**239**	**148**	**744**	**464**	**2,387**
Provision made during the year	-	138	25	73	129	322	687
Reclassified	-	-	-	-	7	-	7
Provision utilised during the year	(9)	(37)	(10)	94	(163)	(258)	(383)
Provision reversed during the year - (d)	-	(19)	(15)	(32)	(35)	(72)	(173)
Unwinding of discounts	10	2	11	-	-	-	23
Exchange adjustment	13	20	-	-	30	52	115
Balance as at March 31, 2023	**307**	**603**	**250**	**283**	**712**	**508**	**2,663**

(b) Brief Description of Provisions:

(i) **Assets Retirement Obligations:**

Asset Retirement Obligation (ARO) is a legal or constructive obligation associated with the ash ponds, red mud ponds, ash pipeline and coal transportation system in refineries and mining land where the land needs to be restored back to a usable condition after closing of activities. This is a statutory requirement in which the timing or method of settlement may be conditional on one or multiple future events, the occurrence of which may not be within the control of the entity. The outflow of economic resources is expected over a period until FY 47. The same has been appropriately discounted.

(ii) **Environmental Liability:**

Environmental Liability is associated with Wild Life Conservation Plan (WLCP) and disposal of hazardous material generated during the course of manufacturing or mining operation e.g. disposal of spent pot lining, Gypsum, Slag etc. This disposal generally takes place as per the guidelines set by various regulatory authorities of States and Central Government. The outflow of economic resources is generally expected in following financial year over a period until FY 31.

(iii) **Enterprise Social Commitment:**

Enterprise Social Commitment is the amount to be spent on social and economic development of the surrounding area where new project is being setup. This is generally defined as a certain percentage of the total cost of the project. The outflow of economic resources is expected over a period until FY 56. This has been appropriately discounted wherever necessary.

(iv) **Renewable Power Obligation (RPO):**

Some of the Group's units situated in various states like Odisha, Madhya Pradesh , Maharashtra ,Gujarat, Jharkhand etc. who gets power from Captive power plants or procure power from open source, are obligated to purchase certain portion of their power consumption from Renewable Energy sources, both solar and non-solar. This gives rise to Renewable Power Obligation (RPO) In case the obligated units fail to procure power from such renewable sources, they may satisfy the obligation by purchasing Renewable Energy Certificates from authorised exchanges as an alternative.

(v) **Legal Cases:**

There are certain legal cases (including revenue matters) against which provision has been made since these events are probable to happen i.e. more likely than not but timing of occurrence of such events is uncertain as it depends on when the matter will be settled at the highest Court of law.

(vi) **Miscellaneous Provisions:**

Restructuring charges include employee severance and benefit costs and other costs associated with exit activities. Severance costs are recognized when management with the proper level of authority has committed to a restructuring plan and communicated those actions to employees. Other exit costs include environmental remediation costs and contract termination costs, primarily related to equipment and facility lease obligations. At each reporting date, the Group evaluates the provisions for restructuring costs to ensure the provisions are still appropriate.

Carbon emission represents estimated liabilities towards emissions for operations in Europe and Asia. The provision is measured at the carrying amount of allowances to the extent that the provision will be settled using allowances on hand, with any excess emission being measured at the market value of the allowances at the period end.

Also, includes statutory provisions related to indirect taxes, coal cess etc.

(c) Pursuant to the notification dated December 31, 2021 issued by Ministry of Environment, Forest and Climate Change (MoEFCC), the Company recognised provision of Rs. 107 Crore for expected cost of disposal/stabilisation of legacy ash lying in ash dykes/ponds as at March 31, 2022. The estimate was based on the plan for disposal and/ or stabilisation of ash dykes/ponds considering feasibility of extraction of ash from ash dykes/ponds. Subsequently, the MoEFCC, vide notification dated December 30, 2022 amended the said notification whereby, any new or operational thermal power plant may be permitted to designate its ash dykes/ponds as operational ash dyke/pond. The Central Pollution Control Board (CPCB) in consultation with the Central Electricity Authority (CEA) was directed to issue guidelines, on or before March 31, 2023, relating to technical specifications of operational as well as stabilised and reclaimed ash dykes/ ponds, procedure for annual certification of such ash dykes/ponds or on various aspects like safety, mode of disposal etc. Considering that such guidelines are yet to be notified, the Company continues to recognise the balance provision amounting to ₹ 91 Crore as at March 31, 2023 towards expected cost of disposal/stabilisation.

(d) During FY 2017-18, while purchasing Non-Solar Renewable Energy Certificates (REC) to meet the Group's obligation, the Group had to pay ₹ 500 per REC aggregating to ₹ 134 Crore as deposit to the REC Exchange in an Escrow account pursuant the directives from the Supreme Court of India. Provision for RPO as at March 31, 2022 was net of these REC deposits under escrow amount. During the current year, the REC Exchange has returned this amount against the bank guarantee provided by the Group. Accordingly, the provision has been adjusted for the same.

25. Employee Benefits Obligation

Refer Note 1B(U) for accounting policy on Employee Benefits

Refer Note 1B(V) for accounting policy on Employee Share-based Payments

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Defined Benefit Plans						
Gratuity	108	5	113	101	5	106
Pension	4,223	200	4,423	5,170	177	5,347
Post-Retiral Medical Benefit	647	90	737	431	87	518
Other Employee Benefit Plans						
Compensated Absence	-	555	555	-	532	532
Stock Appreciation Rights	69	161	230	84	210	294
Others Benefits	258	118	376	338	167	505
	5,305	**1,129**	**6,434**	**6,124**	**1,178**	**7,302**

(A) Post-Employment Benefits

The Group provides various benefit plan to its employees. Some of them are defined benefit in nature while some are contributory.

(I) Defined Benefit Plans

Major post retiral defined benefit plans of the Group include Gratuity, Pension, Post retirement medical benefit and Provident Fund (to the extent of the Group's obligation to fund any shortfall on the yield of the trust's investments over the administered interest rates on an annual basis by Central Provident Fund Organisation of Government of India) The Group does Actuarial valuation for its identified defined benefit plans.

Methodology for actuarial valuation of Defined Benefit Obligations:

The Projected Unit Credit (PUC) actuarial method has been used to assess the plan's liabilities, including those related to death-in-service and incapacity benefits.

Under PUC method, a projected accrued benefit is calculated at the beginning of the year and again at the end of the year, for each benefit that will accrue for all active members of the plan. The projected accrued benefit is based on the plan's accrual formula and upon service as of the beginning or end of the year, but using a member's final compensation, projected to the age at which the employee is assumed to leave active service. The plan liability is the actuarial present value of the projected accrued benefits for active members.

Defined benefit plans expose the Group to actuarial risks such as Interest Rate Risk, Salary Risk and Demographic Risk.

(i) Interest Rate Risk: While calculating the defined benefit obligation a discount rate based on government bonds yields of matching tenure is used to arrive at the present value of future obligations. If the bond yield falls, the defined benefit obligation will tend to increase and plan assets will decrease.

(ii) Salary Risk: Higher than expected increases in salary will increase the defined benefit obligation.

(iii) Demographic Risk: This is the risk of variability of results due to unsystematic nature of decrements that include mortality, withdrawal, disability and retirement. The effect of these decrements on the defined benefit obligations is not straight forward and depends on the combination of salary increase, discount rate and vesting criteria. It is important not to overstate withdrawals because in the financial analysis the retirement benefit of a short career employee typically costs less per year as compared to a long service employee.

(a) Gratuity Plans

The Group has various schemes (funded/unfunded) for payment of gratuity to all eligible employees calculated at specified number of days (ranging from 15 days to 1 month) of last drawn salary depending upon the tenure of service for each year of completed service subject to minimum service of five years payable at the time of separation upon superannuation or on exit otherwise. These defined benefit gratuity plans are governed by the Payment of Gratuity Act, 1972.

(i) Change in Defined Benefit Obligation (DBO)

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Defined Benefit Obligation at beginning of the year	1,027	103	1,130	1,035	96	1,131
Current Service cost	40	7	47	41	7	48
Interest Cost on the DBO	69	8	77	62	6	68
Acquisitions (credit)/ cost - (Refer Note 52)	-	-	-	-	2	2
Actuarial (gain)/ loss - experience	32	2	34	20	4	24
Actuarial (gain)/ loss- financial assumption	(40)	(5)	(45)	(62)	(7)	(69)
Benefits paid directly by the Group	(47)	(5)	(52)	(42)	(5)	(47)
Benefits paid from plan assets	(24)	-	(24)	(27)	-	(27)
Defined Benefit Obligation at the end of the year	**1,057**	**110**	**1,167**	**1,027**	**103**	**1,130**

(ii) Change in Fair Value of Plan Assets

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Fair value of assets at the beginning of the year	1,132	-	1,132	998	-	998
Interest Income on plan assets	80	-	80	63	-	63
Employer's contributions	49	-	49	56	-	56
Return on plan assets greater/(lesser) than discount rate	(34)	-	(34)	42	-	42
Benefits Paid	(23)	-	(23)	(27)	-	(27)
Fair value of assets at the end of the year	**1,204**	**-**	**1,204**	**1,132**	**-**	**1,132**

(iii) Development of Net Balance Sheet Position

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Defined Benefit Obligation	(1,057)	(110)	(1,167)	(1,027)	(103)	(1,130)
Fair Value of Plan Assets	1,204	-	1,204	1,132	-	1,132
Funded Status (surplus/(deficit))	147	(110)	37	105	(103)	2
Funded surplus not recognised - (Refer Note -xiv)	(97)	-	(97)	(105)	-	(105)
Net defined benefit asset/(liability) recognised in Balance sheet	**50**	**(110)**	**(60)**	**-**	**(103)**	**(103)**

(iv) Reconciliation of Net Balance Sheet Position

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Net Defined benefit asset/ (Liability) at beginning of the year	-	(103)	(103)	(37)	(96)	(133)
Service cost	(40)	(7)	(47)	(41)	(7)	(48)
Net Interest on net defined benefit liability/(asset)	11	(8)	3	1	(6)	(5)
Actuarial gain/loss and return on plan assets recognised in OCI	(25)	3	(22)	84	3	87
Funded surplus not recognised - (Refer Note - xiv)	8	-	8	(105)	-	(105)
Employer's contributions	49	-	49	56	-	56
Benefit paid directly by the Group	47	5	52	42	5	47
Acquisitions (credit)/ cost	-	-	-	-	(2)	(2)
Net Defined benefit asset/(Liability) at the end of the year	**50**	**(110)**	**(60)**	**-**	**(103)**	**(103)**

(v) Expense recognised during the year

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Current Service cost	40	7	47	41	7	48
Net Interest on net defined benefit liability/(asset)	(11)	8	(3)	(1)	6	5
Net Gratuity Cost	**29**	**15**	**44**	**40**	**13**	**53**

(vi) Other Comprehensive Income (OCI)

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Actuarial (gain)/loss due to DBO experience	32	2	34	20	4	24
Actuarial (gain)/loss due to DBO assumption changes	(40)	(5)	(45)	(62)	(7)	(69)
Actuarial (gain)/loss arising during the year	**(8)**	**(3)**	**(11)**	**(42)**	**(3)**	**(45)**
Return on Plan Assets(greater)/less than discount rate	34	-	34	(42)	-	(42)
Funded surplus (recognised)/ not recognised in OCI - (Refer Note - xiv)	(8)	-	(8)	105	-	105
Actuarial (gain)/loss recognised in OCI	**18**	**(3)**	**15**	**21**	**(3)**	**18**

(vii) Defined Benefit Cost

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Service Cost	40	7	47	41	7	48
Net Interest on net defined benefit liability/(asset)	(11)	8	(3)	(1)	6	5
Actuarial (gain)/ loss recognised in OCI	25	(3)	22	(84)	(3)	(87)
Funded surplus (recognised)/ not recognised in OCI - (Refer Note - xiv)	(8)	-	(8)	-	-	-
Defined Benefit Cost	**46**	**12**	**58**	**(44)**	**10**	**(34)**

(viii) Principal Actuarial Assumptions

	Year ended	
	31/03/2023	31/03/2022
Discount rate (based on the market yields available on Government bonds at the accounting date with a term that matches that of the liabilities)	**7.50%**	**7.00%**
Salary escalation rate	**7.50%**	**7.50%**
Weighted average duration of the defined benefit obligation	**8 years**	**8 years**
Mortality Rate	**Indian Assured Lives Mortality 2006-08**	

(ix) Non-Current and Current portion of Employee Benefit Obligation and Fair Value of Plan Assets, Refer Note 12(d) for further details.

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Current portion	50	(5)	45	-	(5)	(5)
Non-Current portion	-	(105)	(105)	-	(98)	(98)
Assets/ (Liabilities)	**50**	**(110)**	**(60)**	**-**	**(103)**	**(103)**

(x) Sensitivity Analysis

Sensitivity analysis are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the defined benefit liability recognised in the balance sheet.

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Discount Rate						
Discount Rate as at end of the year	7.50%	7.50%	7.50%	7.00%	7.00%	7.00%
Effect on Defined Benefit Obligation due to 1% Increase in Discount Rate	(73)	(9)	(82)	(73)	(9)	(82)
Effect on Defined Benefit Obligation due to 1% Decrease in Discount Rate	83	10	93	84	10	94
Salary Escalation Rate						
Salary Escalation Rate as at end of the year	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
Effect on Defined Benefit Obligation due to 1% Increase in Salary Escalation Rate	82	10	92	82	10	92
Effect on Defined Benefit Obligation due to 1% Decrease in Salary Escalation Rate	(73)	(9)	(82)	(73)	(9)	(82)

(xi) The Expected Maturity Analysis of Undiscounted Gratuity is as follows: (₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Within 1 year	68	4	72	62	5	67
From 1 year to 2 Year	103	7	110	95	6	101
From 2 year to 3 Year	106	8	114	98	6	104
From 3 year to 4 Year	109	9	118	100	8	108
From 4 year to 5 Year	109	11	120	104	9	113
From 5 year to 10 Year	603	76	679	561	67	628

(xii) Composition of Plan Assets

Major categories of Plan Assets are as under: * (₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Cash and Bank Balances	1.29%	NA	1.29%	8.96%	NA	8.96%
Scheme of insurance - conventional product	0.19%	NA	0.19%	1.19%	NA	1.19%
Scheme of insurance - ULIP Product	98.52%	NA	98.52%	89.85%	NA	89.85%
	100.00%		**100.00%**	**100.00%**		**100.00%**

* Investment in Plan assets are unquoted.

(xiii) Expected Contributions to post employment benefit plan of Gratuity for the year ended March 31, 2024: ₹ 70 Crore.

(xiv) The Group has not recognised the surplus in its plan assets of gratuity fund since no future economic benefits are expected in the form of reduction in future contributions to the gratuity plan or refund from the gratuity plan.

(xv) Gratuity provision amounting to ₹ 3 Crore (31/03/2022: ₹ 3 Crore) is not part of above Actuarial valuaiton. It pertains to one of trust controlled by the Group and the amount is based on management estimate.

(b) Post Retirement Medical Benefit

The Group provides post retirement medical benefit to its certain retired employees in India. The scheme involves reimbursement of expenses towards medical treatment of self and dependents. The amount charged to the Consolidated Statement of Profit and Loss during the year is ₹ 0.33 Crore (31/03/2022: ₹ 0.32 Crore) and amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ (2) Crore (31/03/2022: ₹ (4) Crore) The obligation with respect to said scheme is ₹ 4 Crore (31/03/2022: ₹ 5 Crore)

(c) Junior and Senior Pension Plan

Junior and Senior Pension Plan provided to certain employees is in the nature of defined benefit plan which provides an annuity in the form of pension amount at retirement.

(d) Other Pension Plan

It is a pension benefit provided to erstwhile Managing Director and certain employees of a subsidiary of the Group. The amount charged to statement of Profit and Loss during the year is ₹ 3 Crore (31/03/2022: ₹ 3 Crore) Amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ (2) Crore (31/03/2022: ₹ Nil)

The obligation with respect to these schemes as at As at 31/03/2023: ₹ 48 Crore (31/03/2022: ₹ 47 Crore)

(e) Provident Fund (Managed by Trust)

The Group's contribution towards Provident Fund managed by approved trusts, which are substantially defined benefit plan is debited to the Statement of Profit and Loss. The Company has an obligation to fund any shortfall on the yield of the trust's investments over the administered interest rates on an annual basis by Central Provident Fund Organisation of Government of India. The amount debited to Statement of Profit and Loss during the year was ₹ 75 Crore (31/03/2022: ₹ 68 Crore).

Based on actuarial valuation, the Company has recognised obligation of ₹ 0 Crore as at 31/03/2023 (31/03/2022: ₹ 0 Crore) towards shortfall on the yield of the trust's investments over the administered interest rates. Amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ (0) Crore (31/03/2022: ₹ (5) Crore).

Sensitivity Analysis: (₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Provident Fund		
Discount rate		
Effect on DBO due to 1% increase in discount rate	(6)	(3)
Effect on DBO due to 1% decrease in discount rate	7	4
Pension		
Discount rate		
Effect on DBO due to 1% increase in discount rate	(0)	(0)
Effect on DBO due to 1% decrease in discount rate	0	0
Post Retirement Medical		
Discount rate		
Effect on DBO due to 1% increase in discount rate	(0)	(0)
Effect on DBO due to 1% decrease in discount rate	0	0

Assumption use in determining the present value obligation of the interest rate guarantee under the Deterministic Approach:

	As at	
	31/03/2023	31/03/2022
Discount rate	7.50%	7.00%
Expected EPFO (Employees' Provident Fund Organisation) Return	8.15%	8.10%

(f) Pension and Post Employment Medical Benefits of Novelis Inc, the Group's overseas subsidiary

Obligations related to the Group's overseas operations, relate to: (1) funded defined benefit pension plans in the U.S., Canada, Switzerland, and the U.K.; (2) unfunded defined benefit pension plans in Germany; (3) unfunded lump sum indemnities payable upon retirement to employees in France, Malaysia and Italy; and (4) partially funded lump sum indemnities in South Korea. These defined benefit plans provide a benefit to eligible employees based on plan provisions, including but not limited to, years of service, compensation, or other vesting criteria. Each of the funded pension plans is governed by an Investment Fiduciary. Other post retirement obligations include unfunded health care and life insurance benefits provided to eligible retired employees in the U.S., Canada, and Brazil. In addition, it provide post employment benefits, including disability, early retirement and continuation of benefits (medical, dental, and life insurance) to eligible former employees.

In connection with the acquisition of Aleris Corporation, the Group acquired postretirement benefit plans covering certain employees in Europe and the United States. Upon acquisition, the Group recognized the funded status of the defined benefit plans as an asset or a liability within other non-current assets or other non-current liabilities in the consolidated balance sheet. The plan assets are recognized at fair value. The group uses various assumptions when computing amounts relating to its defined benefit pension plan obligations and their associated expenses (including the discount rate and the expected rate of return on plan assets)

(i) Change in obligation over the year (₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Present Value of defined benefit obligations at the beginning of the year	11,227	5,060	16,287	12,074	5,696	17,770
Exchange (gain)/loss on translation	724	243	967	315	(36)	279
Current Service Cost	146	151	297	158	180	338
Interest Cost	378	112	490	316	90	406
Curtailment cost/ (credit)	-	-	-	(53)	22	(31)
Plan Settlements	-	-	-	(354)	-	(354)
Plan Participants Contribution	42	-	42	38	-	38
Plan Amendments	-	-	-	(27)	(49)	(76)
Net actuarial (gain)/ loss	(1,708)	(874)	(2,582)	(765)	(563)	(1,328)
Remeasurement changes in Asset ceiling	(8)	-	(8)	28	-	28
Benefits Paid	(578)	(291)	(869)	(503)	(280)	(783)
Present Value of defined obligations at the end of the year	**10,223**	**4,401**	**14,624**	**11,227**	**5,060**	**16,287**

(ii) Change in plan Assets (Reconciliation of opening and closing balances) (₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Fair Value of plan assets at the beginning of the year	10,685	-	10,685	10,802	-	10,802
Exchange gain/ (loss) on translation	688	-	688	279	-	279
Plan Settlements	-	-	-	(354)	-	(354)
Remeasurement - return on plan assets excluding amount included in interest income	(1,659)	-	(1,659)	(217)	-	(217)
Interest Income	358	-	358	286	-	286
Plan participants contribution	42	-	42	38	-	38
Plan Participants Contribution	42	-	42	38	-	38
Benefits Paid	(869)	-	(869)	(783)	-	(783)
Fair value of assets at the end of the year	**9,686**	**-**	**9,686**	**10,685**	**-**	**10,685**

(iii) Reconciliation of fair value of assets & obligations (₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Present value of defined benefit obligations at the end of the year	10,223	4,401	14,624	11,227	5,060	16,287
Fair Value of Plan assets at the end of the year	9,686	-	9,686	10,682	-	10,682
Amount recognized in the consolidated balance sheet	537	4,401	4,938	545	5,060	5,605
Recognized prepaid pension	170	-	170	208	-	208
Recognized pension liability	**707**	**4,401**	**5,108**	**753**	**5,060**	**5,813**

(iv) Expenses recognized during the year (₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Current service cost	146	151	297	157	181	338
Past service cost/ Curtailment (credit)/ Settlement (gain)	-	-	-	(80)	(27)	(107)
Interest cost (net)	20	112	132	29	90	119
	166	**263**	**429**	**106**	**244**	**350**

Details of special events during the previous year:

Pension Plan Freeze:

During the previous year, Novelis announced the freeze of future benefit accruals under the Canada Pension Plan, effective for union participants as of December 31, 2021 and non-union participants as of December 31, 2023. The Group remeasured the plan's assets and obligations as of April 30, 2021, which was the nearest calendar month-end to the announcement of this freeze. A curtailment gain of ₹ 24 Crore (USD 3 million) was recorded in the statement of profit and loss for the year ended March 31, 2022.

Others:

During the previous year, Novelis entered into an agreement to transfer the liabilities associated with a portion of the retirees and beneficiaries of the Canada Novelis Pension Plan to an insurer through a purchase of buy-out annuities. The premium payment was made to the insurer on August 10, 2021. The Group remeasured the plan's assets and obligations as of July 31, 2021, which was the nearest calendar month-end to the premium payment for this settlement. As a result of this transaction, a settlement gain of ₹ 7 Crore (USD 1 million) was recorded for the year ended March 31, 2022.

The Group recognised past service credit comprising plan amendment mentioned in the table above amounting to ₹ 49 Crore (USD 7 million) with respect to plans in North America and ₹ 27 Crore (USD 4 million) with respect to plans in Europe during the year ended March 31, 2022 within Employee benefits expense in the profit and loss statement.

(v) Remeasurement of net defined benefit liability/(asset) (OCI)

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Actuarial (gains)/ losses arising from changes in demographic assumptions	-	4	4	(8)	-	(8)
Actuarial (gains)/ losses arising from changes in financial assumptions	(1,781)	(1,163)	(2,944)	(867)	(582)	(1,449)
Actuarial (gains)/ losses arising from changes in experience adjustments	72	286	358	110	19	129
Remeasurement of net defined benefit liability	(1,709)	(873)	(2,582)	(765)	(563)	(1,328)
Remeasurement return on plan assets excluding amount included in interest income	1,659	-	1,659	217	-	217
Impact of asset ceiling	(8)	-	(8)	28	-	28
Exchange Gain/ (Loss)	(19)	(29)	(48)	(8)	(86)	(94)
	(77)	**(902)**	**(979)**	**(528)**	**(649)**	**(1,177)**

(vi) Composition of Plan Assets*

	As at	
	31/03/2023	31/03/2022
Equity	**2,888**	**2,803**
Fixed Income	**5,620**	**6,365**
Real Estate	**470**	**382**
Cash and cash equivalent	**512**	**930**
Other	**196**	**205**
	9,686	**10,685**

* Investment in Plan assets are unquoted.

(vii) Sensitivity analysis for each significant actuarial assumption

(₹ in Crore)

	As at 31/03/2023				As at 31/03/2022			
	Approximate (increase)/ decrease				Approximate (increase)/ decrease			
	Defined Benefits obligation		Post Employment Medical Benefits		Defined Benefits obligation		Post Employment Medical Benefits	
	Funded	Unfunded	Funded	Unfunded	Funded	Unfunded	Funded	Unfunded
Discount Rate								
Increase of 1 percentage	1,036	479	-	66	1,329	668	-	71
Decrease of 1 percentage	(1,216)	(559)	-	(77)	(1,592)	(805)	-	(84)
Salary Growth Rate								
Increase of 1 percentage	(160)	(44)	-	-	(184)	(95)	-	-
Decrease of 1 percentage	144	40	-	-	166	88	-	-
Pension Growth Rate								
Increase of 1 percentage	(106)	(370)	-	-	(178)	(501)	-	-
Decrease of 1 percentage	99	323	-	-	183	421	-	-
Expected future lifetimes(in years) for employees								
Participants assumed to have the mortality rates of individuals who are one year older	(222)	(128)	-	(9)	(220)	(105)	-	(8)
Participants assumed to have the mortality rates of individuals who are one year younger	217	132	-	9	217	114	-	8
Medical cost trend rates								
Increase of 1 percentage	-	-	-	(127)	-	-	-	(105)
Decrease of 1 percentage	-	-	-	63	-	-	-	82

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the defined benefit liability recognised in the balance sheet.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the prior year.

(viii) The principal actuarial assumptions at the reporting dates(expressed as weighted averages) for defined benefit plans

	As at 31/03/2023		As at 31/03/2022	
	Funded	Unfunded	Funded	Unfunded
Discount Rate	4.13%	3.50%	2.52%	1.91%
Salary growth Rate	2.92%	2.41%	2.80%	2.72%
Expected future lifetimes (in years) for employees				
Pensioners	19	20	20	15
Current employees	9	9	11	9

(ix) The principal actuarial assumptions at the reporting dates(expressed as weighted averages) for post employment medical benefits

	As at 31/03/2023		As at 31/03/2022	
	Funded	Unfunded	Funded	Unfunded
Long term increase in healthcare costs	-%	4.71%	-%	4.92%
Discount rate	-%	5.19%	-%	4.22%

(x) Weighted average duration of the defined benefit obligation in years

	As at 31/03/2023		As at 31/03/2022	
	Funded	Unfunded	Funded	Unfunded
Weighted average duration of the defined benefit obligation in years	11.03	10.60	15.46	12.94

(xi) Expected maturity analysis of undiscounted defined befit plan and post-employment medical benefit plans

(₹ in Crore)

	As at 31/03/2023				As at 31/03/2022			
	Within 1 year	Between 1-2 years	Between 2-5 years	5 to 10 years	Within 1 year	Between 1-2 years	Between 2-5 years	5 to 10 years
Defined benefit plan	812	1,750	2,643	4,667	743	1,642	2,485	4,532
Funded	600	1,331	2,074	3,706	522	1,246	1,936	3,556
Unfunded	212	419	569	961	221	396	549	976
Post employment medical benefit plant	35	95	159	326	33	83	141	277
Funded	-	-	-	-	-	-	-	-
Unfunded	35	95	159	326	33	83	141	277

(xii) Expected contributions to the defined benefit plans for the year ended March 31, 2024: ₹ 151 Crore.

(II) Defined Contribution Plans

The Group has certain defined contribution plans such as provident funds (not managed by Trust), superannuation fund and family pension fund for the benefit of the employees. The Contributions are made to registered funds/ organisation administered by the government. The obligation of the Group is limited to the amount contributed and it has no further contractual nor any constructive obligation.

(a) Pension

The Group contributes a certain percentage of salary for all eligible employees in India in the managerial cadre towards Superannuation Funds with option to put certain portion in National Pension Scheme (NPS) and/or in funds managed by Birla Sunlife Insurance Company to be converted to annuity of Life Insurance Corporation of India. Junior Pension Plan provided to certain employees is in the nature of defined benefit plan which provides an annuity in the form of pension amount at retirement. The amount charged to the Consolidated Statement of Profit and Loss during the year is ₹ 19 Crore (31/03/2022: ₹ 18 Crore) and amount of actuarial gain/ (loss) recognised in Other Comprehensive Income during the year is ₹ Nil (31/03/2022: ₹ Nil Crore)

(b) Provident Fund (Other than Trust)

In respect of certain employees, the Company's contribution towards Provident Fund as specified under the law is paid to the Regional Provident Fund Commissioner and is debited to the Statement of Profit and Loss. The Company also contributes to Coal Mines Provident Fund (CMPF) in respect of employees working in coal mines.

The amount debited to the Consolidated Statement of Profit and Loss during the year was ₹ 34 Crore (31/03/2022: ₹ 36 Crore)

(c) Multiemployer Plan

Certain union employees of Novelis Inc. in the United States are covered by a multi-employer plan based on obligations arising from collective bargaining agreements. This plan provides retirement and other benefits to participants generally based on their service to contributing employers. The benefits are paid from assets held in trust for that purpose. Trustees are appointed in equal number by employers and unions and they are typically responsible for oversight of the investment of the assets and administration of the plan.

Contribution rates and, in some instances, benefit levels are generally determined through the collective bargaining process between the participating employers and unions. None of the Company's collective bargaining agreements require an increase in the Company's total pension contributions to meet minimum funding requirements. All plans that are defined benefit plans, on the basis of the terms of the benefits provided, are accounted for as defined contribution plans because, among other things, there is insufficient information available to account for these plans as defined benefit plans.

(B) Other Employee Benefit Plans

(I) Compensated Absences

The Compensated absences cover the Group's liability for earned leave and sick leave. The entire amount of the provision of ₹ 555 Crore (31/03/2022: ₹ 532 Crore) is presented as current, since the Group does not have an unconditional right to defer settlement for these obligations. Expected amount towards settlement of Leave for the next 12 months are ₹ 45 Crore (31/03/2022: ₹ 41 Crore)

(C) Employee Share-based Payments

The Group has formulated employee share-based payment schemes with objective to attract and retain talent and align the interest of employees with the Group as well as to motivate them to contribute to its growth and profitability. The Group views employee stock options as instruments that would enable the employees to share the value they create for the Group in the years to come. At present four employee share-based payment schemes are in operation at Hindalco Industries Limited, the Parent, whereas three employee share-based payment schemes are in operation at Novelis Inc., a subsidiary of the Company. Details of these employee share-based schemes are given below:

(a) Employee share-based payments at Parent

(i) Employee Stock Option Scheme 2006 ("ESOS 2006"):

The shareholders of the Company has approved on 23/01/2007 an Employee Stock Option Scheme 2006 ("ESOS 2006"), under which the Company may grant up to 3,475,000 stock options to its permanent employees in the management cadre, whether working in India or out of India, including Managing and the Whole Time Directors of the Company, in one or more tranches. The ESOS 2006 is administrated by the Nomination and Remuneration Committee of the

Board of Directors of the Company ("the Committee") Each stock option, when exercised, would be converted into one fully paid-up equity share of ₹ 1/- each of the Company. The stock options will vest in 4 equal annual instalments after completion of one year of service from the date of grant. The exercise price shall be average price of the equity shares of the Company in the immediate preceding seven day period on the date prior to the date on which the ESOS compensation committee finalises the specific numbers of Options to be granted to the employees discounted by such percentage not exceeding 30 % (thirty percent) to be determined by ESOS Compensation Committee in the best interest of the various stake holders in the prevailing market conditions. The maximum period of exercise is 5 years from the date of vesting and these stock options do not carry rights to dividends or voting rights till the date of exercise. Further, forfeited/ expired stock options are also available for grant. Further, on 23/09/2011 the ESOS 2006 has been partially modified and by which the Company may grant 6,475,000 stock options to its eligible employees.

Under the ESOS 2006, till Year ended 31/03/2023 the Committee has granted 4,328,159 stock options (Year ended 31/03/2022: 4,328,159 stock options) to its eligible employees out of which 1,819,941 stock options (Year ended 31/03/2022: 1,819,941 stock options) has been forfeited/ expired and are available for grant as per term of the Scheme. A summary of movement of the stock options and weighted average exercise price (WAEP) is given below:

	Year ended 31/03/2023		Year ended 31/03/2022	
	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	-	-	391,304	118.73
Granted during the year	-	-	-	-
Forfeited during the year	-	-	-	-
Exercised during the year	-	-	(391,304)	118.73
Expired during the year	-	-	-	-
Outstanding at year end	-	-	-	-
Vested and Exercisable at year end	-	-	-	-

Under ESOS 2006, as at Year ended 31/03/2023 the range of exercise prices for stock options outstanding was ₹ Nil (Year ended 31/03/2022: ₹ Nil) whereas the weighted average remaining contractual life for the stock options outstanding was Nil (Year ended 31/03/2022: Nil)

The weighted average share price at the date of exercise of ESOS 2006 was ₹ Nil per share (Year ended 31/03/2022: ₹ 428.07 per share).

(ii) **Employee Stock Option Scheme 2013 ("ESOS 2013"):**

The shareholders of the Company has approved on 10/09/2013 an Employee Stock Option Scheme 2013 ("ESOS 2013"), under which the Company may grant up to 5,462,000 Options (comprising of Stock Options and/ or Restricted Stock Units (RSU)) to the permanent employees in the management cadre and Managing and Whole time Directors of the Company and its subsidiary companies in India and abroad, in one or more tranches. The ESOS 2013 is administered by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee") The stock options exercise price would be determined by the Committee, whereas the RSUs exercise price shall be the face value of the equity shares of the Company as at the date of grant of RSUs. Each stock option and each RSU entitles the holders to apply for and be allotted one fully paid-up equity share of ₹ 1/- each of the Company upon payment of exercise price during exercise period. The stock options will vest in 4 equal annual instalments after completion of one year of the services from the date of grant, whereas RSU will vest upon completion of three years of services from the date of grant. The maximum period of exercise is 5 years from the date of vesting and these stock option/ RSU do not carry rights to dividends or voting rights till the date of exercise. Further, forfeited/ expired stock options and RSUs are also available for grant.

In terms of ESOS 2013, till Year ended 31/03/2023 the Committee has granted 2,250,754 stock options and 2,252,254 RSUs (Year ended 31/03/2022: 2,250,754 stock options and 2,252,254 RSUs) to the eligible employees of the Company and some of its subsidiary companies. Further, 301,381 stock options and 213,095 RSUs (Year ended 31/03/2022: 301,381 stock options and 213,095 RSUs) have been forfeited/ expired and are available for grant as per term of the Scheme.

A summary of movement of stock options and RSUs and weighted average exercise price (WAEP) is given below:

	Year ended 31/03/2023				Year ended 31/03/2022			
	Stock Options		RSUs		Stock Options		RSUs	
	Number	WAEP (₹)	Number	WAEP (₹)	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	26,248	135.39	27,553	1.00	110,700	132.68	55,691	1.00
Granted during the year	-	-	-	-	-	-	-	-
Forfeited during the year	-	-	-	-	-	-	-	-
Re-instated during the year	-	-	-	-	-	-	-	-
Exercised during the year	(21,861)	129.02	-	-	(80,067)	132.52	(17,106)	1.00
Expired during the year	(2)	119.45	-	-	(4,385)	119.45	(11,032)	1.00
Outstanding at year end	4,385	167.15	27,553	1.00	26,248	135.39	27,553	1.00
Vested and Exercisable at year end	4,385	167.15	27,553	1.00	26,248	135.39	27,553	1.00

Under ESOS 2013, the range of exercise prices for stock options outstanding as at Year ended 31/03/2023 was ₹ 119.45 to ₹ 167.15 (Year ended 31/03/2022: ₹ 119.45 to ₹ 167.15) whereas exercise price in case of RSUs was ₹ 1 (Year ended 31/03/2022: ₹ 1) The weighted average remaining contractual life for the stock options and RSUs outstanding as at Year ended 31/03/2023 was 1.72 years and 1.72 years, respectively (Year ended 31/03/2022: 1.09 years and 2.73 years, respectively)

The weighted average share price at the date of exercise of ESOS 2013 was ₹ 392.76 per share (31/03/2022: ₹ 460.52 per share)

(iii) **Employee Stock Option Scheme 2018 ("ESOS 2018"):**

The shareholders of the Company has approved on 21/09/2018 an Employee Stock Option Scheme 2018 ("ESOS 2018"), formulated by the Company, under which the Company may grant not more than 13,957,302 [Stock Options and Restricted Stock Units('RSU')] to the permanent employees of the Company in management cadre including Managing and the Wholetime Director of the Company and its subsidiary companies in India and abroad, in one or more tranches. The ESOS 2018 is administered by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee") and the Hindalco Employees Welfare Trust ("Trust") The Stock options exercise price would be determined by the Committee whereas the RSU exercise price shall be the face value of the equity shares of the Company as at the date of grant of RSUs. Each stock option and each RSU entitles the holders to apply for and be allotted one fully paid-up equity share of Re. 1/- each of the Company upon payment of exercise price during the exercise period. The Options and RSUs Granted under the Scheme 2018 shall vest, subject to compliance with the minimum vesting period of one year, within a period of four years for Options and of three years for RSUs from the Grant Date, in the manner set out in the respective vesting letters to be issued by the Company to the Grantees from time to time. The maximum period of exercise is 5 years from the date of vesting and these stock options/RSUs do not carry rights to dividends or voting rights till the date of exercise. Further, forfeited/expired stock options and RSUs are also available for grant. The options shall lapse in case of performance linked vesting conditions are not met.

In terms of ESOS 2018, till 31/03/2023 the Committee has granted 9,465,173 stock options and 2,766,817 RSUs (31/03/2022: 7,062,503 stock options and 1,981,539 RSUs) to the eligible employees of the Company and some of its subsidiary companies. Further, 1,143,828 stock options and RSUs 203,461 (31/03/2022: 1,006,926 stock options and 149,597 RSUs) has been forfeited/ expired and are available for grant as per term of the Scheme. A summary of movement of stock options and RSUs and weighted average exercise price (WAEP) is given below:

	Year ended 31/03/2023				Year ended 31/03/2022			
	Stock Options		RSUs		Stock Options		RSUs	
	Number	WAEP (₹)	Number	WAEP (₹)	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	5,324,888	302.51	1,640,675	1.00	4,277,702	226.06	1,279,318	1.00
Granted during the year	2,402,670	395.45	785,278	1.00	1,872,984	448.89	612,560	1.00
Forfeited during the year	-	-	-	-	17,719	278.05	-	-
Re-instated during the year	(136,902)	384.73	(53,864)	1.00	(155,816)	306.39	(59,936)	1.00
Exercised during the year	(251,593)	232.43	(550,337)	1.00	(687,701)	224.10	(191,267)	1.00
Expired during the year	-	-	-	-	-	-	-	-
Outstanding at year end	7,339,063	333.81	1,821,752	1.00	5,324,888	302.51	1,640,675	1.00
Vested and Exercisable at year end	3,720,192	261.63	640,908	1.00	2,370,953	228.84	966,695	1.00

Under ESOS 2018, the range of exercise prices for stock options outstanding as at 31/03/2023 was ₹ 159.30 to ₹ 453.95 (31/03/2022 was ₹ 159.30 to ₹ 453.95) whereas exercise price in case of RSUs was ₹ 1.00 (31/03/2022: ₹ 1.00) The weighted average remaining contractual life for the stock options and RSUs outstanding as at 31/03/2023 was 5.02 years and 5.90 years, respectively (31/03/2022 was 5.29 years and 5.50 years respectively)

The weighted average share price at the date of exercise of ESOS 2018 was ₹ 416.04 per share (31/03/2022 was ₹ 509.37 per share)

The fair values at grant date of stock options granted during the year ended 31/03/2023 was ₹ 159.32 to ₹ 215.70 (31/03/2022 was ₹ 176.04 to ₹ 220.36) and fair values in case of RSUs was ₹ 350.00 to ₹ 413.12 (31/03/2022 was ₹ 419.15 to ₹ 435.62), respectively. The fair valuation has been carried out by an independent valuer by applying Black and Scholes Model. The inputs to the model include the exercise price, the term of option, the share price at grant date and the expected volatility, expected dividends and the risk free rate of interest for terms of options.

The details of options granted, the key assumptions for Fair Value on the date of grant are as under:

	Year ended 31/03/2023					
	Tranche IX		Tranche X		Tranche XI	
	Stock Option	RSU	Stock Option	RSU	Stock Option	RSU
Grant date	22/07/2022	22/07/2022	11/11/2022	11/11/2022	09/02/2023	09/02/2023
Exercise price (₹)	375.95	1.00	415.10	1.00	436.50	1.00
Expected terms of options granted (years)	4.43 to 6.43 years	8 years	4.43 to 6.43 years	8 years	4.43 to 6.43 years	8 years
Share price on grant date (₹)	381.25	381.25	429.85	429.85	444.55	444.55
Expected volatility (%)	42.23%	42.23%	41.51%	41.51%	38.93%	38.93%
Expected dividend (%)	1.05%	1.05%	0.93%	0.93%	0.90%	0.90%
Risk free interest rate (%)	7.09% - 7.26%	7.23%	7.10% - 7.20%	7.23%	7.21% - 7.28%	7.29%

	Year ended 31/03/2022			
	Tranche VII		Tranche VIII	
	Stock Option	RSU	Stock Option	RSU
Grant date	06/08/2021	06/08/2021	12/11/2021	12/11/2021
Exercise price (₹)	443.25	1.00	453.95	1.00
Expected terms of options granted (years)	4.43-6.43 yrs	6-8 years	4.43-6.43 yrs	6-8 years
Share price on grant date (₹)	443.10	443.10	453.95	453.95
Expected volatility (%)	41.10%	41.10%	41.45%	41.45%
Expected dividend (%)	0.68%	0.68%	0.66%	0.66%
Risk free interest rate (%)	5.64% - 6.22%	6.12% - 6.54%	5.54% - 6.12%	6.01% - 6.44%

The expected volatility was determined based on the historical share price volatility over the past period depending on life of the options granted which is indicative of future periods and which may not necessarily be the actual outcome.

(iv) **Stock Appreciation Rights 2018 ('SAR 2018'):**

The Company till 31/03/2023, has granted 196,064 Option SAR and 57,150 RSU SAR (31/03/2022: 156,694 Option SAR and 50,665 RSU SAR) under the Share Appreciation Rights Scheme 2018 ("SAR 2018") to its eligible employees. Option SAR to be vested in 4 equal annual instalments after completion of one year of the service from the date of grant and RSU SAR will vest upon completion of three years of services from the date of grant. The SAR 2018 is administered by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee") The SAR 2018 have performance linked vesting conditions which are decided by the committee and are cash settled. The options shall lapse in case of performance linked vesting conditions are not met.

A Summary of movement of SAR 2018 and weighted average exercise price (WAEP) is given below:

	Year ended 31/03/2023				Year ended 31/03/2022			
	Option SAR		RSU SAR		Option SAR		RSU SAR	
	Number	WAEP (₹)	Number	WAEP (₹)	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	97,927	236.82	29,996	1.00	76,652	215.00	20,514	1.00
Granted during the year	39,370	351.58	6,485	-	60,879	255.50	30,151	1.00
Forfeited during the year	-	-	-	-	-	-	-	-
Exercised during the year	(16,853)	262.78	(5,745)	1.00	(39,604)	223.29	(20,669)	1.00
Expired during the year	-	-	-	-	-	-	-	-
Outstanding at year end	120,444	270.70	30,736	1.00	97,927	236.82	29,996	1.00
Vested and Exercisable at year end	80,141	228.09	22,836	-	47,115	218.80	13,565	-

The range of exercise price of the Option SAR is ₹ 159.30 to ₹ 443.25 and RSU SAR is ₹ 1 (31/03/2022 : Option SAR is ₹ 159.30 to ₹ 443.25 and RSU SAR is ₹ 1) The fair values per Option SAR as at 31/03/2023 was ₹ 102.54 to ₹ 274.24 (31/03/2022 ₹ 248.38 to ₹ 440.84) and for RSU SAR as at 31/03/2023 was ₹ 384.00 to ₹ 397.73 (31/03/2022 ₹ 552.96 to ₹ 560.60) The fair value has been carried out by an independent valuer by applying Black and Scholes Model. The inputs to the model include the exercise price, the term of option, the share price at grant date and the expected volatility, expected dividends and the risk free rate of interest. The assumptions used for fair valuation for Option SAR and RSU SAR are given below:

	Year ended 31/03/2023		Year ended 31/03/2022	
	Option SARs	RSU SARs	Option SARs	RSU SARs
Valuation Date	31/03/2023	31/03/2023	31/03/2022	31/03/2022
Exercise price (₹)	159.30 - 443.25	1.00	159.30 - 443.25	1.00
Expected volatility (%)	39.50%	39.50%	40.05%	40.05%
Expected dividend (%)	0.99%	0.99%	0.53%	0.53%
Risk Free interest rate (%)	7.04% - 7.14%	7.04% - 7.14%	5.26% - 6.30%	5.26% - 6.30%

The weighted average remaining contractual life for the Option SAR as at 31/03/2023 is 1.70 to 5.31 years (31/03/2022: 2.70 to 5.35 years) and RSU SAR as at 31/03/2023 is 1.70 to 5.31 years (31/03/2022: 2.70 to 5.35 years)

The total intrinsic value at the end of the year of the vested Option SAR and RSU SAR is ₹ 2.86 Crore (31/03/2022 ₹ 2.42 Crore).The liability for outstanding option of such Option SAR and RSU SAR is of ₹ 3 Crore (31/03/2022: ₹ 4 Crore).

(b) Employee share-based payments schemes at Novelis Inc ("Novelis"), a subsidiary of the Group:

The Novelis' Board of Directors has authorized long term incentive plans (LTIPs), under which Hindalco stock appreciation rights (Hindalco SARs), Novelis stock appreciation rights (Novelis SARs), phantom restricted stock units (Phantom RSUs), and Novelis Performance Units (Novelis PUs) are granted to certain executive officers and key employees.

The Hindalco and Novelis SARs vest at the rate of 33% per year, subject to the achievement of an annual performance target, and expire seven years from their original grant date. The performance criterion for vesting of the Hindalco and Novelis SARs is based on the actual overall Novelis operating EBITDA compared to the target established and approved each fiscal year. The minimum threshold for vesting each year is 75% of each annual target operating EBITDA. Each Hindalco SAR is to be settled in cash based on the difference between the market value of one Hindalco share on the date of grant and the market value on the date of exercise. Each Novelis SAR is to be settled in cash based on the difference between the fair value of one Novelis phantom share on the original date of grant and the fair value of a phantom share on the date of exercise. The amount of cash paid to settle Hindalco and Novelis SARs are limited to three times the target pay out, depending on the plan year. The Hindalco and Novelis SARs do not transfer any shareholder rights of Hindalco or Novelis to a participant. The Hindalco and Novelis SARs are classified as liability awards and are re-measured at each reporting period until the SARs are settled or cancelled. Novelis expenses each fiscal year's SAR tranche(s) over the employee requisite service period, which results in the expense being recorded on an accelerated basis.

The Phantom RSUs are based on Hindalco's stock price. The Phantom RSUs vest either in full three years from the grant date or 33% per year over three years, subject to continued employment with Novelis, but are not subject to performance criteria. Each Phantom RSU is to be settled in cash equal to the market value of one Hindalco share. The pay out on the Phantom RSUs is limited to three times the market value of one Hindalco share measured on the original date of grant. The Phantom RSUs are classified as liability awards and expensed over the employee requisite service period (three years) based on the Hindalco stock price as of each balance sheet date.

In May 2016, the Novelis's board of directors approved the issuance of Novelis PUs which have a fixed USD 100 value per unit and will vest in full three years from the grant date, subject to specific performance criteria compared to the established target. The Novelis PUs awards are not based on the Hindalco or Novelis stock prices and therefore are accounted for in accordance with Ind AS 19 - Employee Benefits.

(i) Hindalco Stock Appreciation Rights (Hindalco SARs)

	Year ended 31/03/2023		Year ended 31/03/2022	
	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	8,285,624	208	13,038,526	158
Granted during the year	2,393,378	411	2,411,503	388
Forfeited during the year	(94,196)	332	(187,780)	177
Exercised during the year	(3,581,435)	155	(6,976,625)	177
Expired during the year	-	-	-	-
Outstanding at year end	7,003,371	303	8,285,624	208
Vested and Exercisable at year end	994,206	316	393,803	164

(ii) Novelis Stock Appreciation Rights (Novelis SARs)

	Year ended 31/03/2023		Year ended 31/03/2022	
	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	3,572	4,868	10,165	6,025
Granted during the year	-	-	-	-
Forfeited during the year	(1,275)	-	(4,933)	7,032
Exercised during the year	(2,297)	-	(1,660)	6,200
Expired during the year	-	-	-	-
Outstanding at year end	-	-	3,572	4,868
Vested and Exercisable at year end	-	-	3,572	4,868

(iii) Phantom Restricted Stock Units (Phantom RSUs)

	Year ended 31/03/2023		Year ended 31/03/2022	
	Number	WAEP (₹)	Number	WAEP (₹)
Outstanding at beginning of the year	5,413,720	-	7,236,419	-
Granted during the year	4,426,815	-	1,787,910	-
Forfeited during the year	(156,546)	-	(266,713)	-
Exercised during the year	(2,802,837)	-	(3,343,896)	-
Expired during the year	-	-	-	-
Outstanding at year end	6,881,152	-	5,413,720	-

(iv) Particulars of share based payment

(a) Carrying amount and intrinsic value of liabilities given below: **(₹ in Crore)**

	Year ended 31/03/2023		Year ended 31/03/2022	
	Total carrying amount at the end of the year for liabilities	Total intrinsic value at the end of the year of liabilities (vested portion)	Total carrying amount at the end of the year for liabilities	Total intrinsic value at the end of the year of liabilities (vested portion)
Hindalco SAR	75	9	113	18
Novelis SAR	-	-	1	1
Phantom RSU	152	-	176	-
	227	9	290	19

(b) Number of options exercised and the weighted average exercise price given below: **(₹ in Crore)**

	Year ended 31/03/2023		Year ended 31/03/2022	
	Number of options exercised	Weighted average exercise price	Number of options exercised	Weighted average exercise price
Hindalco SAR (price in ₹)	3,581,435	155	6,976,625	177
Novelis SAR (price in ₹)	2,297	-	1,660	6,200
Phantom RSU (price in ₹)	2,802,837	-	3,343,896	-

(c) Unrecognised compensation expense **(₹ in Crore)**

	Year ended 31/03/2023		Year ended 31/03/2022	
	(₹ in Crore)	Period over which expense will be recognised (in years)	(₹ in Crore)	Period over which expense will be recognised (in years)
Hindalco SAR	21	2	41	2
Novelis SAR	-	-	-	-
Phantom RSU	126	2	73	2

(d) Inputs to the model used to determine fair value are as under: **(₹ in Crore)**

	Year ended 31/03/2023		Year ended 31/03/2022	
	Hindalco SAR	Novelis SAR	Hindalco SAR	Novelis SAR
Risk free interest rate (%)	3.11% - 7.24%	0.00%	3.59% - 6.58%	0.23% -0.23%
Dividend yield (%)	1.03%	0.00%	0.48%	0.00%
Volatility (%)	31.94% - 46.82%	0.00%	39.49% - 49.69%	28.96% - 28.96%
Source of historical volatility	Hindalco historical volatility	Comparable companies	Hindalco historical volatility	Comparable companies
Model used	Monte Carlo Simulation Model	Monte Carlo Simulation Model	Monte Carlo Simulation Model	Monte Carlo Simulation Model

The weighted average remaining contractual life as at Year ended 31/03/2023 for the Hindalco SAR is 5 years (31/03/2022: 5 years) and Novelis SAR is less than one year (31/03/2022: less than one year)

(c) Effect of employee share-based payment transactions on profit or loss for the year and on financial position:

For the year ended Year ended 31/03/2023, the Group recognised expenses of ₹ 48 Crore (31/03/2022: expenses of ₹ 35 Crore) related to equity-settled share based transactions, whereas ₹ 101 Crore as expenses (31/03/2022: expenses ₹ 307 Crore) towards cash-settled share based transactions accounted for as part of Employee Benefits Expenses, Refer Note 33.

During the year ended Year ended 31/03/2023, the Group has allotted 21861 fully paid-up equity share of ₹ 1/- each of the Company (31/03/2022: 488477) on exercise of equity settled options for which the Group has realised ₹ Nil (31/03/2022: ₹ 6 Crore) as exercise prices.

The Group has also allotted 801,930 (31/03/2022: 878,968) fully paid-up equity share of ₹ 1/- each of the Company through its ESOP trust on exercise of equity settled options for which the Group has realised ₹ 6 Crore (31/03/2022: ₹ 15 Crore) as exercise prices.

26. Contract Liabilities

Refer Note 1B(Y) for accounting policy on Contract Liability

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Advance from Customers	-	340	340	10	365	375
	-	**340**	**340**	**10**	**365**	**375**

(a) Reconciliation of contract liabilities for the periods presented:

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Balance at beginning of the year	**375**	**359**
Amount received during the year against which revenue has not been recognized	239	193
Revenue recognized during the year		
Contract liabilities at the beginning of the year	(286)	(182)
Foreign exchange gains and losses	12	5
Balance at end of the year	**340**	**375**

27. Other Non-Current and Current Liabilities

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Customer Refund Liability - (a)	-	280	-	205
Statutory Dues Payables	64	1,076	88	1,381
Deferred Income - (b)	1,718	250	1,769	229
Other Payables	32	87	31	58
	1,814	1,693	1,888	1,873

(a) Customer refund liability are recognised mainly for discount payable to customers.

(b) Deferred income mainly consist of:

(i) Grant related to Export Promotion Capital Goods (EPCG) of ₹ 574 Crore (31/03/2022: ₹ 600 Crore) in non- current portion and ₹ 26 Crore (31/03/2022: ₹ 20 Crore) in current portion.

(ii) Government grant of ₹ 1050 Crore (31/03/2022: ₹ 1,169 Crore) in non-current portion and ₹ 224 Crore (31/03/2022: ₹ 209 Crore) in current portion.

(iii) Grant related to Manufacture and Other Operations in Warehouse Regulations (MOOWR) of ₹ 80 Crore (31/03/2022: ₹ Nil Crore) in non-current portion.

28. Revenue from Operations

Refer Note 1B(T) for accounting policy on Government Grants
Refer Note 1B(X) for accounting policy on Revenue Recognition

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Revenue from Contract with Customers		
Sale of Products - (b)	217,760	191,446
Trade Sales - (c)	2,300	1,177
Sale of Services - (d)	1,877	1,265
Total revenue from contract with customers	**221,937**	**193,888**
Other Operating Revenues - (b), (e)	1,265	1,171
Total revenue from operations	**223,202**	**195,059**

(a) Reconciliation of revenue recognised with contract price:

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Contract Price	**221,485**	**202,754**
Adjustments for:	239	193
Refund Liabilities and Discounts	**(808)**	**(1,527)**
Hedging Gain/ (Loss)	1,157	(7,219)
Others - Provisionally priced contracts	103	(120)
Revenue from Contracts with Customers	**221,937**	**193,888**

(b) Sales of Copper products and precious metals are accounted for provisionally, pending finalization of price and quantity. Variations are accounted for in the period of settlement. Final price receivable on sale of above products for which provisional price was not finalized are realigned at year end forward LME/LMBA rate and is being presented as part of other operating revenue. Revenue from subsequent variation in price movement is gain of ₹ 12 Crore (31/03/2022: loss of ₹ 24 Crore)

(c) Includes nutrient based subsidy of Phosphorus (P) & Potassium (K) arising from sale of Di ammonium phosphate (DAP) ₹ 1292 Crore (31/03/2022: ₹ 441 Crore)

(d) Sale of Services predominantly includes freight and insurance on certain export contracts, which are identified as separate performance obligation under Ind AS 115.

(e) Includes Government grant in the nature of sales related export incentives and other benefits of ₹ 423 Crore (31/03/2022: ₹ 414 Crore)

(f) Group's revenue from external customers as analysed by the country, in which customers are located is given below:

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
India	**59,190**	**46,139**
Outside India		
United States	56,946	46,623
Brazil	20,081	18,347
Korea	10,908	12,418
United Kingdom	5,720	7,305
Germany	10,275	6,060
China	5,713	10,631
Others	53,946	47,122
Total Revenue from Customers	**222,779**	**194,645**
Add: Export Incentive and other benefits	423	414
Total Revenue from Operations	**223,202**	**195,059**

(g) Applying the practical expedient as given in Ind AS 115, the Group has not disclosed the remaining performance obligations related disclosures for contracts where revenue recognized corresponds directly with value to the customer of the Group's performance completed to date.

(h) Refer Note 45 for details of balances with related parties.

29. Other Income

Refer Note 1B(P) for accounting policy on Financial Instruments
Refer Note 1B(T) for accounting policy on Government Grants
Refer Note 1B(Z) for accounting policy on Dividend and Interest Income

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Interest Income		
On Non-Current Investments	20	20
On Current Investments	14	16
On Others	525	189
Dividend Income		
On Non-Current Investments - (a)	34	32
Rent Income	9	9
Income from Government Grants - (b)	251	275
Gains/ (Loss) on Property, Plant and Equipment and Intangibles Assets sold/ discarded (Net)	(41)	(100)
Gains/(Loss) on Investments Measured at FVTPL (Net)		
On sale of Financial Assets	205	349
On change of Fair Value of Financial Assets	(3)	10
Other Non-Operating Income (Net) - (c), (d)	243	336
	1,257	**1,136**

(a) Dividends from equity investments designated at FVTOCI relate to investments held at the end of the reporting period. Dividend income of ₹ Nil (31/03/2022: ₹ 1 Crore) relating to investment de-recognised during the reporting period.

(b) Grant income includes carbon emission credit allotments of ₹ 230 Crore (31/03/2022: ₹ 255 Crore) for certain operations in Europe, UK and Asia, and income associated with fixed assets investments in North America, South America, Europe and Asia of Group's subsidiary, Novelis Inc. There are no unfulfilled conditions or other contingencies attached to these grants.

(c) Includes gain on repayment and modification of borrowings ₹ 48 Crore (31/03/2022: ₹ 183 Crore) resulting from change in rate and timing of expected cash flows payments on term loans.

(d) Includes royalty income of ₹ Nil Crore (31/03/2022: ₹ 7 Crore)

(e) Refer Note 45 for details of balances with related parties.

30. Cost of Materials Consumed

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Copper Concentrate - (a)	30,062	26,677
Aluminium	93,756	86,363
Bauxite	739	668
Caustic Soda	1,356	791
Calcined Petroleum Coke	3,624	2,081
Copper Anode	1,302	2,741
Copper Cathodes	1,672	3,941
Pitch	1,060	703
Others	2,405	1,370
	135,976	**125,335**

(a) Purchase of copper concentrate is accounted for provisionally pending finalization of contents in the concentrate and price. Variations are accounted for in the period of settlement. Final price payable on purchase of copper concentrate for which provisional price and quantity were not finalized during the year are realigned based on forward LME and LBMA rate. Impact on cost from subsequent variation in price movement was loss of ₹ 405 Crore (31/03/2022: loss of ₹ 484 Crore), Refer Note 9(g).

31. Trade Purchases

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Aluminum Rolled Product	474	256
Fertilizer	1,073	1,530
Others	6	172
	1,553	**1,958**

32. Changes in Inventories of Finished Goods, Work-in-Progress and Stock-in-Trade

(₹ in Crore)

	Opening Inventories		Closing Inventories		Net Change	
	As at		As at		Year ended	
	01/04/2022	01/04/2021	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Work-in-Progress	20,434	13,439	18,835	20,434	1,599	(6,995)
Finished Goods	7,180	4,869	7,741	7,180	(561)	(2,311)
Stock-in-Trade	884	4	20	884	864	(880)
	28,498	**18,312**	**26,596**	**28,498**	**1,902**	**(10,186)**
Inventories acquired in business combination	-	-	-	-	-	9
Inventories on disposal of a subsidiary	-	-	-	-	-	(77)
Currency Translation Adjustment (Net)	-	-	-	-	1,339	501
	28,498	**18,312**	**26,596**	**28,498**	**3,241**	**(9,753)**

33. Employee Benefits Expense

Refer Note 1B(U) for accounting policy on Employee Benefits
Refer Note 1B(V) for accounting policy on Employee Share-based Payments

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Salaries and Wages	9,845	9,073
Post Employment Benefits, Refer Note 25(A)		
Defined Benefit Plans	552	478
Defined Contribution Plans	434	349
Employee Share-Based Payment, Refer Note 25(B)		
Equity Settled Share-Based Payment	48	35
Cash Settled Share-Based Payment	101	307
Employee Welfare Expenses	2,207	1,841
	13,187	12,083
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	(124)	(60)
	13,063	**12,023**

(a) The Code on Social Security, 2020 ('Code') relating to employee benefits during employment and post employment benefits received Presidential assent in September 2020. The Code has been published in the Gazette of India. However, the date on which the Code will come into effect has not been notified. The Group will assess the impact of the Code when it comes into effect and will record any related impact in the period the Code becomes effective.

(b) The Hon'ble Supreme Court of India by their order dated February 28, 2019, in the case of Surya Roshani Limited v/s EPFO, set out the principles based on which allowances paid to the employees should be identified for inclusion in basic wages for the purposes of computation of Provident Fund contribution. The Group has given effect of the above judgement effective March 1, 2019. This does not have any material impact on the Consolidated Financial Statements.

34. Power and Fuel

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Power and Fuel Expenses	17,351	11,148
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	(5)	(2)
	17,346	**11,146**

35. Finance Cost

Refer Note 1B(L) for accounting policy on Leases
Refer Note 1B(S) for accounting policy on Borrowing Cost

(₹ in Crore)

	Year ended	
	Year ended	31/03/2022
Interest Expenses on Financial Liabilities not at FVTPL - (a), (b)	3,618	3,352
Interest Expense for Lease Arrangements	89	56
(Gain)/ Loss on Foreign Currency Borrowings (Net)	-	5
Loss on Modification and Extinguishment of Debt - (c)	-	477
Other Borrowing Costs - (d)	44	65
	3,751	3,955
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development - (e)	(105)	(187)
	3,646	**3,768**

(a) Includes ₹ 3 Crore (31/03/2022: ₹ 11 Crore) paid to Income Tax Department.

(b) Includes difference between effective interest rate and contracted interest rate of ₹ 59 Crore (31/03/2022: ₹ 76 Crore) mainly from amortisation of debt issuance cost.

(c) Loss on modification and extinguishment of debt for the year ended 31/03/2022 is primarily related to refinancing of Senior notes 2026 in August 2021 and prepayment of 2017 Term loan, Refer Note 20A for further details.

(d) Mainly includes unwinding of discount on Enterprise Social Commitment and Asset Retirement Obligations, Refer Note 24 for further details.

(e) The capitalisation rate used to determine the amount of borrowing costs capitalised across the Group ranges between 4.46% to 6.61% (31/03/2022: 2.77% to 6.32%). During the year ended Mar 31, 2023 ₹ 105 Crore and ₹ Nil (31/03/2022: ₹ 179 Crore and ₹ 8 Crore) were transferred to Capital Work-in-Progress and Intangible Assets under development respectively.

36. Depreciation and Amortisation Expense

Refer Note 1B(C) for accounting policy on Property, Plant and Equipment
Refer Note 1B(D) for accounting policy on Investment Properties
Refer Note 1B(E) for accounting policy on Intangible Assets (Other than Goodwill)
Refer Note 1B(G) for accounting policy on Stripping Cost
Refer Note 1B(L) for accounting policy on Leases

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Depreciation on Property, Plant and Equipment, Refer Note 2A	5,853	5,515
Depreciation on Right of Use Assets, Refer Note 3A	359	345
Depreciation on Investment Properties, Refer Note 4	1	1
Amortisation on Intangible Assets, Refer Note 6A	873	872
	7,086	**6,733**
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	-	(4)
	7,086	**6,729**

37. Impairment Loss/ (Reversal) of Non-Current Assets (Net)

Refer Note 1B(I) for accounting policy on Impairment of Non-Current Assets (excluding Goodwill)

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Impairment Loss/ (Reversal) on Property, Plant and Equipment - (a), (f)	139	77
Impairment Loss/ (Reversal) on Capital Work-in-Progress (CWIP) - (b), (d)	65	19
Impairment Loss/ (Reversal) on Right of Use assets - (g)	16	-
Impairment Loss/ (Reversal) on Assets/ Disposal Group Held for Sale - (c), (e)	(12)	59
	208	**155**

(a) During year ended 31/03/2022, the Group evaluated operational performance along with current environmental norms of its Di Ammonium Phosphate (DAP) Plant and decided to decommission the same. As a result, the Group recognized impairment in respect of existing DAP plant amounting to ₹ 77 Crore.

(b) During year ended 31/03/2022, the Group impaired certain mining assets of ₹ 19 Crore which was underutilized due to various reasons such as environmental clearances etc.

(c) In December 2021, the Group decided to sell its entire equity interest in its wholly owned Brazilian subsidiary, Hindalco Do Brasil Industria e Comercio de Alumina Ltda ('Hindalco Do Brazil') and assets and liabilities of the same were classified as 'Disposal Group Held for Sale'. Accordingly the Group recognized an impairment loss of ₹ 59 Crore ($8 million) on the net assets of Hindalco Do Brazil, Refer Note 54(A)

(d) During year ended 31/03/2023, the Group has impaired certain Plant and Equipments construction of which was suspended due to various environment and safety reasons amounting to ₹ 65 Crore.

(e) During year ened 31/03/2023, the Group has reversed the impairment loss on certain equipments and accessories classified as asset held for sale that were impaired earlier on determination of its realizable value (Net of cost to sales) amounting to ₹ 12 Crore, Refer Note 17A.

(f) During year ened 31/03/2023, the Group has partially closed Richmond plant due to it's operational issues. Due to significant reductions in demand driven by looming recession and other macro reasons, the Group has impaired it's Property, Plant and Equipment amounting to ₹ 139 Crore ($17.3 million), Refer Note 2A.

(g) During year ened 31/03/2023, the Group has partially subleased one of it's Corporate office and assessed for impairment with reliable estimates of sublease cash flows. Impairment was accounted due to this sublease transaction amounting to ₹ 16 Crore, Refer Note 3A.

38. Impairment Loss/ (Reversal) on Financial Assets (Net)

Refer Note 1B(P) for accounting policy on Financial Instruments

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Provision for Doubtful Debts, Loans and Other Financial Assets / (written back) (Net)	11	10
Bad Debts Loans and Other Financial Assets/ (written back) (Net)	-	145
	11	**155**

39. Other Expenses

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Consumption of Stores and Spares	5,091	4,467
Repairs to Buildings	391	352
Repairs to Machinery	3,371	2,884
Rates and Taxes	241	228
Leases Expenses - (a)	461	307
Insurance Charges	425	392
Payments to Auditors	80	68
Research and Development	796	716
Freight and Forwarding Expenses (Net) - (b)	7,915	6,636
Donation - (c)	36	15
Non Executive Directors' Fees and Commission	14	17
(Gain)/ Loss on Assets held for Sale	5	-
(Gain)/ Loss on Change in Fair Value of Derivatives (Net)	508	1,796
(Gain) /Loss on Foreign Currency Transactions and Translation (Net)	219	21
Miscellaneous Expenses - (d)	9,616	7,825
	29,169	25,724
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	(31)	(31)
	29,138	**25,693**

(a) Details of lease expenses not included in the measurement of lease liabilities:

Short Term Leases	277	161
Variable Lease Payments	167	129
Leases of Low Value Assets	17	17
	461	**307**

(b) Freight and forwarding expenses are net of freight subsidy of ₹ 29 Crore (31/03/2022: ₹ 10 Crore) received on sale of DAP.

(c) Donation includes ₹ Nil Crore (31/03/2022: ₹ 10 Crore) paid to AB General Electoral Trust towards political donation.

(d) Miscellaneous expenses include ₹ Nil Crore (31/03/2022: ₹ 0.10 Crore) paid to a firm of solicitors in which one of the Director of the Company is a partner.

40. Exceptional Income/ (Expenses) (Net)

Refer Note 1B(AB) for accounting policy on Exceptional Items

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Exceptional Income - (a)	41	841
Exceptional Expenses - (b)	-	(259)
	41	582

Details of Exceptional Income/ (Expenses) are given below:

(₹ in Crore)

		Year ended 31/03/2023	Year ended 31/03/2022
(a)	**Exceptional Income:**		
(i)	Reversal of provision made during the previous year towards Cross Subsidy Surcharge (CSS) and Additional Surcharge (ASC) related to FY 2017-18 and FY 2018-19. This reversal was affected pursuant to the undertaking given by MSEDCL (Maharashtra State Electricity Distribution Co. Ltd.) to Maharashtra Electricity Regulatory Commission (MERC) on July 29, 2022, to refund CSS and commencement of ASC refund.	41	-
(ii)	Recognition of benefit received as a result of multiple favourable rulings from the Brazilian Supreme Court that recognized the right to exclude certain taxes related to Program for Social Integration (PIS) And Contribution for the Financing of Social Security (COFINS) on gross methodology for the years 2009 to 2017, net of litigation cost. (Principal ₹ 367 Crore ($ 50 million); Interest ₹ 241 Crore ($ 33 million); Litigation cost ₹ (9) Crore ($ 1 million))	-	599
(iii)	Gain of sale of controlling interest (90% equity ownership) in Saras Micro Devices, Inc. by the Group, Refer Note 54(B)	-	112
(iv)	Recognition of benefit received as a result of favourable rulings regarding tax rebates for sales to Manaus, Brazilian Free Trade Zone (Reintegra) (Principal ₹ 60 Crore ($ 8 million); Interest ₹ 25 Crore ($ 4 million))	-	85
(v)	Reversal of Employee severance cost pursuant to restructuring program in a manufacturing unit in Novelis, Germany.	-	45
		41	**841**
(b)	**Exceptional Expenses:**		
(i)	Loss on sale of a wholly owned subsidiary, 'Hindalco do Brasil', Refer Note 54(A)	-	(152)
(ii)	Pursuant to the notification by Ministry of Environment, Forest and Climate Change (MoEFCC), the Group has recognised a provision for expected cost of disposal of legacy ash lying in ash dykes/ponds as at December 31, 2021. The above provision is estimated based on the plan for disposal of ash and stabilisation of ash dykes/ponds (subject to approval of Pollution Control Board) considering feasibility of extraction of ash from ash dykes/ponds.	-	(107)
		-	**(259)**

41. Other Comprehensive Income/ (Loss)

The disaggregation of changes to other comprehensive income (OCI) by each class is given below:

(₹ in Crore)

		Year ended 31/03/2023			Year ended 31/03/2022		
		Gross	Tax	Net	Gross	Tax	Net
(i)	**Items that will not be reclassified to Statement of Profit and Loss**						
	Remeasurement of Defined Benefit Obligation, Refer Note 25A	969	(269)	700	1,172	(289)	883
	Change in Fair Value of Equity Instruments Designated as FVTOCI	(494)	70	(424)	1,211	(248)	963
		475	**(199)**	**276**	**2,383**	**(537)**	**1,846**
(ii)	**Items that will be reclassified to Statement of Profit and Loss**						
	Change in Fair Value of Debt Instruments Designated as FVTOCI	(13)	4	(9)	(9)	3	(6)
	Effective Portion of Cash Flow Hedges	7,773	(2,326)	5,447	(4,867)	1,403	(3,464)
	Cost of Hedging Reserve	64	(22)	42	(75)	26	(49)
	Foreign Currency Translation Reserve	1,704	-	1,704	525	-	525
		9,528	**(2,344)**	**7,184**	**(4,426)**	**1,432**	**(2,994)**
	Other Comprehensive Income/ (Loss) for the year	**10,003**	**(2,543)**	**7,460**	**(2,043)**	**895**	**(1,148)**

42. Earnings Per Share (EPS)

Refer Note 1B(AC) for accounting policy on Earnings Per Share

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Profit/ (Loss) for the year from Continuing Operations		
As per Consolidated Statement of Profit and Loss	10,097	14,201
Less: Non-Controlling Interests in Profit/ (Loss)	-	-
Profit/ (Loss) from Continuing Operations attributable to Owners of the Company	10,097	14,201
Profit/ (Loss) for the year from Discontinued Operations		
As per Consolidated Statement of Profit and Loss	-	(471)
Less: Non-Controlling Interests in Profit/ (Loss)	-	-
Profit/ (Loss) from Discontinued Operations attributable to Owners of the Company	-	(471)
Profit/ (Loss) attributable to Owners of the Company from Continuing and Discontinued Operations	**10,097**	**13,730**
Weighted average numbers of equity shares for calculation of EPS:		
Weighted average numbers of equity shares for Basic EPS	2,222,884,407	2,224,071,351
Dilutive impact of Employee Stock Options Scheme	2,922,977	2,968,669
Weighted average numbers of equity shares for Diluted EPS	2,225,807,384	2,227,040,020
Face value per Equity Share (₹)	1.00	1.00
Earnings Per Share		
Basic - Continuing Operations (₹)	45.42	63.85
Diluted - Continuing Operations (₹)	45.36	63.77
Basic - Discontinued Operations (₹)	-	(2.12)
Diluted - Discontinued Operations (₹)	-	(2.12)
Basic - Continuing and Discontinued Operations (₹)	45.42	61.73
Diluted - Continuing and Discontinued Operations (₹)	45.36	61.65

Stock options granted to the employees under various ESOP schemes are considered to be potential equity shares. They have been included in the determination of diluted earnings per share to the extent to which they are dilutive. 833,136 shares (31/03/2022: 538,978 shares) options granted under Employee Stock option scheme but were not included in the calculation of diluted earnings per share because they are antidilutive for the period. Options can potentially dilute basic earnings per share in the future depending on future share price of the Company. The stock options have not been included in the determination of basic earnings per share. The details relating to stock options are under Note 25B.

43. Gare Palma IV/4 (GP-4), Gare Palma IV/5 (GP-5) and Kathautia coal mines were acquired by the Company through auction conducted by the Nominated Authority (NA) constituted under the Ministry of Coal, Government of India. The Company was required to achieve certain efficiency parameters and reach their Peak Rated Capacity (PRC) during FY 2015-16. Performance security in the form of Performance Bank Guarantees (PBG) of ₹ 318 crore (for GP-4), ₹ 369 crore (for GP-5) and ₹ 267 crore (for Kathautia) were provided by the Company to NA in this regard.

Due to the various delays on the part of Government Authorities, PRC was achieved by the Company for GP-4 and GP-5 during FY 2016-17 and for Kathautia during FY 2017-18. Having satisfied itself about achievement of efficiency parameters/

PRC, NA returned the PBG in respect of GP-4 on June 19, 2017. However, in a volte face action, vide a letter dated 25th April, 2018, NA imposed a penalty equal to 20% of PBG amounting to ₹ 64 crore for GP-4, ₹ 74 crore for GP-5 and ₹ 118 crore for Kathautia (Refer note - 12(c)). As the PBG for GP-5 is still with NA, it also appropriated an amount equal to the penalty from the PBG of the GP-5 mines. For Kathautia Coal Mine only appropriated amount of ₹ 118 crore is with NA. In terms of agreement, we have not renewed the PBG for remaining amount.

The above actions were contested by the Company. The Hon'ble Chhattisgarh High Court at Bilaspur has already given its judgment in favour of the Company in the matter related to GP-5. As per the judgment, Hon'ble High Court has asked NA to refund the amount appropriated by them and return the PBG to the Company. The NA has filed an appeal before the Hon'ble Supreme Court. The Company's appeal to quash the demand raised by NA in case of GP-4 and Kathautia is yet to be decided and is pending before the Mines Tribunal at Bilaspur and Ranchi respectively.

44. Segment Information:

Refer Note 1B(AA) for accounting policy on Segment Reporting

The Group is primarily engaged in the business of manufacture and distribution of aulminium, copper and its products across the globe. Based on the information reviewed by the Group's Chief Operating Decision Maker ("CODM"), the Group has determined four reporting segments, namely (1) Novelis; (2) Aluminium Upstream; (3) Aluminium Upstream; and (4) Copper. The CODM, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Company's Board of Directors.

(1) **Novelis Segment**: This segment represents Novelis Inc, a wholly owned foreign subsidiary of the Company and it's step down subsidiaries engaged in producing and selling aluminium sheet and light gauge products and operating in four continents viz. North America, South America, Europe, and Asia. This is identified as a separate segment based on its geographical area and regulatory environment.

(2) **Aluminium Upstream Segment**: This segment represents Aluminium Upstream business namely Bauxite & Coal Mining, Alumina Specials, Refineries, Metal and Power. This is identified as separate segment based on its nature of products and different risks and returns.

(3) **Aluminium Downstream Segment**: This segment represents aluminium downstream business of the Group which include Aluminium value-added products e.g., Flat Rolled Products, Extrusion, Foils. This is identified as separate segment based on its nature of products and different risks and returns.

(4) **Copper Segment:** This segment represents copper business of the Group e.g. Copper Cathode, Copper Rods, Precious metals and Di-ammonium phosphate (DAP) This is identified as separate segment based on its nature of products and different risks and returns.

Last year, there were four reporting segments, namely (1) Novelis; (2) Aluminium; (3) Copper; and (4) All Other Segments, reported by the Group. During the year, in line with the changes in the internal structure for reporting financial information to the entity's CODM, the Aluminium segment has been segregated into "Aluminium Upstream" and "Aluminium Downstream". Further, from this year the Group has also discontinued "All Other segment" since a subsidiary which was primarily used to represent this segment was disposed of by the Group in March 2022. The corresponding segment information of previous year has been restated accordingly.

The CODM primarily uses a measure of adjusted earnings from continuing operations before interest, tax and depreciation and amortization excluding certain items of income amd expenses (Adjusted EBITDA) The CODM also receives information about the segment's revenue, assets and liabilities on a regular basis. The information of Group's reportable segments is given below:

(A) Adjusted EBITDA:

For Aluminium Upstream, Aluminium Downstream and Copper segment, Adjusted EBITDA is the earnings from Continuing Operations before (a) finance cost, (b) tax, (c) depreciation and amortization, (d) impairment of non-current assets, (e) exceptional items, (f) investment income, (g) fair value gains/ (losses) on financial assets, (h) share in profit/ (loss) in equity accounted investments, (i) metal price lag (the base metal price movement between the procurement at transfer price from the Aluminium Upstream segment and sale price of the Aluminium Downstream segment), (j) corporate income/ expenses, and (k) certain unallocable income/ expenses) which are not related to the performance of the segment.

For Novelis segment, Adjusted EBITDA is the earnings from Continuing Operations before (a) depreciation and amortization; (b) finance cost - net; (c) interest income; (d) unrealized gains or losses on change in fair value of derivative instruments, net, except for foreign currency remeasurement hedging activities, which are included in Adjusted EBITDA; (e) impairment loss or reversal on non financial assets, net; (f) gain or loss on extinguishment of debt; (g) restructuring costs; (h) profit or loss on plant property and equipment and intangibles sold or discarded, net; (i) other costs/income, net; (j) litigation settlement, net of insurance recoveries; (k) sale transaction fees; (l) cumulative effect of accounting change, net of tax; (m) metal price lag; (n) exceptional income or cost; (o) business acquisition and other integration related costs; (p) purchase price accounting adjustments; and (q) gains or losses from discontinued operations, net of tax; (r) tax expenses/ (benefits), which is in line with the segment information for Novelis that has been reported in accordance with its US GAAP financial information filed with the Securities Exchange Commission of the United States of America. Recognition and measurement differences between US GAAP and Ind AS accounting policies have been separately presented as part of reconciliation in the segment information. Gains and losses on metal derivative contracts are not recognized in "Adjusted EBITDA" until realized.

(a) Adjusted EBITDA are as follows:

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Novelis	14,543	15,229
Aluminium Upstream	8,402	12,496
Aluminium Downstream	627	382
Copper	2,253	1,390
Total Adjusted EBIDTA	**25,825**	**29,497**

(b) Reconciliation of Adjusted EBITDA to Profit/ (Loss) before Tax from Continuing and Discontinued Operations are as follows:

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Total Adjusted EBIDTA	25,825	29,497
Finance Cost	(3,646)	(3,768)
Depreciation and Amortization Expense	(7,086)	(6,729)
Impairment (Loss)/ Reversal of Non-current Assets (Net)	(208)	(155)
Share in Profit/ (Loss) in Equity Accounted Investments (Net of Tax)	9	6
Exceptional Income / (Expenses) (Net) *	41	164
Interest Income	460	146
Dividend Income	34	32

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Gains/ (losses) on Financial Investments Measured at FVTPL (Net)	202	359
Adjustment on account of different accounting policies for Novelis Segment	103	323
Inter-segment Profit/ (Loss) Elimination (Net)	414	(264)
Other Unallocated Income/ (Expenses) (Net)	(2,907)	(37)
Profit/ (Loss) before Tax from Continuing Operations	13,241	19,574
Profit/ (Loss) before Tax from Discontinued Operations	-	(464)
Profit/ (Loss) before Tax from Continuing and Discontinued Operations	13,241	19,110

* Exceptional Income / (Expenses) for the year ended 31/03/2022, exclude ₹ 418 Crore which represents the principal portion of (a) PIS/ COFINS related tax credit income in Brazil ₹ 358 Crore (net of litigation cost of ₹ 9 Crore) and (b) tax rebates for sales to Manaus, Brazilian Free Trade Zone ₹ 60 Crore, as it is included in the results of Novelis segment.

(c) Following amount are either included in the measure of segment's Adjusted EBITDA reviewed by the CODM or are regularly provided to the CODM:

(₹ in Crore)

	Year ended 31/03/2023					Year ended 31/03/2022				
	Novelis	Aluminium Upstream	Aluminium Downstream	Copper	Total	Novelis	Aluminium Upstream	Aluminium Downstream	Copper	Total
Interest Income - (i)	-	27	2	70	99	-	22	2	55	79
Depreciation and Amortization Expense - (ii)	4,787	1,833	218	179	7,017	4,581	1,727	188	178	6,674
Impairment Loss/ (Reversal) of Non-Current Assets (Net)-(ii)	155	-	(12)	65	208	-	78	-	77	155

(i) Represents interest income from customers/ security deposits etc. which are included in the measure of segment Adjusted EBITDA.

(ii) Not included in the measure of segment Adjusted EBITDA but provided to the CODM.

(B) Segment Revenue:

For Aluminium Upstream, Aluminium Downstream and Copper segment, the segment revenue is measured in the same way as measured in the Statement of Profit and Loss.

In case of Novelis segment, CODM reviews its financial performance as those are reported under US GAAP, accordingly Novelis segment revenue is measured as the revenue reported under US GAAP financial reporting. The difference between 'Segment Revenue' reported under USGAAP and 'Revenue' reported under Ind AS together with any adjustment item identified between US GAAP and Ind AS is shown as "'Different accounting policies adjustment".

(a) Sales between operating segments are eliminated on consolidation. Segment Revenue and reconciliation of the same with total revenue as follows:

(₹ in Crore)

	Year ended 31/03/2023				Year ended 31/03/2022			
	Segment Revenue	Inter-segment Revenue	Different accounting policies adjustment	Revenue from external customers	Segment Revenue	Inter-segment Revenue	Different accounting policies adjustment	Revenue from external customers
Novelis	148,471	-	(3,839)	144,632	127,747	-	(1,804)	125,943
Aluminium Upstream	33,010	(7,038)	-	25,972	30,844	(8,352)	-	22,492
Aluminium Downstream	11,009	(93)	-	10,916	11,009	(1,083)	-	9,926
Copper	41,702	(20)	-	41,682	36,723	(25)	-	36,698
Total	234,192	(7,151)	(3,839)	223,202	206,323	(9,460)	(1,804)	195,059

(b) Revenue of ₹ 23,632 Crore (31/03/2022: ₹ 22,037 Crore), which is more than 10% of Group's total "Revenue from Operations" are derived from a single external customer. This revenue is attributed to Novelis segment.

(c) The Group is primarily engaged in the Aluminium and the Copper Business. The Group's revenue from operations by nature of business are given below:

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Aluminium Business	181,520	158,361
Copper Business	41,682	36,698
	223,202	195,059

(d) The Group's operations are located in India and outside India. The amount of its revenue from external customers analysed by the country in which customers are located irrespective of origin of the goods or services are given below:

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
India *	59,613	46,553
Outside India	163,589	148,506
	223,202	195,059

* Includes Export Incentive and other benefits, Refer Note 28(f).

(C) Segment Assets:

For Aluminium Upstream, Aluminium Downstream and Copper segment, assets are allocated based on the operations of the segment and the physical location of the asset. However, certain assets like investments, equity accounted investments, loans, assets classified as held for sale, current and deferred tax assets are not considered to be segment assets. Further, corporate administrative assets of an entity having operation which are part of more than one reporting segments are not allocated to individual segments as they are generally managed at corporate levels and are not linked to any specific segment.

For Novelis segment, segment assets of are measured at the amount of total assets of Novelis Inc. as reported under US GAAP financial reporting. The difference between 'Segment Assets' reported under USGAAP and 'Total Assets' reported under Ind AS together with any adjustment items identified between US GAAP and Ind AS is presented as "Adjustment on account of different accounting policies for Novelis Segment" as part of reconciliation.

(a) Segment assets and reconciliation of the same with total assets are as follows:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Novelis	118,015	114,539
Aluminium Upstream	48,277	46,203
Aluminium Downstream	6,405	5,096
Copper	17,892	19,407
Total Segment Assets	**190,589**	**185,245**
Investment Properties	20	21
Investments (Non-Current and Current)	13,948	14,046
Equity Accounted Entities	79	51
Adjustment on account of different accounting policies for Novelis Segment	13,448	12,743
Assets of Discontinued Operations	-	46
Other Corporate Assets	6,733	10,910
Total Assets	224,817	223,062

b) During the year ended March 31, 2023, capital expenditure relating to Novelis, Aluminium Upstream, Aluminium Downstream and Copper segments are ₹ 6313 Crore, ₹ 1746 Crore, ₹ 876 Crore and ₹ 319 Crore, respectively (31/03/2022: ₹ 3321 Crore, ₹ 1092 Crore, ₹ 425 Crore and ₹ 225 Crore, respectively)

(c) Investment in associates and joint ventures accounted for by the equity method are not allocated to any of the reportable segment.

(d) The total of Non-Current assets excluding goodwill, financial assets, equity accounted investments and deferred tax assets analysed by the country in which assets are located are given below.

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
India	44,602	43,540
Outside India - (i)	52,275	45,999
	96,877	89,539

(i) Major geography wise break up of non-current asset located outside India:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
United States	27,158	22,342
Asia and Other Pacific	7,499	7,342
Brazil	7,324	6,714
Canada	410	363
Germany	4,473	4,294
Rest of Europe	5,411	4,944
	52,275	45,999

(D) Segment Liabilities:

For Aluminium Upstream, Aluminium Downstream and Copper segment, liabilities are allocated based on the operations of the segment. Items like borrowings, current and deferred tax liabilities, liabilities associated with disposal group classified as held for sale etc. are not considered to be segment liabilities. Further, corporate administrative liabilities of an entity having operation which are part of more than one reporting segments are not allocated to individual segments as they are generally managed at corporate levels and does not linked to any specific segment.

In case of Novelis segment, segment liabilities are measured at the amount of all the liabilities of Novelis Inc., except borrowings, as reported under US GAAP financial reporting. The difference between 'Segment Liabilities' reported under USGAAP and 'Total Liabilities' reported under Ind AS, together with any adjustment items identified between US GAAP and Ind AS is presented as "Adjustment on account of different accounting policies for Novelis Segment" as part of reconciliation.

(a) Segment liabilities and reconciliation of the same with total liabilities as follows:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Novelis	43,298	53,458
Aluminium Upstream	5,656	8,650
Aluminium Downstream	1,062	756
Copper	13,376	11,541
Total Segment Liabilities	**63,392**	**74,405**
Adjustment on account of different accounting policies for Novelis Segment	1,247	1,454
Liabilities of Discontinued Operations	-	93
Borrowings (Non-Current and Current)	58,335	63,235
Other Corporate Liabilities	7,026	5,673
Total Liabilities	130,000	144,860

45. Related Party Transactions

The Group's related parties principally consist of its associates, joint ventures, other related parties and its key managerial personnel. The Group routinely enters into transactions for sale and purchase of products and rendering and receiving services with these related parties. Transactions and balances between the parent, subsidiaries and fellow subsidiaries and trusts, which are related parties of the Company, have been eliminated on consolidation. List of the related parties required to be given as per Ind AS 24 - Related Party Disclosure, and the details of transactions and balances between the Group and these related parties are as follows:

(a) List of Related Parties with joint control and significant influence:

	Name of the Related Party	Relationship#
1	Aditya Birla Science & Technology Company Pvt. Limited	Associate
2	Aditya Birla Renewables Subsidiary Limited	Associate
3	Aditya Birla Renewables Utkal Limited	Associate
4	Aditya Birla Renewables Solar Limited	Associate
5	France Aluminum Recyclage SPA.	Associate
6	Deutsche Aluminum Verpachung Recycling GMBH	Associate
7	MNH Shakti Limited	Joint Venture
8	Hydromine Global Minerals (GMBH) Limited	Joint Venture

\# For country of incorporation, place of operation and ownership interest, refer Note 51 (D).

(b) Key Managerial Personnel:

	Name of the Related Party	Relationship
1	Mr. Satish Pai - Managing Director	Executive Director
2	Mr. Praveen Maheshwari - Whole time Director & Chief Financial Officer	Executive Director
3	Mr. Kumar Mangalam Birla	Non Executive Director
4	Smt. Rajashree Birla	Non Executive Director
5	Mr. D Bhattacharya (Resigned w.e.f. March 02, 2022)	Non Executive Director
6	Mr. A.K.Agarwala	Non Executive Director
7	Mr. K.N. Bhandari	Non Executive Director
8	Mr. Y.P. Dandiwala	Non Executive Director
9	Mr. Anant Maheshwari	Non Executive Director
10	Ms. Alka Bharucha	Non Executive Director
11	Dr. Vikas Balia	Non Executive Director
12	Mr. Sudhir Mital	Non Executive Director

(c) Other Related Parties with whom there were transactions during the year:

	Name of the Related Party	Relationship
1	Hindalco Employee's Gratuity Fund, Kolkata ^	Post-Employment Benefit Plan
2	Hindalco Employee's Gratuity Fund, Renukoot ^	Post-Employment Benefit Plan
3	Hindalco Employee's Provident Fund Institution, Renukoot ^	Post-Employment Benefit Plan
4	Hindalco Superannuation Scheme, Renukoot ^	Post-Employment Benefit Plan
5	Hindalco Industries Limited Employees' Provident Fund II ^	Post-Employment Benefit Plan
6	Hindalco Industries Limited Senior Management Staff Pension Fund II ^	Post-Employment Benefit Plan
7	Aditya Birla Management Corporation Private Limited @	Other related party in which Director is interested

@ The Company and its subsidiary, Utkal Alumina International Limited, are members of Aditya Birla Management Corporation Private Limited (ABMCPL), a company limited by guarantee formed for the purpose of its members to mutually avail and share common facilities, expertise and other support charged on cost basis.

^ For transactions with funds covered under Post-Employment Benefit Plan please Refer Note 25

(d) The following transactions were carried out with the related parties in the ordinary course of business:**

(₹ in Crore)

	Nature of Transaction with Related Parties	Note	Year ended 31/03/2023	Year ended 31/03/2022
(i)	**Sales of Goods**	28	**2**	**-**
	Aditya Birla Renewables Subsidiary Limited		2	-
(ii)	**Services rendered**	28	**11**	**11**
	Aditya Birla Management Corporation Private Limited		11	11
(iii)	**Interest received**	29	**2**	**2**
	Aditya Birla Science & Technology Company Private Limited		2	2
(iv)	**Purchase of Goods**		**36**	**25**
	Aditya Birla Renewables Subsidiary Limited		13	15
	Aditya Birla Renewables Solar Limited		20	7
	Aditya Birla Renewables Utkal Limited		3	3
(v)	**Services received**		**853**	**619**
	Aditya Birla Science & Technology Company Private Limited		21	17
	Aditya Birla Management Corporation Private Limited		832	602
(vi)	**Investments made**	51D	**17**	**8**
	Aditya Birla Renewables Solar Limited		17	8
(vii)	**Return of Capital**		**-**	**8**
	MNH Shakti Limited		-	8
(viii)	**Deposits, Loans and Advances received back from**	8	**7**	**4**
	Aditya Birla Science & Technology Company Private Limited		7	4
(ix)	**Reimbursement of Expenses from**		**1**	**-**
	Aditya Birla Management Corporation Private Limited		1	-
(x)	**Reimbursement of Expenses to**		**1**	**-**
	Aditya Birla Science & Technology Company Private Limited		1	-

(e) Outstanding Balances# **

(₹ in Crore)

	Nature of Transaction/Relationship	Note	As at 31/03/2023	As at 31/03/2022
(i)	**Payables**	22	**103**	**81**
	Aditya Birla Renewables Subsidiary Limited		1	1
	Aditya Birla Renewables Solar Limited		3	-
	Aditya Birla Renewables Utkal Limited		1	1
	Aditya Birla Management Corporation Private Limited		98	79
(ii)	**Loans, Deposits and Advances given**	8, 10	**123**	**142**
	Aditya Birla Science & Technology Company Private Limited		29	36
	Aditya Birla Management Corporation Private Limited		94	106
(iii)	**Receivable against reimbursement**		**1**	**-**
	Aditya Birla Management Corporation Private Limited		1	-

all outstanding balances are unsecured and are payable/ receivables in cash.

** Related parties having transactions / Balances less than ₹ 0.49 Crore are not disclosed above because of rounding off.

(f) Compensation of Key Managerial Personnel (KMP) of the Company

(₹ in Crore)

	Nature of Transaction/Relationship	Year ended 31/03/2023	Year ended 31/03/2022
(I)	**Remuneration of Executive Directors - (i) and (ii)**	**46**	**54**
	Short term employment benefit - (iv)	44	52
	Post employment benefits	2	2
(II)	**Remuneration to Non Executive Director**		
	Director Commission and Sitting Fees	**6**	**12**
	Mr. Kumar Mangalam Birla	-	-
	Smt. Rajashree Birla	3	4
	Mr. A.K. Agarwala - (iv)	-	1
	Mr. K.N. Bhandari	1	1
	Mr. Y.P. Dandiwala	1	1
	Ms. Alka Bharucha	-	-
	Dr. Vikas Balia	1	1
	Mr. Sudhir Mital	-	-
	Mr. Anant Maheshwari	-	-
	Mr. D Bhattacharya - (iii), (iv)	-	4

(i) Excludes amortisation of fair value of employee share-based payments under Ind AS 102.

(ii) As the liabilities for defined benefit plans and leave entitlements are provided on actuarial basis for the Company as a whole, the amounts pertaining to Key Management Personnel are not included.

(iii) The Board approved pension of Mr. D. Bhattacharya of ₹ 0.335 Crore per month and other post-employment benefits for his past service when he was the Managing Director of the Company. The present value of the above pension liability determined based on the actuarial valuation is accounted by the Company in the financial statements. Amount charged as expenses in the statement of profit and loss such post-employment benefit amounting to ₹ 3 Crore, included above, and does not include the impact of acturial (gains)/losses recognised in other comprehensive income.

(iv) includes director fees received from the foreign susbsidiary.

46. Contingent Liabilities and Commitments

Refer Note 1B(K) for accounting policy on Provisions and Contingencies

(A) Contingent Liabilities

The Group is party to, and may in the future be involved in, or subject to, disputes, claims and proceedings arising in the ordinary course of our business, including some we assert against others, such as environmental, health and safety, product liability, employee, tax, personal injury and other matters. The Group has established a liability with respect to contingencies for which a loss is probable and estimable. While the ultimate resolution of and liability and costs related to these matters cannot be determined with certainty, the Management does not believe any of these pending actions, individually or in the aggregate, will materially impact our operations or materially affect our financial condition or liquidity.

The evaluation model includes all asserted and unasserted claims that can be reasonably identified including claims relating to our responsibility for compliance with environmental, health and safety laws and regulations in the jurisdictions in which the Group operate or formerly operated. The estimated costs in respect of such reported liabilities are not offset by amounts related to insurance or indemnification arrangements unless otherwise noted.

The amount for which the Group is contingently liable are given below:

(₹ in Crore)

		As at 31/03/2023	As at 31/03/2022
(a)	**Claims against the Group not acknowledged as Debt**		
	Tax Matters - Direct Taxes - (i)	5	5
	Tax Matters - Indirect Taxes - (ii)	1,082	693
	Legal and Other Matters - (iii)	204	224
	(i) Tax Matters - Direct Taxes: The Group has ongoing disputes with direct tax authorities in various tax jurisdictions relating to tax treatment of certain items in the Company and some of its subsidiaries. These mainly include claims disallowed, tax treatment of certain items of income/expense, use of certain tax incentives or allowances, etc. in their tax computation.		
	(ii) Tax Matters - Indirect Taxes: There are pending litigations for various matters relating to customs, excise duty and service tax, VAT across various entities in the Group involving demands, including interest and penalties.		
	(iii) Legal and Other Matters: In addition to above matters certain Group companies are involved in several other legal claims including revenue matters, environmental matters, civil and Labour matters.		
	It is not practicable for the Group to estimate the timing of cash outflows, if any, in respect of the above matters, pending resolution of the respective proceedings.		
(b)	**Other money for which the Group is contingently liable:**		
	Customs Duty on Raw Materials imported under Advance License, against which export obligation is to be fulfilled.	14	24
(c)	For contingent liabilities relating to associates and joint ventures, Refer Note 51(D).		

(B) Commitments

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
The Group's commitments with regard to various items in respect of:		
(a) Estimated amount of contracts remaining to be executed on capital account and not provided for	2,588	1,122
(b) Purchase commitments in relation to Materials and Services (net of advances)	130,268	95,946

47. Capital Management

The Group's objective to manage its capital is to ensure continuity of business while at the same time provide reasonable returns to its various stakeholders but keep associated costs under control. In order to achieve this, requirement of capital is reviewed periodically with reference to operating and business plans that take into account capital expenditure and strategic investments. Apart from internal accrual, sourcing of capital is done through judicious combination of equity and borrowing, both short term and long term. Net debt (total borrowings + lease liabilities) to equity ratio is used to monitor capital. No changes were made to the objectives, policies or processes for managing capital during the year ended 31/03/2023 and 31/03/2022.

	As at 31/03/2023	As at 31/03/2022
Debt Equity Ratio (in times)	0.64	0.82

As at March 31, 2023 and March 31, 2022, the Group was in compliance with all of its debt covenants for borrowings.

48. Financial Instruments

Refer Note 1B(P) for accounting policy on Financial Instruments

(a) Fair Value Measurements

(i) The following table shows the carrying amount of financial assets and financial liabilities by category.

(₹ in Crore)

	Note	As at 31/03/2023			As at 31/03/2022		
		Amortised Cost	Fair value through OCI	Fair value through P&L	Amortised Cost	Fair value through OCI	Fair value through P&L
Financial Assets							
Investments in Equity Instruments #	7						
Quoted Equity Instruments	-	-	7,729	-	-	8,239	-
Unquoted Equity Instruments	-	-	129	-	-	48	-
Investments in Preference Shares	7	-	-	24	-	-	24
Investments in Debt Instruments	7						
Mutual Funds	-	-	-	5,625	-	-	5,230
Bonds & Debentures	-	-	-	130	-	-	152
Government Securities	-	-	303	-	-	375	-
Commercial Paper	-	-	-	97	-	-	-
Cash & Cash Equivalents	15	-	-	-	-	-	-
Cash & Bank	-	12,840	-	-	10,977	-	-
Liquid Mutual Funds	-	-	-	-	-	-	662
Bank Balances other than cash & cash equivalents	16	2,528	-	-	5,753	-	-
Trade receivables *	14	2,337	13,486	391	2,060	18,280	736
Loans	8	55	-	-	57	-	-
Derivatives	9	-	-	1,891	-	-	3,671
Other financial assets	10	4,466	-	-	2,599	-	380
Total Financial Assets		**22,226**	**21,647**	**8,158**	**21,446**	**26,942**	**10,855**
Financial Liabilities							
Borrowings							
Borrowings, Non-Current	20A	51,434	-	-	51,635	-	-
Borrowings, Current	20B	6,901	-	-	11,600	-	-
Lease Liabilities	3B	1,956	-	-	1,251	-	-
Supplier's Credit	21	1,035	-	4,600	-	-	2,456
Trade Payables	22	32,103	-	3,757	36,309	-	5,073
Derivatives	9	-	-	1,313	-	-	11,121
Other financial Liabilities	23	3,120	-	-	3,746	-	-
Total Financial Liabilities		**96,549**	**-**	**9,670**	**104,541**	**-**	**18,650**

* As of March 31, 2023, The Group determined that ₹ 13,486 crores of outstanding trade receivables should be classified as Fair value through other comprehensive income ("FVTOCI") rather than at amortized cost. It was determined that ₹ 18,280 crores of trade receivables had been inadvertently classified as amortized cost instead of at FVTOCI as of March 31, 2022. This did not materially impact the consolidated balance sheet, statement of profit and loss, statement of changes in equity, or statement of cash flows for the year ended March 31, 2022. It was mainly related to a disclosure within this footnote and did not materially impact the overall financial position or operations of the Group, since all trade receivables have a short maturity period i.e., less than one year.

The Group had acquired certain equity instruments for purpose of holding for a longer duration and not for the purpose of selling in near term for short term profit. Such instruments have been categorized as FVTOCI.

(ii) The following table shows fair value for financial assets and financial liabilities measured at amortised cost.

(₹ in Crore)

	Note	As at 31/03/2023 Carrying Value	As at 31/03/2023 Fair Value	As at 31/03/2022 Carrying Value	As at 31/03/2022 Fair Value
Financial Assets					
Loans, Non-Current	8	47	45	50	48
Other Financial Assets, Non-Current	10	3,069	3,059	405	400
Financial Liabilities					
Non convertible debentures (NCDs)	20A	699	696	5,999	6,025
Borrowings, Non-Current #	20A	52,082	49,929	51,815	51,642
Other Financial Liabilities, Non-Current	23	207	207	139	139

Fair values for current financial assets and financial liabilities have not been disclosed because their carrying amount are a reasonable approximation of their fair values.

Carrying amount includes current portion of debt shown under short term borrowing.

Fair Value of borrowings does not include interest accrued but not due.

(iii) Derecognition of Investments in Equity Instruments designated at FVTOCI

(₹ in Crore)

	Year ended 31/03/2023		Year ended 31/03/2022	
	Fair value on the date of derecognition	Cumulative gain or loss on disposal	Fair value on the date of derecognition	Cumulative gain or loss on disposal
Investment in Equity Instrument- Quoted				
National Aluminium Company Limited	-	-	388	303
Total	**-**	**-**	**388**	**303**

(b) Fair Value Hierarchy

The following table shows the details of financial assets and financial liabilities, including their levels in the fair value hierarchy.

(i) Financial assets and liabilities measured at fair value - Recurring fair value

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial Assets							
Investments in Equity Instruments	7						
Quoted Equity Instruments		7,729	-	-	8,239	-	-
Unquoted Equity Instruments		-	-	129	-	-	48
Investments in Preference Shares	7	-	24	-	-	24	-
Investments in Debt Instruments	7	-	-	-	-	-	-
Mutual Funds		5,625	-	-	5,228	2	-
Bonds & Debentures		-	100	30	-	-	152
Government Securities		202	53	48	235	140	-
Commercial Paper		-	-	97			
Cash & Cash Equivalents	15						
Liquid Mutual Funds		-	-	-	662	-	-
Trade Receivables	14	-	13,877	-	-	19,016	-
Derivatives	9	-	1,891	-	-	3,671	-
Other Financial Assets	10	-	-	-	-	-	380
Total Financial Assets		**13,556**	**15,945**	**304**	**14,364**	**22,853**	**580**
Financial Liabilities							
Derivatives	9	-	1,313	-	-	11,121	-
Supplier's credit	21	-	4,600	-	-	2,456	-
Trade Payables	22	-	3,757	-	-	5,073	-
Total Financial Liabilities		**-**	**9,670**	**-**	**-**	**18,650**	**-**

(ii) Financial assets and liabilities measured at amortised cost for which fair value disclosure is given

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial Assets							
Loans and **Other Financial Assets**	8	-	-	3,104	-	-	448
Financial Liabilities							
Non convertible debentures (NCDs)	20A	-	696	-	-	6,025	-
Borrowings, Non-Current #	20A	-	49,929		-	51,642	-
Other Financial Liabilities, Non - Current	23	-	207	-	-	139	-

Level 1:

Hierarchy includes financial instruments valued using quoted market prices. Listed equity instruments and traded debt instruments which are traded in the stock exchanges are valued using the closing price at the reporting date. Mutual funds are valued using the closing NAV.

Level 2:

Hierarchy includes financial instruments that are not traded in active market. This includes over the counter (OTC) derivatives, close ended mutual funds and debt instruments valued including quoted using observable market data such as yield etc. of similar instruments traded in active market. All derivatives are reported at discounted values hence are included in Level 2. Borrowings have been fair valued using credit adjusted interest rate prevailing on the reporting date. Trade Receivables and Payables that are realigned based on forward LME/LBMA price movements have been included in Level 2 hierarchy.

Level 3:

If one or more significant inputs is not based on observable market data, the instrument is included in level 3. This is the case for unlisted equity instruments and certain debt instruments including quoted which are valued using assumptions from market participants. Valuations for certain derivatives for which forward prices are not observable, have been valued using forward prices for a nearby geographical market and adjusted for historical spreads between cash prices of the two markets.

(iii) Disclosure of changes in level 3 items for the period ended 31/03/2023 and 31/03/2022 respectively

(₹ in Crore)

	Unquoted Equity Instruments	Unquoted Debt Instruments	Derivatives	Contingent Consideration	Total
As at April 01, 2021	**30**	**87**	**(16)**	**819**	**920**
Acquisitions	22	-	-	-	22
Sale	-	(10)	(44)	-	(54)
Sale of Business	-	-	-	-	-
Gain/(losses) recognised in Profit or loss	-	8	47	-	55
Gain/(losses) recognised in OCI	(4)	-	13	-	9
Mark down to fair value	-	-	-	(454)	(454)
Exchange difference	-	-	-	15	15
Transfer from Level 1 & 2	-	67	-	-	67
Transfer to Level 1 & 2	-	-	-	-	-

(₹ in Crore)

	Unquoted Equity Instruments	Unquoted Debt Instruments	Derivatives	Contingent Consideration	Total
As at March 31, 2022	**48**	**152**	**-**	**380**	**580**
Acquisitions	65	96	-	-	161
Sale	-	(17)	-	-	(17)
Convert to notes Receivable	-	-	-	(380)	(380)
Sale of Business	-	-	-	-	-
Gain/(losses) recognised in Profit or loss	-	(3)	-	-	(3)
Gain/(losses) recognised in OCI	14	-	-	-	14
Mark down to fair value	-	-	-	-	-
Exchange difference	2	-	-	-	2
Transfer from Level 1 & 2	-	48	-	-	48
Transfer to Level 1 & 2	-	(101)	-	-	(101)
As at March 31, 2023	**129**	**175**	**-**	**-**	**304**
Unrealised Gain/ (loss) recognised in the statement of profit and loss relating to assets and liabilities held at the end of reporting period:					
As at March 31, 2023	-	4	-	-	4
As at March 31, 2022	-	9	-	-	9

Transfers from level 1 and 2 to level 3 and out of level 3 for unquoted debt instruments is based on unavailability/availability of market observable inputs as on the reporting date. The Group's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period.

Valuation Process

Some of the Group's assets and liabilities are measured at fair value for financial reporting purposes. The Management of the Group has set up a team in the finance department which performs the valuation of financial assets and liabilities.

In estimating the fair value of an asset or a liability, the Group uses market-observable data to the extent it is available. Where Level 1 inputs are not available, the Group engages third party qualified valuers to perform the valuation. The team works closely with the qualified external valuers to establish the appropriate valuation techniques and inputs to the model. The team reports findings to the Management of the Group to explain the cause of fluctuations in the fair value of the assets and liabilities.

Valuation techniques used for valuation of instruments categorised as level 3.

For valuation of investments in equity shares which are unquoted, peer comparison has been performed wherever available. Valuation has been primarily done by considering the net worth of the company and price to book multiple to arrive at the fair value. In cases where income approach was feasible valuation has been arrived using the earnings capitalisation method. For inputs that are not observable for these instruments, certain assumptions are made based on available information. The most significant of these assumptions are the discount rate and credit spreads used in the valuation process.

For valuation of investments in debt securities categorised as level 3, market polls which represent indicative yields are used as assumptions by market participants when pricing the asset.

There were no significant inter-relationships between unobservable inputs that materially affect fair values.

Forward prices are not observable for Oswego, New York facility and electricity swaps which is derived based on forward prices of a geographically nearby market with adjustments for historical spreads of cash prices between the two markets. Valuations are adjusted for various factors such as liquidity, bid/offer spreads and credit considerations.

Contingent Consideration is recognised based on discounted value of amount estimated to be receivable. Discount rate used for determination are based on credit risk of the purchaser. Refer Note 53 on Discontinued Operations.

49. Financial Risk Management

Refer Note 1B(Q) for accounting policy on Derivatives and Hedge Accounting

The Group's activities exposes it to various risks such as market risk, liquidity risk and credit risk. This section explains the risks which the Group is exposed to and how it manages the risks.

(a) Market Risk

(i) Commodity Price Risk

Hindalco's India Operations consist of two businesses – Copper Business and Aluminium Business. The Copper Business works under a "Custom Smelting" model wherein the focus is to improve the processing margin. The timing mis-match risk between the input and output price, which is linked to the same international pricing benchmark, is eliminated through use of derivatives. This off-set hedge model (through use of derivatives) is used to manage the timing mis-match risk for both Commodity (Copper and Precious Metals) and Currency Risk (primarily, USD/INR). The Copper Business also has a portion of View Based exposure for both Commodity and Currency, beyond the above timing mis-match risk. Lower Copper Prices, Stronger USD/INR exchange rate and Higher "Other Input" Prices (eg. Coal, furnace oil, natural gas etc) are the major price risks that adversely impact the business. Here, the Group may use derivative instruments, wherever available, to manage these pricing risks. A variety of factors, including the risk appetite of the business and price view, are considered while taking Hedging Decisions. Such View based hedges are usually done for the next 1-12 quarters.

The Aluminium Business is a vertically integrated business model wherein the input and output pricing risks are independent of each other, i.e. – are on different pricing benchmarks, if any. Here, the Group may use derivative instruments, wherever available, to manage its pricing risks for both input and output products. Lower Aluminium Prices, weaker USD/INR exchange rate and Higher Input Prices (e.g. Alumina, Furnace Oil, Coal, Electricity, Natural Gas, Diesel Fuel) are the major price risks that adversely impact the business. Hedging decisions are based on a variety of factors, including risk appetite of the business and price View. Such Hedge decisions are usually done for the next 1-12 quarters.

Embedded Derivatives

Copper concentrate is purchased on future pricing model based on month's average LME (in case of copper) / LBMA (in case of gold and silver). Since, the value of the concentrate changes with response to change in commodity pricing indices, embedded derivatives (ED) is identified and segregated in the contract. The ED so segregated, is treated like commodity derivative and qualify for hedge accounting. These derivatives are put into a Fair Value hedge relationship with respect to inventory.

Novelis business model is conducted under a conversion model which allows us to pass through increases or decreases in the price of aluminium to our customers . Derivative instruments are used to preserve conversion margins and manage timing differences associated with metal price lag related to base aluminium price. Novelis also uses several sources of energy such as natural gas, electricity, fuel oil and transport oil in manufacturing and delivery of its products.

(a) The table below summarises the gain/(loss) impact on account of increase in the commodity prices on the Group's equity and profit for the period.

(₹ in Crore)

Commodity Risk	Price Index	Increase in Rate/Price	Year ended 31/03/2023		Year ended 31/03/2022	
			Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax	Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax
Aluminium	LME	10%	(219)	(1,146)	(34)	(2,528)
Copper	LME	10%	(682)	-	(847)	-
Gold	LBMA/ MCX	10%	(159)	-	(136)	-
Silver	LBMA	10%	-	-	(10)	-
Zinc	LME	10%	3	-	2	-
Furnace Oil	AG Platts	10%	-	10	-	-
Natural Gas	ICE Brent/ Henry NYMEX	10%	1	12	1	29
Diesel Fuel	EIA Flat Tax On- Highway	10%	5	3	-	12

Decrease in prices by 10% will have equal and opposite impact in financial statements. Sensitivity analysis has been computed by stress testing the market price of the underlying price index on the outstanding derivative position as on the reporting date by assuming all other factors constant.

(ii) Foreign Currency Risk

Exchange rate movements, particularly the United States Dollar (USD) and Euro (EUR) against Indian Rupee (INR) and Euro, the Swiss franc, the Brazilian real and the Korean won against the U.S. dollar have an impact on our operating results.

In India, in addition to the foreign exchange inflow from exports, the commodity prices in the domestic market are derived based on the landed cost of imports where LME prices and USD/INR exchange rate are the main factors. In case of conversion business, the objective is to match the exchange rate of outflows and related inflows through derivative financial instruments. With respect to Aluminium business where costs are predominantly in INR, the strengthening of INR against USD adversely affects the profitability of the business and benefits when INR depreciates against USD. The Group enters into various foreign exchange contracts to protect profitability. The Group also enters into various foreign exchange contracts to mitigate the risk arising out of foreign currency exchange rate movement in foreign currency contracts executed with foreign suppliers to procure capital items for its project activities.

In Europe, where the Group has predominantly local currency selling prices and operating costs, it benefits as the Euro strengthens, but is adversely affected as the Euro weakens. For Swiss operations, where operating costs are incurred primarily in the Swiss franc and a large portion of revenues are denominated in the Euro, the Group benefits as the franc weakens but is adversely affected as the franc strengthens. In South Korea, for local currency operating costs and U.S. dollar denominated selling prices for exports, the Group benefits as the Korean won weakens but are adversely affected as the Korean won strengthens. In Brazil, where the Group has predominately U.S. dollar selling prices and local currency manufacturing costs, it benefits as the Brazilian real weakens, but is adversely affected as the Brazilian real strengthens.

(a) The Group's exposure to foreign currency risk at the end of the reporting period expressed in INR , is as follows:

(₹ in Crore)

Unhedged Foreign Currency Payable / (Receivable)

Currency Pair	As at 31/03/2023	As at 31/03/2022
USD	208	-
GBP	(166)	281
NOK	1	1
CAD	(23)	19
AUD	-	-
CHF	1	348
BRL	-	-
JPY	(8)	(3)
EUR	46	
	59	**646**

Assets and liabilities that are naturally hedged against future transactions are excluded for the purpose of above disclosure.

The table below summarises the gain/(loss) impact on account of increase in the exchange rates on the Group's equity and profit for the period on total foreign currency receivable and payable as at balance sheet date:

(₹ in Crore)

Currency Pair	Increase in Rate/Price	Year ended 31/03/2023		Year ended 31/03/2022	
		Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax	Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax
USD_INR	10%	(126)	(1,271)	(13)	(1,158)
EUR_USD	10%	140	211	121	89
BRL_USD	10%	(25)	(45)	80	117
KRW_USD	10%	123	209	138	322
CAD_USD	10%	(13)	(18)	9	15
GBP_USD	10%	(377)	-	304	-
CHF_USD	10%	1	1	(27)	25
CNY_USD	10%	14	-	12	-
GBP_CHF	10%	(6)	-	6	-
EUR_CHF	10%	290	53	244	45
EUR_GBP	10%	210	-	170	-
EUR_CNY	10%	9	-	1	-
EUR_KRW	10%	3	-	1	1
EUR_INR	10%	(1)	-	-	-
GBP_INR	10%	-	-	-	-
NOK_INR	10%	-	-	-	-
CHF_INR	10%	-	-	-	-

Decrease in prices by 10% will have equal and opposite impact in financial statements.Sensitivity analysis has been computed by stress testing the market price of the underlying currency index on the outstanding derivative position and unhedged exposure as on the reporting date by assuming all other factors constant.

(iii) Interest Rate Risk

(a) The Group is exposed to interest rate risk on financial liabilities such as borrowings, both short-term and long-term. It maintains a balance of fixed and floating interest rate borrowings and the proportion is determined by current market interest rates, projected debt servicing capability and view on future interest rates. Such interest rate risk is actively evaluated and interest rate swap is taken whenever considered necessary.

The Group is also exposed to interest rate risk on its financial assets that include fixed deposits, bonds , debentures, commercial paper, mutual funds and liquid investments comprising mainly mutual funds (which are part of cash and cash equivalents). Since, all these are generally for short durations, the Group believes it has manageable and limited interest rate risk.

The table below summarises the (gain)/loss impact on account of increase in the benchmark interest rates on the Group's equity and profit for the period.

(₹ in Crore)

	Increase in Rate/Price	Year ended 31/03/2023		Year ended 31/03/2022	
		Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax	Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax
Interest rate on floating rate borrowings	100 bps	(191)	-	(193)	-

Decrease in rates by 100 bps will have equal and opposite impact in financial statements.

(b) Interbank Offered Rates (IBOR) Reform

The following table contains details of all financial instruments that are referenced to IBOR which have not yet transitioned to an alternative interest rate benchmark (ARR):

Non-derivative assets and liabilities	IBOR Exposure	Carrying Value (₹ in Crore)	Alternative Interest Rate Benchmark
Long Term Foreign Currency Borrowings	USD 1M-6M LIBOR	10,083	Secured Overnight funding Rate (SOFR)
Short Term Foreign Currency Borrowings	USD 1M LIBOR	3,804	

Derivatives

The Group has interest rate hedges outstanding as on the reporting date, accordingly IBOR related impact on hedge accounting including discounting of other derivatives is not expected to be material.

(iv) Equity Securities Price Risk

The Group's exposure to equity securities price risk arises from movement in market price of related securities classified either as fair value through OCI or as fair value through profit and loss. The Group manages the price risk through diversified portfolio.

The table below summarises the gain/(loss) impact on account of increase in the equity share prices on the Group's equity and profit for the period.

(₹ in Crore)

	Increase in Rate/Price	Year ended 31/03/2023		Year ended 31/03/2022	
		Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax	Gain/(Loss) in Statement of Profit & Loss post Tax	Gain/(Loss) in Other Components of Equity Post Tax
Investment in Equity securities	10%	-	683	-	728

Decrease in prices by 10% will have equal and opposite impact in financial statements.Sensitivity analysis has been computed by stress testing the market price of the underlying price index on the investment portfolio as on the reporting date.

(b) Liquidity Risk

The Group determines its liquidity requirements in the short, medium and long term. This is done by drawing up cash forecast for short and medium term requirements and strategic financing plans for long term needs.

The Group manages its liquidity risk in a manner so as to meet its normal financial obligations without any significant delay or stress. Such risk is managed through ensuring operational cash flow while at the same time maintaining adequate cash and cash equivalent position. The management has arranged for diversified funding sources and adopted a policy of managing assets with liquidity in mind and monitoring future cash flows and liquidity on a regular basis. Surplus funds not immediately required are invested in certain investments (including mutual fund) which provide flexibility to liquidate at short notice and are included in current investments and cash and cash equivalents. Besides, it generally has certain undrawn credit facilities which can be accessed as and when required; such credit facilities are reviewed periodically.

The Group has developed appropriate internal control systems and contingency plans for managing liquidity risk. This incorporates an assessment of expected cash flows and availability of alternative sources for additional funding, if required.

(i) Financing Arrangement

The Group had access to the following undrawn borrowing facilities at the end of the reporting period:

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Bank Overdraft and other facilities	13,285	15,197

Undrawn limit has been calculated based on the available drawing power and sanctioned amount at each reporting date.

(ii) Maturity Analysis

The table below shows the Group's financial liabilities into relevant maturity groupings based on their contractual maturities for all non-derivative financial liabilities and net settled derivative financial instruments. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

(₹ in Crore)

Contractual maturities of financial liabilities as at March 31, 2023	Note No	Less than 1 Year	Between 1 and 2 Years	Between 2 and 5 Years	Over 5 Years	Total	Carrying Value
Non Derivatives							
Borrowings #	20A, 20B	9,519	9,751	20,489	28,131	67,890	58,335
Lease liabilities	3B	507	331	576	1,244	2,658	1,956
Supplier's credit	21	5,701	-	-	-	5,701	5,635
Trade payables	22	35,860	-	-	-	35,860	35,860
Other financial liabilities	23	2,598	44	16	146	2,804	3,120
Total Non Derivative liabilities		**54,185**	**10,126**	**21,081**	**29,521**	**114,913**	**104,906**
Derivatives (net settled)	9	1,268	59	1	-	1,328	1,313
Total Derivative liabilities		**1,268**	**59**	**1**	**-**	**1,328**	**1,313**

(₹ in Crore)

Contractual maturities of financial liabilities as at March 31, 2022	Note No	Less than 1 Year	Between 1 and 2 Years	Between 2 and 5 Years	Over 5 Years	Total	Carrying Value
Non Derivatives							
Borrowings #	20A, 20B	14,132	3,099	23,001	39,516	79,748	63,235
Lease liabilities	3B	348	360	461	1,042	2,211	1,251
Supplier's credit	21	2,459	-	-	-	2,459	2,456
Trade payables	22	41,382	-	-	-	41,382	41,382
Other financial liabilities	23	3,607	13	-	126	3,746	3,746
Total Non Derivative liabilities		**61,928**	**3,472**	**23,462**	**40,684**	**129,546**	**112,070**
Derivatives (net settled)	9	10,649	464	10	-	11,123	11,121
Total Derivative liabilities		**10,649**	**464**	**10**	**-**	**11,123**	**11,121**

Includes Principal and interest payments, short term borrowings, current portion of debt and excludes unamortised fees.

Total cash outflow for leases is ₹ 1,037 Crore (31/03/2022: is ₹ 694 Crore) which includes ROU Lease payments, Short term leases, variable lease payments and Leases of low value assets - (Refer Note 20A(g) and 39(a).

(c) Credit Risk

Credit risks is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligation, and arises principally from the Group's receivables from customers.

Credit risk arises from cash and cash equivalents, contractual cash flows of debt investments, favourable derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to customers including outstanding receivables.

Credit risk is managed on an group basis. The Group has adopted a policy of dealing only with creditworthy counterparties and obtaining sufficient collateral, where appropriate, as a means of mitigating risk of financial loss from defaults. The Group invests only in those instruments issued by high rated banks/ institutions and government agencies. The Group assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. The Group's investments in debt instruments and certain loans are considered as low credit risk investments. The credit ratings of the investments are monitored for credit deterioration.

For some trade receivables the Group obtains security in the form of guarantees, deed of undertaking or letters of credit which can be called upon if the counterparty is in default under the terms of the agreement.

For other financial assets, the Group assesses and manages credit risk based on the credit rating. The Group has assessed its other financial assets as high quality, negligible credit risk. The Group periodically monitors the recoverability and credit risks of its other financials assets including security deposits and other receivables. The Group evaluates 12 months expected credit losses for all the financial assets for which credit risk has not increased. In case credit risk has increased significantly, the Group considers life time expected credit losses for the purpose of impairment provisioning.

The Group has used a practical expedient by computing the expected credit loss allowance for trade receivables based on a provision matrix. The provision matrix takes into account historical credit loss experience and adjusted for forward-looking information.

(₹ in Crore)

Movement in the allowance for doubtful debts :

Particulars	As at 31/03/2023	As at 31/03/2022
Balance at the beginning of the year	(84)	(77)
Impairment losses (recognised)/ reversed on receivables	(10)	(10)
Amounts written off during the period as uncollectible	1	3
Foreign exchange translation gains and losses	-	-
Balance at the end of the year	(93)	(84)

For further details, Refer Note 14 Trade receivables

Financial assets at FVTPL and at FVTOCI: The Company is also exposed to credit risks in relation to financial assets that are measured at FVTPL or at FVTOCI. The maximum exposure at the end of the reporting period is the carrying amount of these assets.

50. Offsetting Financial Liabilities and Financial Assets

Refer Note 1B(P) for accounting policy on Financial Instruments

Financial instruments subject to offsetting , enforceable master netting arrangement and similar arrangement.

(₹ in Crore)

As at 31/03/2023	Note No	Effects on Balance sheet			Related amounts not offset		
		Gross amount	Gross amount set off in the balance sheet	Net amount in the balance sheet	Amounts subject to master netting	Financial Instrument collateral	Net Amount
Financial Assets							
Derivatives	9	2,009	(118)	1,891	(592)	-	1,299
Financial Liabilities							
Derivatives	9	1,431	(118)	1,313	(592)	(362)	359

(₹ in Crore)

As at 31/03/2022	Note No	Effects on Balance sheet			Related amounts not offset		
		Gross amount	Gross amount set off in the balance sheet	Net amount in the balance sheet	Amounts subject to master netting	Financial Instrument collateral	Net Amount
Financial Assets							
Derivatives	9	3,695	(24)	3,671	(1,792)	-	1,879
Financial Liabilities							
Derivatives	9	11,145	(24)	11,121	(1,792)	(345)	8,984

51. Interest in Other Entities

A. Subsidiaries:

The Group's wholly-owned subsidiaries along with country of incorporation, place of operation and principal activities for the year ended 31/03/2023 are set out below:

S. No.	Name of Entity	Principal Activity	Country of Incorporation	Place of Operation
1	Minerals & Minerals Limited	Mining	India	India
2	Renukeshwar Investments & Finance Limited	Investment	India	India
3	Renuka Investments & Finance Limited	Investment	India	India
4	Lucknow Finance Company Limited	Investment	India	India
5	Dahej Harbour and Infrastructure Limited	Cargo services	India	India
6	Utkal Alumina International Limited	Manufacturing	India	India
7	Utkal Alumina Social Welfare Foundation	Welfare	India	India
8	Kosala Livelihood and Social Foundation	Welfare	India	India
9	Birla Copper Asoj Private Limited (formerly known as "Ryker Base Private Limited")	Manufacturing	India	India
10	AV Minerals (Netherlands) N.V.	Investment	Netherland	Netherland
11	AV Metals Inc. - (a)	Investment	Canada	Canada
12	Novelis Inc.	Manufacturing	Canada	Canada
13	Novelis do Brasil Ltda.	Manufacturing	Brazil	Brazil
14	Brecha Energetica Ltda.	Distribution Services	Brazil	Brazil
15	4260848 Canada Inc.	Management Company	Canada	Canada
16	4260856 Canada Inc.	Management Company	Canada	Canada
17	8018227 Canada Inc.	Management Company	Canada	Canada
18	Novelis (China) Aluminum Products Co., Ltd.	Manufacturing	China	China
19	Novelis (Shanghai) Aluminum Trading Co., Ltd.	Import and export aluminum	China	China
20	Novelis Ventures LLC - (b)	Holding Company	USA	USA
21	Novelis PAE SAS	Engineering	France	France
22	Novelis Aluminium Beteiligungs GmbH	Dormant	Germany	Germany
23	Novelis Deutschland GmbH(formerly known as "Aleris Deutschland Holding GmbH")	Manufacturing	Germany	Germany
24	Novelis Sheet Ingot GmbH	Manufacturing	Germany	Germany
25	Novelis Aluminum Holding Unlimited Company	Intermediate subsidiary	Ireland	Ireland
26	Novelis Italia SpA	Manufacturing	Italy	Italy
27	Novelis de Mexico S.A. de C.V.	Dormant	Mexico	Mexico
28	Novelis Korea Limited	Manufacturing	South Korea	South Korea
29	Novelis AG	Management Company	Switzerland	Switzerland
30	Novelis Switzerland S.A.	Manufacturing	Switzerland	Switzerland
31	Novelis MEA Ltd.	Import and export aluminum	UAE	UAE
32	Novelis Europe Holdings Limited	Intermediate subsidiary	UK	UK
33	Novelis UK Ltd.	Manufacturing	UK	UK
34	Novelis Services Limited	Management Company	UK	UK
35	Novelis Corporation	Manufacturing	USA	USA
36	Novelis South America Holdings LLC	Intermediate subsidiary	USA	USA
37	Novelis Holdings Inc.	Intermediate subsidiary	USA	USA
38	Novelis Services (North America) Inc.	Cash management service provider	USA	USA
39	Novelis Global Employment Organization, Inc.	Management Company	USA	USA
40	Novelis Services (Europe) Inc.	Management Company	USA	USA
41	Novelis Vietnam Company Limited	Manufacturing	Vietnam	Vietnam
42	Aleris Asia Pacific International (Barbados) Ltd.	Holding Company	Barbados	Barbados
43	Novelis Aluminum (Zhenjiang) Co., Ltd. (formerly known as "Aleris Aluminum (Zhenjiang) Co., Ltd.")	Manufacturing	China	China
44	Aleris (Shanghai) Trading Co., Ltd.	Management Company	China	China
45	Aleris Asia Pacific Limited	Holding Company	Hong Kong	Hong Kong
46	Aleris Aluminum Japan, Ltd.	Sales Office	Japan	Japan
47	Novelis Casthouse Germany GmbH (formerly known as "Aleris Casthouse Germany GmbH")	Manufacturing	Germany	Germany
48	Novelis Deutschland Holding GmbH	Holding Company	Germany	Germany
49	Novelis Koblenz GmbH (formerly known as "Aleris Rolled Products Germany GmbH")	Manufacturing	Germany	Germany
50	Novelis Netherlands B.V. (formerly known as "Aleris Aluminum Netherlands B.V.")	Management Company	Netherlands	Netherlands
51	Aleris Switzerland GmbH	Management Company	Switzerland	Switzerland
52	Aleris Aluminum UK Limited	Sales Office	United Kingdom	United Kingdom
53	Aleris Holding Canada ULC	Holding Company	Canada	Canada
54	Novelis ALR Aluminum Holdings Corporation(formerly known as "Aleris Corporation")	Manufacturing	USA	USA
55	Novelis ALR International, Inc. (formerly known as "Aleris International, Inc.")	Manufacturing	USA	USA
56	Novelis ALR Rolled Products, LLC (formerly known as "Aleris Rolled Products,LLC")	Management Company	USA	USA
57	Novelis ALR Rolled Products, Inc. (formerly known as "Aleris Rolled Products, Inc.")	Management Company	USA	USA
58	Novelis ALR Aluminum, LLC (formerly known as "Nichols Aluminum LLC")	Management Company	USA	USA

S. No.	Name of Entity	Principal Activity	Country of Incorporation	Place of Operation
59	Novelis ALR Rolled Products Sales Corporation (formerly known as "Aleris Rolled Products Sales Corporation")	Management Company	USA	USA
60	Novelis ALR Recycling of Ohio, LLC (formerly known as "IMCO Recycling of Ohio, LLC")	Manufacturing	USA	USA
61	Novelis ALR Aluminum-Alabama, LLC (formerly known as "Nichols Aluminum-Alabama LLC")	Dormant	USA	USA
62	Novelis ALR Asset Management Corporation (formerly known as "UWA Acquisition Co.")	Holding Company	USA	USA
63	Novelis (India) Infotech Ltd. - (c)	Dormant	India	India
64	Hindalco Kabushiki Kaisha - (d)	Sales Office	Japan	Japan
65	White Rock USA Protected Cell 24 - (e)	Captive Insurance Cell	USA	USA
66	Hindalco Jana Seva Trust - (f)	Welfare	India	India
67	Copper Jana Seva Trust - (f)	Welfare	India	India
68	Utkal Alumina Jan Seva Trust - (f)	Welfare	India	India

(a) AV Metals Inc., a wholly owned subsidiary was merged with Novelis Inc. w.e.f. September 01, 2022.

(b) Novelis Ventures LLC was formed on May 20, 2022

(c) Novelis (India) Infotech Ltd. was dissolved on September 23, 2022.

(d) Hindalco Kabushiki Kaisha (Hindalco K.K.), a wholly owned subsidiary was incorporated on April 08, 2022.

(e) Novelis is participating in a protected rent-a-captive arrangement viz. White Rock USA Protected Cell with the purpose of maintaining incremental insurance coverage. This Participant Agreement was entered into on March 28, 2022 and effective as of March 9, 2022. This structure is not an incorporated legal entity, but Novelis has control over the specified assets of this protected cell which are the only source of payment for specified liabilities of the protected cell (Deemed separate entity) There are no transactions with the protected cell till date.

(f) Trusts controlled by the Group

B. Non-Controlling Interests (NCI)

The Group has following non-wholly owned subsidiaries:

Name of Entity	Principal Activity	Country of Incorporation	Place of Operation	Ownership interest held by the Group	
				31/03/2023	31/03/2022
Suvas Holdings Limited	Power Generation	India	India	74.00%	74.00%
Hindalco-Almex Aerospace Limited	Manufacturing	India	India	97.18%	97.18%
East Coast Bauxite Mining Company Private Limited	Mining	India	India	74.00%	74.00%

None of the above non-wholly owned subsidiaries are material to the Group, therefore financial information about these non-wholly owned subsidiary are not disclosed separately.

C. Joint Operations

The Group is engaged in various arrangements on a joint basis with other companies. In assessing whether joint control exists for these arrangements, management evaluates the structure and legal framework and contracts governing the arrangement combined with an assessment of which decisions that significantly influence the return from the arrangement.

The Group assesses whether joint arrangements are joint operations where the Group has rights to the assets and obligations for the liabilities related to the arrangement, or a joint venture where the group has an interest in the net assets of the joint arrangement. Accordingly, the Group has identified the following joint arrangements as joint operations:

Name of the Joint Operations	Principal Activity	Country of Incorporation	Place of Operation	Group's proportion of ownership interest and voting power	
				31/03/2023	31/03/2022
Mahan Coal Limited - (a)	Mining	India	India	50.00%	50.00%
Tubed Coal Mines Limited - (a)	Mining	India	India	60.00%	60.00%
Aluminum Norf GmbH - (b)(i)	Rolling and recycling	Germany	Germany	50.00%	50.00%
Logan Aluminum Inc. - (b)(ii)	Rolling and finishing	USA	USA	40.00%	40.00%
Ulsan Aluminum Limited - (b)(iii)	Rolling and recycling	South Korea	South Korea	50.00%	50.00%
AluInfra Services SA - (b)(iv)	Service Company	Switzerland	Switzerland	50.00%	50.00%

(a) The proportionate share of total assets and total comprehensive income in the above joint operations are included in standalone financial statements of the Parent.

(b) Novelis Inc, a wholly owned subsidiary of the Group, is engaged in the following arrangements that are concluded to be joint operations.

(i) Aluminum Norf GmbH ("Alunorf"), a large rolling mill in Germany, is a joint operation between Novelis and Hydro Aluminum Deutschland GmbH ("Hydro") Both Novelis and Hydro hold a 50% interest in equity, profits and losses, shareholder voting and management control. Novelis shares control of the management of Alunorf with Hydro through a jointly-controlled shareholders' committee and supervisory board. Management of Alunorf is led jointly by two managing executives, one nominated by Novelis and one nominated by Hydro. The primary objective of Alunorf is to provide tolling services (output) exclusively to Novelis and Hydro as the total output capacity is allocated between Novelis and Hydro. This indicates that both Novelis and Hydro get substantially all of the economic benefits from the assets of the joint arrangement. The major or sole sources of cash inflows for Alunorf are Novelis and Hydro, who are legally obliged to cover production costs.

(ii) Logan Aluminum Inc ("Logan"), an aluminum rolling mill in Kentucky, is a joint operation between Novelis and Tri-Arrows Aluminum Inc. ("Tri-Arrows") Logan processes metal exclusively received from Novelis and Tri-Arrows and charges the respective partner a fee to cover expenses. This indicates that both Novelis and Tri-Arrows get substantially all of the economic benefits from the assets of the joint arrangement. Logan is thinly capitalized and relies on the regular reimbursement of costs and expenses by Novelis and Tri-Arrows to fund its operations, indicating that Novelis and Tri-Arrows have an obligation for the liabilities of the arrangement. Other than these contractually required reimbursements, Novelis does not provide other material support to Logan. Logan's creditors do not have recourse to Novelis' general credit. Novelis has a 40% voting interest; however, its participating interest in operations ranges from greater that 50% to approximately 55% depending on output. Novelis has joint ability to make decisions regarding Logan's production operations and take its share of production and associated costs.

(iii) In May 2017, Novelis Korea Ltd., a subsidiary of Novelis Inc., entered into definitive agreements with Kobe Steel Ltd. ("Kobe"), an unrelated party, under which Novelis Korea and Kobe Steel Ltd. will jointly own and operate Ulsan Aluminum, Ltd. (UAL), the joint arrangement. UAL is controlled by an equally represented Board of Directors in which neither entity has sole decision making ability regarding production operations or other significant decisions. Furthermore, neither entity has the ability to take the majority share of production or associated costs over the life of the joint venture. UAL currently produces flat rolled aluminum products exclusively for Novelis and Kobe. As of the March 31, 2023, each of the parties to the joint arrangement hold a 50% interest in the equity, profits and losses, shareholder voting, management control and rights to use the production capacity of the facility.

(iv) In July 2018, Novelis Switzerland SA (Novelis Switzerland), a subsidiary of Novelis, entered into definitive agreements with Constellium Valais SA (Constellium), an unrelated party, under which Novelis Switzerland and Constellium will jointly own and operate AluInfra Services SA (AluInfra), the joint arrangement. Each of the parties to the joint arrangement hold a 50% interest in the equity, profits and losses, shareholder voting, management control and rights to use the production capacity of the facility.

D. Equity Accounted Investments

(a) Investments in Associates:

Details of Associates of the Group are set out below. The country of incorporation is also their principal place of business and the proportion of ownership interest is the same as the proportion of voting rights held. The Group's interest in these entities are accounted for using equity method in the consolidated financial statements.

Name of Entity	Country of Incorporation	Place of Operation	Proportion of Ownership Interests (%)		Carrying Amount (₹ Crore)	
			31/03/2023	31/03/2022	31/03/2023	31/03/2022
Aditya Birla Science & Technology Company Pvt. Limited (ABSTCPL)	India	India	49.00%	49.00%	36	27
Aditya Birla Renewables Subsidiary Limited (ABRSL)	India	India	26.00%	26.00%	8	6
Aditya Birla Renewables Utkal Limited (ABRUL)	India	India	26.00%	26.00%	2	2
Aditya Birla Renewables Solar Limited (ABRSolar)	India	India	26.00%	26.00%	27	9
Deutsche Aluminum Verpachung Recycling GMBH#	Germany	Germany	30.00%	30.00%	-	-
France Aluminum Recyclage SPA.#	France	France	20.00%	20.00%	-	-
					73	44

(i) Summarised financial information in respect of the Group's associates are set out below. These information is based on their Ind-AS financial statements after alignment of Group's accounting policies.

(₹ in Crore)

	As at 31/03/2023				As at 31/03/2022			
	ABSTCPL	ABRSL	ABRUL	ABRSolar	ABSTCPL	ABRSL	ABRUL	ABRSolar
Summarised Balance Sheet								
Non-current Assets	108	107	18	407	110	111	20	156
Current Assets	49	10	3	41	43	7	1	5
Non-current Liabilities	(71)	(82)	(14)	(327)	(84)	(86)	(14)	(120)
Current Liabilities	(13)	(5)	(1)	(17)	(13)	(4)	(1)	(7)
Net Assets	**73**	**30**	**6**	**104**	**56**	**28**	**6**	**34**
Group's share of Net Assets of Associates	36	8	2	27	27	7	2	9
Dividend Received	-	-	-	-	-	1	-	-
Carrying Amount	36	8	2	27	27	6	2	9
Contingent Liabilities								
Share of Contingent Liabilities of the associate	6	-	-	-	6	-	-	-

(₹ in Crore)

	Year ended 31/03/2023				Year ended 31/03/2022			
	ABSTCL	ABRSL	ABRUL	ABRSolar	ABSTCL	ABRSL	ABRUL	ABRSolar
Summarised Statement of Profit and Loss								
Total Revenues	78	16	3	21	64	15	3	8
Total Profit/ (Loss) for the year	17	2	1	3	9	2	1	2
Other comprehensive income for the year	-	-	-	-	-	-	-	-
Group's share of Profit/ (Loss) of Associates	8	-	-	1	4	1	-	1
Group's share of Other comprehensive income of Associates	-	-	-	-	-	-	-	-
Reconciliation to carrying amounts								
Opening net assets	56	28	6	34	47	29	6	1
Increase on account of acquisition/issue	-	-	1	67	-	-	1	31
Profit/(Loss) for the year	17	2	1	3	9	2	1	2
Other comprehensive income	-	-	-	-	-	-	-	-
Amounts directly recognised in equity:								
Dividend Paid	-	-	(2)	-	-	(3)	(2)	-
Closing net assets	73	30	6	104	56	28	6	34
Group's share (%)	49.00%	26.00%	26.00%	26.00%	49.00%	26.00%	26.00%	26.00%
Group's share (Amount)	36	8	2	27	27	7	2	9
Dividend Received	-	-	-	-	-	(1)	-	-
Carrying amount	36	8	2	27	27	6	2	9

Deutsche Aluminum Verpachung Recycling GMBH and France Aluminum Recyclage SPA. are immaterial associates of Novelis with no existing operations.

(b) Interests in Joint Ventures:

Details of Joint Ventures of the Group are set out below. The joint ventures listed below have share capital consisting solely equity shares, which are directly held by the Group. The country of incorporation is also their principal place of business and the proportion of ownership interest is the same as the proportion of voting rights held. No entity listed below is listed on any public stock exchange. The Group's interests in these entities are accounted for using equity method in the consolidated financial statements.

(₹ in Crore)

	Country of Incorporation	Place of Operation	Proportion of Ownership Interests		Carrying Amount	
			31/03/2023	31/03/2022	31/03/2023	31/03/2022
MNH Shakti Limited (MNH Shakti)	India	India	15.00%	15.00%	6	7
Hydromine Global Minerals (GMBH) Limited (Hydromine) #	British Virgin Islands	British Virgin Islands	45.00%	45.00%	-	-
					6	7

Immaterial joint venture with no existing operations.

E. Interest in Trusts controlled by the Company accounted as Treasury Shares:

Name of the Trust	% of Holding	Country of Incorporation	Place of Operation
Trident Trust	#	India	India
Hindalco Employee Welfare Trust	#	India	India

Treasury Shares are held in Trusts whose sole beneficiary is Hindalco Industries Limited, Refer Note 18(b)(i) and (ii) for further details.

52. Business Combination

Refer Note 1B(B) for accounting policy on Business Combination

During year ended 31/03/2023, the Group does not have any business acquisition transaction to report. During year ended 31/03/2022, the Group reported the following business acquisition transactions:

(A) Acquisition of Birla Copper Asoj Private Limited (formerly known as 'Ryker Base Private Limited'):

On November 18, 2021, the Group through it's wholly owned subsidiary Renuka Investments & Finance Limited had acquired 100% of equity shareholdings of Birla Copper Asoj Private Limited (Birla Asoj) which is in the business of manufacturing Copper Rods on job work basis. The acquisition was in line with the Group's intention to expand in the downstream portfolio. The amount of puchase consideration, net assets acquired and the resultant Goodwill on acquisition of Birla Asoj, which was allocated to the Copper segment, is given below:

(₹ in Crore)

Purchase Consideration (including ₹ 31 Crore Cash and Cash Equivalents received)	178
Less: Net identifiable assets acquired	(115)
Goodwill on Business Combination	**63**

(B) Acquisition of Kuppam unit of SAPA Extrusions India Private Limited:

On February 1, 2022, the Group completed the acquisition of the Extrusion business of SAPA Extrusion India Private Limited (Kuppam Unit), manufacturer of high end extrusion products. The acquisition increased the Group's footprint in high-end extrusion products, pursuant to a Business Transfer Agreement dated December 17, 2021. The amount of puchase consideration, net assets acquired and the resultant Goodwill on acquisition of Kuppam Unit, which was allocated to the Aluminium Downstream segment, is given below:

(₹ in Crore)

Purchase Consideration	265
Less: Net identifiable assets acquired	(261)
Goodwill on Business Combination	**4**

53. Discontinued Operations

Refer Note 1B(H) for accounting policy on Non-Current Assets or Disposal Groups Held for Sale and Discontinued Operations

On April 14, 2020, the Group closed the acquisition of Aleris done through its wholly owned foreign subsidiary, Novelis Inc. (Novelis) As a result of the European Union (EU) and United States (US) antitrust review processes required for approval of the acquisition, Novelis is obligated to divest Aleris' European and North American automotive assets, including its plants in Duffel, Belgium (Duffel) and Lewisport, Kentucky (Lewisport)

Duffel

On September 30, 2020 ("transaction date for Duffel business"), Novelis completed the sale of Duffel to Liberty Group through its subsidiary, ALVANCE, the international aluminium business of the GFG Alliance. Previously, the European Commission and Chinese State Administration for Market Regulation (SAMR) determined that acquisition of Aleris, which closed earlier this year, could proceed on the condition that Novelis divest Duffel to a third party that met certain buyer suitability requirements. ALVANCE agreed to acquire Duffel for €310 million (₹ 2,675 Crore ($364 million) as of September 30, 2020) Both regulators approved ALVANCE as a suitable buyer. At the transaction date, Novelis received €210 million (₹ 1,812 Crore ($246 million) as of September 30, 2020) in cash and a €100 million (₹ 863 Crore ($117 million) as of September 30, 2020) receivable that is deemed to be contingent consideration subject to the results of a binding arbitration proceeding. More specifically, the arbitration will determine the liability of ALVANCE and certain affiliates to Novelis based on the parties' relative culpability for any breaches of any obligation in connection with the purchase and sale agreement with respect to SAMR, reduced by certain claims purchaser may have against seller. The arbitrators may award Novelis no more than €100 million and may not award any damages to ALVANCE. In addition to the cash and contingent consideration, the Group have recorded ₹ 130 Crore (€15 million/$18 million as of September 30, 2020) receivable for net debt and working capital adjustments. As of September 30, 2021 the amount receivable from Liberty group on account of net debt and working capital adjustments was impaired.

During the year ended 31/03/2022, Novelis marked all outstanding receivables related to the sale of Duffel to an estimated fair value of € 45 million (₹ 381 Crore ($ 51 million)), which resulted in a loss of € 51 million (₹ 454 Crore ($ 61 million)) recorded in "Loss from discontinued operations" for the year ended 31/03/2022.

In June 2022, Duffel was acquired by American Industrial Partners Capital Fund VII, L.P. (together with its affiliates, "AIP") In December 2022, the Company reached a settlement with AIP in order to reach a resolution to the dispute being arbitrated, among other matters. As part of the settlement, the contingent consideration balance was settled for €45 million ((₹ 381 Crore ($ 46 million)) , on the settlement date, AIP paid €5 million (₹ 47 Crore ($5 million)) in cash and issued a note in the amount of €40 million (₹ 353 Crore ($41 million)) The note bears interest at the annual rate of 5% and matures on December 31, 2027, with interest and €0.2 million of principal payable semi-annually and the remainder of the principal payable at maturity. As a result of the settlement, the arbitration was dismissed in January 2023. The settlement did not have a material impact on the Group's consolidated financial statements.

The resolution reached with AIP also included the settlement of certain assets and liabilities that were previously classified as current assets and current liabilities of discontinued operations on our consolidated balance sheets. The settlement of such assets and liabilities did not have a material impact on the consolidated statement of profit and loss.

Lewisport

On November 8, 2020, the Group entered into a definitive agreement with American Industrial Partners (AIP) for the sale of Lewisport and closed the sale on November 30, 2020 ("transaction date for Lewisport business"). Upon closing, the Group received ₹ 1,335 Crore ($ 180 million) in cash proceeds. In addition, the Group recorded a ₹ 123 Crore ($ 17 million) receivable for net working capital adjustments which was subsequently received during year ended March 31, 2022. During the year ended March 31, 2022, the Group has incurred additional cost to sales amounting to ₹ 10 Crore ($1.3 million) primarily related to legal expenses.

The results of operations and cash flows of Lewisport have been presented as discontinued operations in the consolidated statement of profit and loss and consolidated statement of cash flows for the year ended March 31, 2022.

(a) The Financial Performance of the Discontinued Operations are as follows:

(₹ in Crore)

	Year ended	
Particulars	**31/03/2023**	**31/03/2022**
Total Income	-	-
Total Expenses	-	464
Profit/ (Loss) before income tax	**-**	**(464)**
Income tax benefit	-	(7)
Profit/ (Loss) after income tax from discontinued operations	**-**	**(471)**
Comprehensive Income	**-**	**(471)**

(b) **The following assets and liabilities were classified as held for sale in relation to the discontinued operation:**

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Assets or Disposal Group Classified as Held for Sale (refer Note 17A)		
Trade receivables	-	46
	-	**46**
Liability Associated with Disposal Group Classified as Held for Sale (refer Note 17B)		
Trade payables	-	93
	-	**93**

54. Disposal of Subsidiaries

Refer Note 1B(A) for accounting policy on Principles of Consolidation

During year ended 31/03/2023, the Group does not have any disposal of subsidiary transaction to report. During year ended 31/03/2022, the Group reported the following disposal of subsidiaries transactions:

(A) Disposal of Hindalco Do Brasil Industria e Comercio de Alumina Ltda.

In December 2021, the Group decided to sell its entire equity interest in its wholly owned Brazilian subsidiary, Hindalco Do Brasil Industria e Comercio de Alumina Ltda. ('Hindalco Do Brasil') and accordingly the assets and liabilities of Hindalco Do Brasil classified as 'Disposal Group Held for Sale' and recognized an impairment loss of ₹ 59 Crore (USD 8 million), Refer Note 37 for further details. The sale of Hindalco Do Brasil was completed on March 7, 2022, and as a result of this the Group had recognised a loss on sale of subsidiary of ₹ 152 Crore (USD 22 million) which has been presented as exceptional expenses, Refer Note 40 for further details.

(B) Disposal of Saras Micro Devices Inc.

On November 22, 2021, the Group sold 90% of its equity ownership in its subsidiary Saras Micro Devices Inc. As a result of this, the Group recognised a gain on sale of subsidiary of ₹ 112 Crore (USD 15 million) which has been presented as exceptional income, Refer Note 40 for further details.

As a part of this transaction, the Group received ₹ 66 Crore (USD 9 million) in cash upon closure during year ended 31/03/2022 and approximately ₹ 48 Crore (USD 6 million) in deferred cash receipts, which comprises of promissory note amounting to ₹ 24 Crore (USD 3 million) due in November 2022 and note amounting to ₹ 24 Crore (USD 3 million) due in November 2023. The amount of promissory note of ₹ 24 Crore (USD 3 million) has been received in November 2022 on due date.

55. Relationship with struck off companies

Disclosure related to relationship of the Company with a company which is Struck off under Section 248 of the Companies Act, 2013 or Section 530 of Companies Act, 1956:

(₹ in Crore)

	Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31/03/2023	Balance outstanding as at 31/03/2022	Relationship with the Struck off company
(a)	**Receivables**				
1	Daga Nylomet Private Limited	Sale of Goods and Services	1	1	Not a related party
2	Copral Insulated Conductors Private Limited	Sale of Goods and Services	-	-	Not a related party
3	Krs And Sons Construction Private Limited	Sale of Goods and Services	-	-	Not a related party
4	Maheshwary Metal & Alloys Private Limited	Sale of Goods and Services	-	-	Not a related party
5	Nathanz Chemicals Private Limited	Sale of Goods and Services	-	-	Not a related party
6	Nicco Eastern Private Limited	Sale of Goods and Services	-	-	Not a related party
7	Payal Synthetics Private Limited	Sale of Goods and Services	-	-	Not a related party
8	Tecon Surface Coating & Engineering Private Limited	Sale of Goods and Services	-	-	Not a related party
(b)	**Payables**				
1	Agngreen Pest Control Services Private Limited	Purchase of Goods and Services	-	-	Not a related party
2	Anand Motors	Purchase of Goods and Services	-	-	Not a related party
3	Arc India Limited	Purchase of Goods and Services	-	-	Not a related party
4	Associated Enterprises	Purchase of Goods and Services	-	-	Not a related party
5	Bharat Timber Industries	Purchase of Goods and Services	-	-	Not a related party
6	D Wren Industries Private Limited	Purchase of Goods and Services	-	-	Not a related party
7	K.P.Industries	Purchase of Goods and Services	-	-	Not a related party
8	Knop Trading Company Private Limited	Purchase of Goods and Services	-	-	Not a related party
9	Multitech Engineers Private Limited	Purchase of Goods and Services	-	-	Not a related party
10	Nuwave Technology Private Limited	Purchase of Goods and Services	-	-	Not a related party
11	Paramount Engineering Company	Purchase of Goods and Services	-	-	Not a related party

	Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31/03/2023	Balance outstanding as at 31/03/2022	Relationship with the Struck off company
12	Pyrotech Electronics Private Limited	Purchase of Goods and Services	-	-	Not a related party
13	R V Briggs And Co Private Limited	Purchase of Goods and Services	-	-	Not a related party
14	Singhal Bricks Private Limited	Purchase of Goods and Services	-	-	Not a related party
15	Sitaram Mall	Purchase of Goods and Services	-	-	Not a related party
16	Vikadis Consulting Engineering Private Limited	Purchase of Goods and Services	-	-	Not a related party
17	Xtend Apt Solutions Private Limited	Purchase of Goods and Services	-	-	Not a related party
18	Zion Construction	Purchase of Goods and Services	-	-	Not a related party
19	Boc India Limited	Purchase of Goods and Services	-	-	Not a related party
20	AMCO Construction & Engineering Private Limited	Purchase of Goods and Services	-	-	Not a related party
21	Vijay Construction	Trade Deposit	-	-	Not a related party
22	B P Construction Company	Trade Deposit	-	-	Not a related party

(c) Details of other struck off entities holding equity shares in the Company is as below:

		Number of shares held	Paid-up as at March 31, 2023 (₹)	Paid-up as at March 31, 2022 (₹)
1	Siddha Papers Private Limited	5	5	5
2	Vaishak Shares Limited	1	1	1
3	Alike Trading Private Limited	50	50	50
4	Fayda Portfolio Private Limited	100	100	100
5	Kothari Intergroup Limited	1	1	1
6	Arunoday Holdings Private Limited	6,551	6,551	4,387
7	Dreams Broking Private Limited	5	5	5
8	Tushar Commercial Company Limited	2,000	2,000	2,000
9	Agents India Limited	120	120	120
10	Ambica Multifibres Limited	10,714	10,714	10,714
11	Tangmarg Investment And Trading Private Limited	1,525	1,525	2,370
12	Victor Properties Private Limited	2,286	2,286	1,286
13	Central Investment Private Limited	5,820	5,820	5,820
14	Shri Vishnu Commodities Private Limited	140	140	140
15	Nacon Software Services Private Limited	1,500	1,500	1,500
16	Murli Tie- Up Private Limited	46	46	46
17	Architectural Glass Private Limited	60	60	60

56. Additional Regulatory Information:

(a) Details of loans given, investment made and guarantee given covered under section 186(4) of the Companies Act, 2013:

(i) Loans and Financial Guarantees given below:

(₹ in Crore)

Name of the Company	Relationship	Nature of Transaction	Purpose / Utilisation	As at 31/03/2023	As at 31/03/2022
Aditya Birla Science and Technology Company Private Limited	Associate	Loan	Working capital Use	29	36

(ii) Disclosure relating to amount outstanding at year end and maximum outstanding during the year of loans and advances, in nature of loan, required under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, are given below:

(₹ in Crore)

		Outstanding balance as at		Maximum outstanding during the year ended on	
Name of the Company	Relationship	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Aditya Birla Science and Technology Company Private Limited	Associate	29	36	36	41

(b) Other Information

(i) No proceedings have been initiated on or are pending against the Group for holding benami property under the Benami Transactions (Prohibition) Act, 1988 (45 of 1988) and Rules made thereunder.

(ii) None of the entities in the Group have been declared wilful defaulter by any bank or financial institution or government or any government authority.

(iii) The Group has complied with the number of layers prescribed under the Companies Act, 2013.

(iv) There is no undisclosed income under the tax assessments under the Income Tax Act, 1961 for the year ending March 31, 2023 and March 31, 2022 which needs to be recorded in the books of account of any of the entities consolidated in the Group.

(v) The Group has not traded or invested in crypto currency or virtual currency during the current or previous year.

(vi) Utilisation of borrowed funds and share premium

The Group has not advanced or loaned or invested funds to any other person(s) or entity(ies), including foreign entities (Intermediaries) with the understanding that the Intermediary shall:

a. directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the group (Ultimate Beneficiaries) or

b. provide any guarantee, security or the like to or on behalf of the ultimate beneficiaries

(vii) The Group has not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

a. directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

b. provide any guarantee, security or the like on behalf of the ultimate beneficiaries

(viii) Borrowings obtained by the Group from banks and financial institutions have been applied for the purposes for which such loans were taken.

57. Subsequent Events

The Management has evaluated all the activities of the Group till May 24, 2023 and concluded that there were no additional subsequent events required to be reflected in the Consolidated financial statements.

58. During the financial year ended 31/03/2023, the Group has reclassified following comparatives which are primarily to conform to the current years classification. This reclassifications do not have material impact on the Consolidated Financial Statements.

(₹ in Crore)

	Note	Note Description	Previously Reported Amount	Revised Amount	Change in Amount	Reason for Reclassification
A.	**Consolidated Balance Sheet**					
	10	Other Financial Asset (Current)	2,131	2,193	62	Reclassified by a subsidiary to align with the parent presentation
	12	Other Current Assets	4,362	4,300	(62)	
	24	Provisions (Current)	2,841	1,726	(1,115)	Employee Benefit Obligations separately presented on the face of the Balance Sheet. Further, reclassified balance of a subsidiary to align with the parent presentation.
	24	Provisions (Non-Current)	6,848	661	(6,187)	
	25	Employee Benefit Obligations (Current)	-	1,178	1,178	
	25	Employee Benefit Obligations (Non-Current)	-	6,124	6,124	
	2A	Property, Plant and Equipment	76,470	74,547	(1,923)	Right of Use Assets separately presented on the face of the Balance Sheet
	3A	Right of Use Assets	-	1,923	1,923	
			92,652	**92,652**	**-**	
B.	**Consolidated Statement of Profit and Loss**					
	33	Employee Benefits Expenses	11,936	12,023	87	Reclassified by of a subsidiary to align with the parent presentation
	39	Other Expenses	25,780	25,693	(87)	
			37,716	**37,716**	**-**	

59. Additional information required under Schedule III of the Companies Act, 2013

Information regarding subsidiaries, associates and joint ventures included in the consolidated financial statements for the year ended 31/03/2023:

(₹ in Crore)

	Net Assets i.e. total Assets minus total Liabilities		Share in Profit/ (Loss)		Share in Other Comprehensive Income		Share in Total Comprehensive Income	
	As % of Consolidated Net Assets	Amount	As % of Consolidated Profit/ (Loss)	Amount	As % of Other Comprehensive Income	Amount	As % of Total Comprehensive Income	Amount
Parent:								
Hindalco Industries Limited	61.69%	58,489	32.94%	3,326	22.82%	1,702	28.64%	5,028
Subsidiaries:								
Indian:								
Minerals & Minerals Limited	0.02%	19	0.06%	6	0.00%	-	0.03%	6
Utkal Alumina International Limited	11.37%	10,782	16.75%	1,691	-0.11%	(8)	9.59%	1,683
Utkal Alumina Social Welfare Foundation	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Suvas Holdings Limited	0.03%	30	0.01%	1	0.00%	-	0.01%	1
Renuka Investments & Finance Limited	0.25%	240	0.01%	1	0.05%	4	0.03%	5
Renukeshwar Investments & Finance Limited	0.15%	143	0.06%	6	0.00%	-	0.03%	6
Dahej Harbour and Infrastructure Limited	0.11%	109	0.14%	14	0.00%	-	0.08%	14
Lucknow Finance Company Limited	0.02%	22	0.02%	2	0.00%	-	0.01%	2
Hindalco-Almex Aerospace Limited	0.11%	107	0.01%	1	0.00%	-	0.01%	1
East Coast Bauxite Mining Company Private Ltd	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Kosala Livelihood and Social Foundation	0.00%	2	-0.02%	(2)	0.00%	-	-0.01%	(2)
Birla Copper Asoj Private Limited	0.09%	87	0.13%	13	0.00%	-	0.07%	13
Hindalco Jana Seva Trust	0.00%	1	0.00%	-	0.00%	-	0.00%	-
Copper Jann Seva Trust	-0.01%	(8)	-0.02%	(2)	0.00%	-	-0.01%	(2)
Utkal Alumina Jana Seva Trust	0.00%	1	0.00%	-	0.00%	-	0.00%	-
Foreign:								
AV Minerals (Netherlands) N.V.	11.87%	11,250	2.25%	227	12.08%	901	6.42%	1,128
AV Metals Inc.	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Novelis Inc. (Consolidated)	43.14%	40,900	51.49%	5,199	76.78%	5,728	62.24%	10,927
Hindalco Do Brasil Industria Comercia de Alumina Ltda.	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Hindalco Kabushiki Kaisha	0.00%	-	-0.02%	(2)	0.00%	-	-0.01%	(2)
Non-controlling Interest	0.01%	11	0.00%	-	0.00%	-	0.00%	-
Associates								
Indian:								
Aditya Birla Renewable Subsidiary Limited	0.01%	8	0.00%	-	0.00%	-	0.00%	-
Aditya Birla Renewable Utkal Limited	0.00%	1	0.00%	-	0.00%	-	0.00%	-
Aditya Birla Renewable Solar Limited	0.03%	27	0.01%	1	0.00%	-	0.01%	1
Aditya Birla Science and Technology Co. Pvt. Ltd.	0.04%	36	0.08%	8	0.00%	-	0.05%	8
Joint Ventures								

(₹ in Crore)

	Net Assets i.e. total Assets minus total Liabilities		Share in Profit/ (Loss)		Share in Other Comprehensive Income		Share in Total Comprehensive Income	
	As % of Consolidated Net Assets	Amount	As % of Consolidated Profit/ (Loss)	Amount	As % of Other Comprehensive Income	Amount	As % of Total Comprehensive Income	Amount
Indian:								
MNH Shakti Limited	0.01%	6	0.00%	-	0.00%	-	0.00%	-
Foreign:								
Hydromine Global Minerals (GMBH) Limited	0.00%	-	0.00%	-	0.00%	-	0.00%	-
	128.95%	**122,263**	**103.89%**	**10,490**	**111.62%**	**8,327**	**107.18%**	**18,817**
Consolidation Adjustments	-28.95%	(27,446)	-3.89%	(393)	-11.62%	(867)	-7.18%	(1,260)
Total	**100.00%**	**94,817**	**100.00%**	**10,097**	**100.00%**	**7,460**	**100.00%**	**17,557**

Information regarding subsidiaries, associates and joint ventures included in the consolidated financial statements for the year ended 31/03/2022:

(₹ in Crore)

	Net Assets i.e. total Assets minus total Liabilities		Share in Profit/ (Loss)		Share in Other Comprehensive Income		Share in Total Comprehensive Income	
	As % of Consolidated Net Assets	Amount	As % of Consolidated Profit/ (Loss)	Amount	As % of Other Comprehensive Income	Amount	As % of Total Comprehensive Income	Amount
Parent:								
Hindalco Industries Limited	69.60%	54,428	40.11%	5,507	34.58%	(397)	40.61%	5,110
Subsidiaries:								
Indian:								
Minerals & Minerals Limited	0.02%	14	0.02%	3	0.00%	-	0.02%	3
Utkal Alumina International Limited	11.64%	9,099	8.00%	1,099	-0.78%	9	8.81%	1,108
Utkal Alumina Social Welfare Foundation	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Suvas Holdings Limited	0.04%	30	0.00%	-	0.00%	-	0.00%	-
Renuka Investments & Finance Limited	0.30%	235	0.01%	1	-4.62%	53	0.43%	54
Renukeshwar Investments & Finance Limited	0.18%	137	-0.01%	(1)	-5.05%	58	0.45%	57
Dahej Harbour and Infrastructure Limited	0.12%	95	0.09%	13	0.00%	-	0.10%	13
Lucknow Finance Company Limited	0.02%	19	0.01%	2	0.00%	-	0.02%	2
Hindalco-Almex Aerospace Limited	0.14%	106	0.06%	8	0.00%	-	0.06%	8
East Coast Bauxite Mining Company Private Ltd	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Kosala Livelihood and Social Foundation	0.00%	1	0.00%	-	0.00%	-	0.00%	-
Birla Copper Asoj Private Limited	0.10%	75	-0.03%	(4)	0.00%	-	-0.03%	(4)
Hindalco Jana Seva Trust	0.00%	2	0.00%	-	0.00%	-	0.00%	-
Copper Jann Seva Trust	-0.01%	(6)	-0.03%	(4)	0.00%	-	-0.03%	(4)
Utkal Alumina Jana Seva Trust	0.00%	1	0.00%	-	0.00%	-	0.00%	-
Foreign:								
AV Minerals (Netherlands) N.V.	14.27%	11,157	-1.82%	(250)	-32.32%	371	0.96%	121
AV Metals Inc.	14.21%	11,110	0.00%	-	-35.80%	411	3.27%	411
Novelis Inc. (Consolidated)	39.30%	30,734	54.84%	7,529	78.66%	(903)	52.66%	6,626
Hindalco Do Brasil Industria Comercia de Alumina Ltda.	0.00%	-	-0.12%	(16)	-3.22%	37	0.17%	21
Non-controlling Interest	0.01%	11	0.00%	-	0.00%	-	0.00%	-
Associates								
Indian:								
Aditya Birla Renewable Subsidiary Limited	0.01%	7	0.00%	-	0.00%	-	0.00%	-
Aditya Birla Renewable Utkal Limited	0.00%	1	0.00%	-	0.00%	-	0.00%	-
Aditya Birla Renewable Solar Limited	0.01%	9	0.01%	1	0.00%	-	0.01%	1
Aditya Birla Science and Technology Co. Pvt. Ltd.	0.03%	27	0.03%	4	0.00%	-	0.03%	4
Joint Ventures								
Indian:								
MNH Shakti Limited	0.01%	6	0.01%	1	0.00%	-	0.01%	1
Foreign:								
Hydromine Global Minerals (GMBH) Limited	0.00%	-	0.00%	-	0.00%	-	0.00%	-
	149.99%	**117,298**	**101.19%**	**13,893**	**31.45%**	**(361)**	**107.55%**	**13,532**
Consolidation Adjustments	-49.99%	(39,096)	-1.19%	(163)	68.55%	(787)	-7.55%	(950)
Total	**100.00%**	**78,202**	**100.00%**	**13,730**	**100.00%**	**(1,148)**	**100.00%**	**12,582**

As per our report annexed

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration No. 304026E/E-300009

Sarah George
Partner
Membership No. 045255

Place: Mumbai
Date: May 24, 2023

For and on behalf of the Board of **Hindalco Industries Limited**

Praveen Kumar Maheshwari
Whole-time Director and
Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN-00026078

Independent Auditor's Report

To the Members of Hindalco Industries Limited

Report on the Audit of the Standalone Financial Statements

Opinion

1. We have audited the accompanying Standalone Financial Statements of Hindalco Industries Limited ("the Company"), which comprise the Balance Sheet as at March 31, 2023, and the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows for the year then ended, and notes to the standalone financial statements, including a summary of significant accounting policies and other explanatory information in which are included the financial statements of two joint operations consolidated on a proportionate basis and two trusts (Refer note 53 to the standalone financial statements) for the year ended on that date audited by the other auditors (hereinafter referred to as "standalone financial statements").

2. In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on the audited financial statements of the joint operations and trusts, the aforesaid standalone financial statements give the information required by the Companies Act, 2013 ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs of the Company, its joint operations and trusts, as at March 31, 2023, and total comprehensive income (comprising of profit and other comprehensive income), changes in equity and its cash flows for the year then ended.

Basis for Opinion

3. We conducted our audit in accordance with the Standards on Auditing (SAs) specified under Section 143(10) of the Act. Our responsibilities under those Standards are further described in the "Auditor's Responsibilities for the Audit of the Financial Statements" section of our report. We are independent of the Company in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the standalone financial statements under the provisions of the Act and the Rules thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors in terms of their reports referred to in sub-paragraph 13 of the Other Matter paragraph below, is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

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

Key audit matter	How our audit addressed the key audit matter
1. Measurement of inventory quantities of coal, bauxite, copper concentrate and work in progress consisting of precious metals Refer Notes 1C(b) and 15(d) to the standalone financial statements. Of the Company's ₹ 20,186 crores of inventory as at March 31, 2023, ₹ 4,232 crores of inventory comprised of coal, bauxite, copper concentrate and work in progress consisting of precious metals. This was determined a key audit matter, as the measurement of these inventory quantities lying at the Company's yards, smelters and refineries is complex and involves significant judgements and estimates resulting from measuring the surface area, dip measurement of material in tanks/silos and such other parameters. The Company uses internal and external experts, as applicable, to perform volumetric surveys and assessments basis which the quantities of these inventories are estimated	• Our audit procedures relating to the measurement of inventory quantities of coal, bauxite, copper concentrate and work in progress of precious metals included the following: • Understanding and evaluating the design and testing the operating effectiveness of controls over the physical count process and measurement of such inventory; • Evaluation of the independence, competency and capabilities of the management's experts; • Physically observing inventory measurement and count procedures carried out by management using experts to assess its appropriateness and completeness and performing roll forward procedures; and • Obtaining and inspecting inventory measurement and physical count results for such inventories, including assessing and evaluating the results of analysis performed and adjustments made by management in respect of differences between book and physical quantities. Based on the above procedures performed, we did not identify any material exceptions in the measurement of inventory quantities of coal, bauxite, copper concentrate and work in progress inventories consisting of precious metals.
2. Migration to a new ERP system The Company's financial reporting process significantly relies on the design and operating effectiveness of its IT systems. The Company is migrating to a centralised enterprise- wide resource planning ('ERP') system in a phased manner across its plants and offices. The changes in the ERP system represent a financial reporting risk as controls and processes that have been established and embedded over a number of years are updated and migrated into a new environment. Due to changes in the ERP system, there is a risk of breakdown in internal financial controls and a risk of inaccurate or incomplete processing of the financial data. Further, the migration involved significant programme and configuration changes. Accordingly, it is considered as a key audit matter.	• We performed the following procedures with respect to transition to the new ERP system: • Obtained an understanding of the changes in the IT environment, IT infrastructure and the ERP system by involving technology specialists; • Obtained an understanding and tested the controls over data migration including proper authorisation, completeness and accuracy; • Tested a sample of the migrated balances of general ledgers, sub-ledgers and open items for completeness and accuracy as of the date of migration at the respective plants/offices; • Evaluated and tested relevant IT general controls over the ERP system and IT dependencies identified as relevant for our audit of the standalone financial statements; and • Communicated with those charged with governance and management and tested a combination of compensating controls or remediated controls and/or performed alternative audit procedures, wherever necessary. Based on the above no significant exceptions were noted.

Key audit matter	How our audit addressed the key audit matter
3. Provisions recognised and contingencies disclosed with regards to certain legal and tax matters including uncertain tax positions Refer Notes 1C (c) and (d), 13, 14, 25 and 48(A) to the standalone financial statements. The Company operates in a complex tax jurisdiction with certain tax exemption/ deduction that may be subject to challenge and audit by the tax authorities. Further, there are open tax matters under litigation with the tax authorities. As at March 31, 2023, the Company has, recognised provisions and disclosed contingent liabilities towards various legal and tax matters, including environmental, mining, local and state levies, income tax holidays, availing of input tax credits and such other matters. This is a key audit matter, as evaluation of these matters requires management judgement and estimation, related legal advice including those leading to interpretation of laws and regulations and application of relevant judicial precedents to determine the probability of the outflow of economic resources for recognising provisions, disclosing contingent liabilities and making related disclosures in the standalone financial statements.	Our audit procedures relating to provisions recognised and contingencies disclosed with regard to certain legal and tax matters included the following: • Understanding and evaluating the design and testing the operating effectiveness of controls over the recognition, measurement, presentation and disclosures made in the standalone financial statements in respect of these matters; • Obtaining details of legal and tax matters, inspecting the supporting documents to evaluate management's assessment of probability of outcome and the magnitude of potential loss as well as testing related to provisions and disclosures in the standalone financial statements through inquiries with the management and legal counsel; • Assessing on test basis on the underlying calculation supporting the contingent liabilities and other litigation disclosures in the standalone financial statements; • Reviewing orders and other communication from tax and regulatory authorities and management responses thereto; • Assessing the management expert's legal advice and opinion, as applicable, obtained by the Company's management to corroborate management assessment and evaluating competence and capabilities of the experts; and • Using auditor's specialist for technical assistance in evaluating certain significant and judgemental complex direct and indirect tax litigation and positions in tax returns and their possible outcome. Based on the above procedures performed, we did not identify any material exceptions in the provisions recognised and contingent liabilities disclosed in the standalone financial statements with regard to such legal and tax matters.

Other Information

5. The Company's Board of Directors is responsible for the other information. The other information comprises the information included in the integrated annual report, but does not include the financial statements and our auditor's report thereon. The integrated annual report is expected to be made available to us after the date of this auditor's report.

   Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

   In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

   When we read the annual integrated report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate action as applicable under the relevant laws and regulations.

Responsibilities of management and those charged with governance for the standalone financial statements

6. The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Act with respect to the preparation of these standalone financial statements that give a true and fair view of the financial position, financial performance, changes in equity and cash flows of the Company in accordance with the accounting principles generally accepted in India, including the Accounting Standards specified under Section 133 of the Act. The respective Board of Directors of the Company, its joint operations and trusts are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding of the assets of the Company, its joint operations and trusts and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the standalone financial statements by the Directors of the Company, as aforesaid.

7. In preparing the standalone financial statements, the respective Board of Directors of the Company, its joint operations and trusts are responsible for assessing the ability of the Company, its joint operations and trusts to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the respective management either intends to liquidate the Company, its joint operations and trusts, or to cease its operations, or has no realistic alternative but to do so. The respective Board of Directors of the Company, its joint operations and trusts are also responsible for overseeing the financial reporting process of the Company, its joint operations and trusts.

Auditor's responsibilities for the audit of the standalone financial statements

8. Our objectives are to obtain reasonable assurance about whether the standalone financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these standalone financial statements.

9. As part of an audit in accordance with SAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under Section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the Company has adequate internal financial controls with reference to standalone financial statements in place and the operating effectiveness of such controls. (Refer paragraph 13 below)
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Company, its joint operations and trusts to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the standalone financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company, its joint operations and trusts to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the standalone financial statements, including the disclosures, and whether the standalone financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial statements of the joint operations and trusts which are included in the Company to express an opinion on the standalone financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the standalone financial statements of which we are the independent auditors. For the other entities included in the standalone

financial statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

10. We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

11. We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

12. From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the standalone financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matter

13. We did not audit the financial statements of two joint operations and two trusts included in the standalone financial statements of the Company, which constitute total assets of ₹ 356 crores and net assets of ₹ 51 crores as at March 31, 2023, total revenue of ₹ Nil, total comprehensive income (comprising of profit and other comprehensive income) of ₹ 2 crores and net cash outflows amounting to ₹ 10 crores for the year then ended. These financial statements and other financial information have been audited by other auditors whose reports have been furnished to us by the management, and our opinion on the standalone financial statements (including other information) in so far as it relates to the amounts and disclosures included in respect of these joint operations and trusts and our report in terms of sub-section (3) of section 143 of the Act including report on Other Information insofar as it relates to the aforesaid joint operations, is based solely on the reports of such other auditors. In respect of one joint operation an emphasis of matter paragraph with regard to going concern and in respect of one joint operation, a material uncertainty related to going concern has been reported by the auditors of the respective entities vide their audit report, however, the same is not considered to be material to the financial statements of the Company.

Our opinion on the standalone financial statements, and our report on other legal and regulatory requirements is not modified in respect of above matter with respect to our reliance on the work done and the reports of the other auditors.

Report on other legal and regulatory requirements

14. As required by the Companies (Auditor's Report) Order, 2020 ("the Order"), issued by the Central Government of India in terms of sub-section (11) of Section 143 of the Act, we give in the "Annexure B" a statement on the matters specified in paragraphs 3 and 4 of the Order, to the extent applicable.

15. As required by Section 143(3) of the Act, we report that:

    (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.

    (b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books and the reports of the other auditors.

    (c) The Standalone Balance Sheet, the Standalone Statement of Profit and Loss (including other comprehensive income), the Standalone Statement of Changes in Equity and the Standalone Statement of Cash Flows dealt with by this Report are in agreement with the relevant books of account.

    (d) In our opinion, the aforesaid standalone financial statements comply with the Accounting Standards specified under Section 133 of the Act.

    (e) On the basis of the written representations received from the directors of the Company as on April 1, 2023, taken on record by the Board of Directors of the Company and the reports of the statutory auditors of its joint operations, none of the directors is disqualified as on March 31, 2023 from being appointed as a director in terms of Section 164(2) of the Act.

    (f) With respect to the adequacy of the internal financial controls with reference to financial statements of the Company and its joint operations, and the operating effectiveness of such controls, refer to our separate Report in "Annexure A".

    (g) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014 (as amended), in our opinion and to the best of our information and according to the explanations given to us:

        i. The standalone financial statements disclose the impact of pending litigations on the standalone financial position of the Company, its joint operations and trusts – Refer Note 13, 25 and 48(A) to the standalone financial statements;

        ii. Provision has been made in the standalone financial statements, as required under the applicable law or accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts as at March 31, 2023– Refer Note 11, 13 and 25 to the standalone financial statements in respect of such items as it relates to the Company, its joint operations and trusts;

        iii. Except as referred to in Note 24 to the standalone financial statements, there has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company and its joint operations.

        iv. (a) The respective managements of the Company and its joint operations whose financial statements have been audited under the Act, have represented to us and the other auditors of such joint operations, respectively that, to the best of its knowledge and belief, as disclosed in the notes to the accounts, no funds have been advanced or loaned or invested (either from borrowed funds or share premium or any other sources or kind of funds) by the Company or any of such joint operations to or in any other persons or entities, including foreign entities ("Intermediaries"), with the understanding, whether recorded in writing or otherwise, that the Intermediary shall, whether, directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Company or any of such joint operations ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries (Refer Note 58(c) to the standalone financial statements);

        (b) The respective managements of the Company and its joint operations whose financial statements have been audited under the Act, have represented to us and the other auditors of such joint operations, respectively that, to the best of its knowledge and belief, as disclosed in the notes to the accounts, no funds have been received by the Company or any of such joint operations from any persons or entities, including foreign entities ("Funding Parties"), with the understanding, whether recorded in writing or otherwise, that the Company or any of such joint operations shall, whether, directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries (Refer Note 58(c) to the standalone financial statements); and

        (c) Based on such audit procedures that we considered reasonable and appropriate in the circumstances, performed by us and those performed by the auditors of joint operations whose financial statements have been audited under the Act, nothing has come to our or other auditors' notice that has caused us to believe that the representations under sub-clause (a) and (b) contain any material misstatement.

        v. The dividend declared and paid during the year by the Company is in compliance with Section 123 of the Act. The joint operations have not declared or paid any dividend during the year.

        vi. As proviso to Rule 3(1) of the Companies (Accounts) Rules, 2014 (as amended), which provides for books of account to have the feature of audit trail, edit log and related matters in the accounting software used by the Company and its joint operations, is applicable to the Company and its joint operations only with effect from financial year beginning April 1, 2023, the reporting under clause (g) of Rule 11 of the Companies (Audit and Auditors) Rules, 2014 (as amended), is currently not applicable.

16. The Company and its joint operations has paid/ provided for managerial remuneration in accordance with the requisite approvals mandated by the provisions of Section 197 read with Schedule V to the Act.

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/E-300009

Sarah George
Partner
Membership Number: 045255
UDIN: 23045255BGYVVQ8568

Place : Mumbai
Date : May 24, 2023

Annexure A to Independent Auditor's Report

Referred to in paragraph 15(f) of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the standalone financial statements as of and for the year ended March 31, 2023

Report on the Internal Financial Controls with reference to the Standalone Financial Statements under clause (i) of sub-section 3 of Section 143 of the Act

1. We have audited the internal financial controls with reference to the standalone financial statements of Hindalco Industries Limited ("the Company") as of March 31, 2023 in conjunction with our audit of the standalone financial statements of the Company for the year ended on that date, which includes internal financial controls with reference to financial statements of the Company's two joint operations, as of that date.

Management's Responsibility for Internal Financial Controls

2. The respective Board of Directors of the Company and its joint operations, to whom reporting under clause (i) of sub section 3 of Section 143 of the Act in respect of the adequacy of the internal financial controls with reference to financial statements is applicable, are responsible for establishing and maintaining internal financial controls based on the internal control over financial reporting criteria established by the Company, its joint operations considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting ("the Guidance Note") issued by the Institute of Chartered Accountants of India ("ICAI"). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditor's Responsibility

3. Our responsibility is to express an opinion on the Company's internal financial controls with reference to financial statements based on our audit. We conducted our audit in accordance with the Guidance Note and the Standards on Auditing deemed to be prescribed under Section 143(10) of the Act to the extent applicable to an audit of internal financial controls, both applicable to an audit of internal financial controls and both issued by the ICAI. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to financial statements was established and maintained and if such controls operated effectively in all material respects.

4. Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial controls system with reference to financial statements and their operating effectiveness. Our audit of internal financial controls with reference to financial statements included obtaining an understanding of internal financial controls with reference to financial statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

5. We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors in terms of their reports referred to in the Other matter paragraph below is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls system with reference to financial statements.

Meaning of Internal Financial Controls with reference to financial statements

6. A company's internal financial controls with reference to financial statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial controls with reference to financial statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Financial Controls with reference to financial statements

7. Because of the inherent limitations of internal financial controls with reference to financial statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to financial statements to future periods are subject to the risk that the internal financial controls with reference to financial statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

8. In our opinion, the Company and its joint operations, has in all material respects, an adequate internal financial controls system with reference to financial statements and such internal financial controls with reference to financial statements were operating effectively as at March 31, 2023, based on the internal control over financial reporting criteria established by the Company and its joint operations considering the essential components of internal control stated in the Guidance Note issued by ICAI.

Other Matter

9. Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to financial statements insofar as it relates to two joint operations, is based on the corresponding reports of the auditors of such joint operations. Our opinion is not modified in respect of this matter.

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/E-300009

Sarah George
Partner
Membership Number: 045255
UDIN: 23045255BGYVVQ8568

Place : Mumbai
Date : May 24, 2023

Annexure B to Independent Auditor's Report

Referred to in paragraph 14 of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the standalone financial statements as of and for the year ended March 31, 2023

i. (a) (A) The Company is maintaining proper records showing full particulars, including quantitative details and situation, of Property, Plant and Equipment.

B) The Company is maintaining proper records showing full particulars of Intangible Assets.

(b) The Property, Plant and Equipment are physically verified by the Management according to a phased programme designed to cover all the items over a period of 3 years which, in our opinion, is reasonable having regard to the size of the Company and the nature of its assets. Pursuant to the programme, a portion of the Property, Plant and Equipment has been physically verified by the Management during the year and no material discrepancies have been noticed on such verification.

(c) The title deeds of all the immovable properties (other than properties where the Company is the lessee and the lease agreements are duly executed in favour of the lessee), as disclosed in Note 2A on 'Property, Plant and Equipment', Note 3A 'Right of Use Assets', Note 4 on 'Investment Properties' and Note 19 on 'Non-Current Assets Held for Sale' to the standalone financial statements, are held in the name of the Company, except for the following (Also refer Note 55 on 'Title deeds of the immovable properties pending for transfer as at 31/03/2023'):

Description of property	Gross carrying value (₹ in crore)	Held in the name of	Whether promoter, director or their relative or employee	Period held - indicate range, where appropriate (Financial year-FY)	Reason for not being held in the name of the Company
Freehold Land (Property,Plant and Equipment and Investment Property) at Bharuch and Nashik; and Building (Investment Property) at Mumbai	8	Indogulf Fertilizer and Chemicals Corporation Limited	No	Since FY 2002-2003	The title deeds are held in the name of Indogulf Fertilizer and Chemicals Corporation Limited which has subsequently been amalgamated with the Company
Freehold Land (Property,Plant and Equipment and Rights of Use Assets)/ Buildings (Property,Plant and Equipment) at various locations	6	Indian Aluminium Company Limited	No	Since FY 2004-2005	The title deeds are held in the name of Indian Aluminium Company Limited which has subsequently been amalgamated with the Company
Freehold Land (Property,Plant and Equipment) at Kuppam	1	SAPA Extrusion India Private Limited	No	Since FY 2021-2022	The title deeds are held in the name of the SAPA Extrusion India PrivateLimited which has subsequently been acquired by the Company.
Freehold Land (Property,Plant and Equipment) at Mahan unit	4	Various individual land owners	No	Since FY 2013 -2014	Certain original land-related documents held in the name of original land owners were submitted to the bank that had provided borrowing for the Mahan project. These original documents are required to be submitted to the land department in order to get the title deed registered in the name of the Company. The Company is awaiting receipt of these original land-related documents from the bank to initiate the process of transfer of the title of the land in favour of the Company.
Freehold Land (Property,Plant and Equipment) at Kathautia mine	27	Various individual land owners	No	Since FY 2018 -2019	Approval of the District collector is awaited which is a prerequisite as per the Chota Nagpur Tenancy Act, 1908 to transfer the title deed in the name of the Company. The Company is in the process of obtaining these approvals.

(d) The Company has not revalued its Property, Plant and Equipment (including Right of Use assets) or intangible assets or both during the year. Consequently, the question of our commenting on whether the revaluation is based on the valuation by a Registered Valuer, or specifying the amount of change, if the change is 10% or more in the aggregate of the net carrying value of each class of Property, Plant and Equipment (including Right of Use assets) or intangible assets does not arise.

(e) Based on the information and explanations furnished to us, no proceedings have been initiated on or are pending against the Company for holding benami property under the Prohibition of Benami Property Transactions Act, 1988 (as amended in 2016) (formerly the Benami Transactions (Prohibition) Act, 1988 (45 of 1988)) and Rules made thereunder, and therefore the question of our commenting on whether the Company has appropriately disclosed the details in its financial statements does not arise.

ii. (a) The physical verification of inventory excluding stocks with third parties has been conducted at reasonable intervals by the Management during the year and, in our opinion, the coverage and procedure of such verification by Management is appropriate. In respect of inventory lying with third parties, these have substantially been confirmed by them. The discrepancies noticed on physical verification of inventory as compared to book records were not 10% or more in aggregate for each class of inventory.

(b) During the year, the Company has been sanctioned working capital limits in excess of ₹ 5 crores, in aggregate, from banks on the basis of security of current assets. In our opinion, the quarterly returns or statements filed by the Company with such banks are in agreement with the unaudited books of account of the Company.

The Company has filed provisional statement with the bank for the quarter ended March 31, 2023, with respect to Company's Aluminium division and the final statement will be submitted to the bank upon finalization of the audited financial statements.

(Also refer Note 58(c) to the standalone financial statements).

iii. (a) The Company has made investments in 3 companies, 82 mutual fund schemes and granted unsecured loans to a company and its 304 employees. The aggregate amount during the year, and balance outstanding at the balance sheet date with respect to such loan to a subsidiary and to its employees are as per the table given below:

Particulars	Aggregate amount of loan granted / provided during the year * (₹ in crores)	Balance outstanding as at balance sheet date in respect of these cases* (₹ in crores)
Subsidiary	1	1
Others	3	2

*excludes loan granted to Hindalco Employee Welfare Trust for administering share based awards to employees of the Company.

(Also refer Note 10 and Note 47 to the standalone financial statements)

(b) In respect of the aforesaid investments/loans, the terms and conditions under which such loans were granted/ investments were made are not prejudicial to the Company's interest.

(c) In respect of the loans, the schedule of repayment of principal and payment of interest has been stipulated, and the parties are repaying the principal amounts, as stipulated, and are also regular in payment of interest as applicable.

(d) In respect of the loans, there is no amount which is overdue for more than ninety days.

(e) Following loans were granted to same parties, which has fallen due during the year and were renewed/extended. Further, in respect of following loans fresh loans were granted to settle the overdue loans.

Name of the parties	Aggregate amount dues renewed or extended or settled by fresh loans (₹ in crores)	Percentage of the aggregate to the total loans or advances in the nature of loans granted during the year
Birla Copper Asoj Private Limited	164	97.62%
Suvas Holdings Limited	1	0.60%

(Also refer Note 10 to the standalone financial statements)

(f) The loans granted during the year, including to related parties had stipulated the scheduled repayment of principal and payment of interest and the same were not repayable on demand.

iv. In our opinion, and according to the information and explanations given to us, the Company has complied with the provisions of Sections 185 and 186 of the Companies Act, 2013 (the "Act") in respect of the loans and investments made, and guarantees and security provided by it.

v. The Company has not accepted any deposits or amounts which are deemed to be deposits referred in Sections 73, 74, 75 and 76 of the Act and the Rules framed there under to the extent notified.

vi. Pursuant to the rules made by the Central Government of India, the Company is required to maintain cost records as specified under Section 148(1) of the Act in respect of its products. We have broadly reviewed the same and are of the opinion that, prima facie, the prescribed accounts and records have been made and maintained. We have not, however, made a detailed examination of the records with a view to determine whether they are accurate or complete.

vii. (a) According to the information and explanations given to us and the records of the Company examined by us, in our opinion, the Company is generally regular in depositing undisputed statutory dues in respect of goods and service tax, income tax and profession tax, though there have been slight delays in a few cases, and is regular in depositing undisputed statutory dues, including employees' state insurance, sales tax, service tax, duty of customs, duty of excise, value added tax and cess and other material statutory dues, as applicable, with the appropriate authorities (Refer note 45(b)). Also, refer note 35(ii) to the standalone financial statements regarding management's assessment on certain matters relating to provident fund.

(b) According to the information and explanations given to us and the records of the Company examined by us, there are no statutory dues of provident fund as referred to in sub-clause (a) which have not been deposited on account of any dispute. The particulars of other statutory dues referred to in sub-clause (a) as at March 31, 2023 which have not been deposited on account of a dispute, are as follows:

Name of the statute	Nature of dues	Amount (₹ in crore)#	Period to which the amount relates	Forum where the disputes are pending
Central Sales Tax Act and Local Sales Tax (including VAT) Act	Sales Tax	31	1995-2010, 2014-2016	Assistant Commissioner/Deputy Commissioner /Commissioner/ Revisionary Authorities/ Joint Commissioner (A) /Additional Commissioner (A)
		5	2002-2007, 2009-2011	Tribunal
		33	1999-2007, 2012-2013	High Court
The Central Excise Act, 1944	Excise Duty	13	2000-2003, 2005-2006, 2008-2009, 2012-2018	Assistant Commissioner/ Commissioner/ Revisionary Authorities/ Commissioner (A)
		1,373	2001-2018	Customs, Excise and Service Tax Appellate Tribunal (CESTAT)
		207	2001-2008	High Court
		3	2014-2016	Supreme Court
Clean environment cess		17	2017-2018	Customs, Excise and Service Tax Appellate Tribunal (CESTAT)
The Customs Act, 1962	Custom Duty	1	2004-2005, 2010-2014, 2020-2021	Commissioner (Appeal)

Annexure B to Independent Auditor's Report

Referred to in paragraph 14 of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the standalone financial statements as of and for the year ended March 31, 2023

Name of the statute	Nature of dues	Amount (₹ in crore)#	Period to which the amount relates	Forum where the disputes are pending
		30	2004-2006, 2010-2013, 2016-2018	Customs, Excise and Service Tax Appellate Tribunal (CESTAT)
		9	2014-2015	High Court
The Service Tax under the Finance Act, 1994	Service Tax	9	2008 – 2018	Assistant Commissioner/ Commissioner/ Revisionary Authorities /Commissioner (A)
		476	2004-2018	Customs, Excise and Service Tax Appellate Tribunal (CESTAT)
		48	2013-2018	High Court
The Central Goods and Service Tax Act, 2017	Goods and Services Tax	134	2016-2019, 2020-2023	Assistant Commissioner/ Commissioner (A)/ Joint Commissioner
		14	2017-2018	High Court
Income Tax Act, 1961	Income Tax	19	2015-2017	Commissioner of Income Tax Appeals
Building and Other Construction Workers Welfare Cess Act, 1996	BOCW Cess	191	2008-2018	State Labour Commissioner
Mines and Minerals (Development and Regulation) Act, 1957	Royalty	37	1991-2011	Certificate Officer
Orissa Entry Tax, 1999	Entry Tax	76	2003-2018	High Court
Uttar Pradesh Tax on Entry of Goods into Local Areas Act, 2007	Entry Tax	298	2000-2012	High Court
Uttar Pradesh Stamp Act	Stamp Duty	253	2006-2007	High Court
Indian Stamp Act, 1899	Stamp Duty	*	2003-2004	High Court
The Employees State Insurance Act, 1948	Employees State Insurance	*	2004-2005	Employees State Insurance Court
Transit Permit Pass Regulation, 1973	Transit Permit Pass	1	2006-07	High Court
Uttar Pradesh Kshetra Panchayat and Zila Panchayat Adhiniyam, 1961	Toll Tax	54	2003-2017	High Court
Procurement of Energy from renewable sources, 2010 (Regulations)	Renewable Power Obligation	5	2010-2011	Commissioner (A)/ Joint Commissioner

The above amounts does not include the matters where the Company has favourable orders at various forums without an outstanding demand as at year end and the Revenue authorities have preferred an appeal.

above amounts are net of payments made under protest.

* Represents figures below the rounding off convention used in this report.

viii. According to the information and explanations given to us and the records of the Company examined by us, there are no transactions in the books of account that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961, that has not been recorded in the books of account.

ix. (a) According to the records of the Company examined by us and the information and explanation given to us, the Company has not defaulted in repayment of loans or other borrowings or in the payment of interest to any lender during the year.

(b) According to the information and explanations given to us and on the basis of our audit procedures, we report that the Company has not been declared Wilful Defaulter by any bank or financial institution or government or any government authority.

(c) According to the records of the Company examined by us and the information and explanations given to us, the Company has not obtained any term loans.

(d) According to the information and explanations given to us, and the procedures performed by us, and on an overall examination of the standalone financial statements of the Company, we report that no funds raised on short-term basis have been used for long-term purposes by the Company.

(e) According to the information and explanations given to us and on an overall examination of the financial statements of the Company, we report that the Company has not taken any funds from any entity or person on account of or to meet the obligations of its subsidiaries, associates or joint ventures.

(f) According to the information and explanations given to us and procedures performed by us, we report that the Company has not raised loans during the year on the pledge of securities held in its subsidiaries, joint ventures or associate companies.

x. (a) The Company has not raised any money by way of initial public offer or further public offer (including debt instruments) during the year. Accordingly, the reporting under clause 3(x)(a) of the Order is not applicable to the Company.

(b) The Company has not made any preferential allotment or private placement of shares or fully or partially or optionally convertible debentures during the year. Accordingly, the reporting under clause 3(x)(b) of the Order is not applicable to the Company.

xi. (a) During the course of our examination of the books and records of the Company, carried out in accordance with the generally accepted auditing practices in India, and according to the information and explanations given to us, we have neither come across any instance of material fraud by the Company or on the Company, noticed or reported during the year, nor have we been informed of any such case by the Management.

(b) During the course of our examination of the books and records of the Company, carried out in accordance with the generally accepted auditing practices in India, and according to the information and explanations given to us, a report under Section 143(12) of the Act, in Form ADT-4, as prescribed under rule 13 of Companies (Audit and Auditors) Rules, 2014 was not required to be filed with the Central Government. Accordingly, the reporting under clause 3(xi)(b) of the Order is not applicable to the Company.

(c) During the course of our examination of the books and records of the Company carried out in accordance with the generally accepted auditing practices in India, and according to the information and explanations given to us, the Company has received whistle-blower complaints during the year, which have been considered by us for any bearing on our audit and reporting under this clause. In respect of a complaint, for which preliminary findings of the investigation has been provided to us by management, our consideration of the complaint having any bearing on our audit is limited to such preliminary findings.

Annexure B to Independent Auditor's Report

Referred to in paragraph 14 of the Independent Auditor's Report of even date to the members of Hindalco Industries Limited on the standalone financial statements as of and for the year ended March 31, 2023

xii. As the Company is not a Nidhi Company and the Nidhi Rules, 2014 are not applicable to it, the reporting under clause 3(xii) of the Order is not applicable to the Company.

xiii. The Company has entered into transactions with related parties in compliance with the provisions of Sections 177 and 188 of the Act. The details of such related party transactions have been disclosed in the standalone financial statements as required under Indian Accounting Standard 24 "Related Party Disclosures" specified under Section 133 of the Act.

xiv. (a) In our opinion and according to the information and explanation given to us, the Company has an internal audit system commensurate with the size and nature of its business.

(b) The reports of the Internal Auditor for the period under audit have been considered by us.

xv. The Company has not entered into any non-cash transactions with its directors or persons connected with him. Accordingly, the reporting on compliance with the provisions of Section 192 of the Act under clause 3(xv) of the Order is not applicable to the Company.

xvi. (a) The Company is not required to be registered under Section 45-IA of the Reserve Bank of India Act, 1934. Accordingly, the reporting under clause 3(xvi)(a) of the Order is not applicable to the Company.

(b) The Company has not conducted non-banking financial / housing finance activities during the year. Accordingly, the reporting under clause 3(xvi)(b) of the Order is not applicable to the Company.

(c) The Company is not a Core Investment Company (CIC) as defined in the regulations made by the Reserve Bank of India. Accordingly, the reporting under clause 3(xvi)(c) of the Order is not applicable to the Company.

(d) Based on the information and explanations provided by the management of the Company, the Group has five CICs as part of the Group. We have not, however, separately evaluated whether the information provided by the management is accurate and complete.

xvii. The Company has not incurred any cash losses in the financial year or in the immediately preceding financial year.

xviii. There has been no resignation of the statutory auditors during the year and accordingly the reporting under clause (xviii) is not applicable.

xix. According to the information and explanations given to us and on the basis of the financial ratios (Also refer Note 57 to the standalone financial statements), ageing and expected dates of realisation of financial assets and payment of financial liabilities, other information accompanying the financial statements, our knowledge of the Board of Directors and management plans and based on our examination of the evidence supporting the assumptions, nothing has come to our attention, which causes us to believe that any material uncertainty exists as on the date of the audit report that Company is not capable of meeting its liabilities existing at the date of balance sheet as and when they fall due within a period of one year from the balance sheet date. We, however, state that this is not an assurance as to the future viability of the Company. We further state that our reporting is based on the facts up to the date of the audit report and we neither give any guarantee nor any assurance that all liabilities falling due within a period of one year from the balance sheet date will get discharged by the Company as and when they fall due.

xx. (a) In respect of other than ongoing projects, as at balance sheet date, the Company does not have any amount remaining unspent under Section 135(5) of the Act. Accordingly, reporting under clause 3(xx)(a) of the Order is not applicable.

(b) The Company has transferred the amount of Corporate Social Responsibility remaining unspent under sub-section (5) of Section 135 of the Act pursuant to ongoing projects to a special account in compliance with the provision of sub-section (6) of Section 135 of the Act. (Also refer Note 58(a) to the standalone financial statements)

xxi. As required by paragraph 3(xxi) of the CARO 2020, we report that the auditors of the following joint operation companies, which are companies incorporated in India, have given qualification or adverse remarks in their CARO report on the standalone financial statements of the respective joint operation companies which are consolidated in standalone financial statements of the Company:

Sr. No.	Name of the Company	CIN	Relationship with the Holding Company	Date of the respective auditors' report	Paragraph number and comment in the respective CARO report reproduced below
1	Mahan Coal Limited	U01010MP2006PLC018586	Joint Operation	May 17, 2023	xiv. The Company did not have an internal audit system for the year under Audit. xvii. The Company has incurred cash losses during the current financial year as well as in the immediately preceding financial year. The amount of cash loss during the current year is ₹ 2,065.01 and ₹ 3,361.71 (₹ In hundreds) in the immediately preceding financial year.
2	Tubed Coal Mines Limited	U10100MH2007PLC174466	Joint Operation	May 17, 2023	vii. (b) According to the information and explanations provided by management and the records examined by us, the Company is yet to pay Professional Tax of ₹ 4,600 for FY 18-19, ₹ 4,600/- for FY 19-20, ₹ 4,600/- for FY 20-21, ₹ 3,700/- for FY 21-22 and ₹ 2,500/- for FY 22-23. xvii. The Company has not incurred cash losses during the financial year, however the Company had incurred cash loss in the immediately preceding financial year.

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership Number: 045255
UDIN: 23045255BGYVVQ8568

Place : Mumbai
Date : May 24, 2023

Standalone Balance Sheet

as at March 31, 2023

(₹ in Crore)

	Page No.	Note	As At 31/03/2023	As At 31/03/2022
ASSETS				
Non-Current Assets				
Property, Plant and Equipment	551	2A	30,304	30,926
Capital Work-in-Progress	552	2B	2,968	1,573
Right of Use Assets	554	3A	1,272	833
Investment Properties	556	4	7	8
Goodwill	557	5	4	4
Other Intangible Assets	557	6A	516	529
Intangible Assets Under Development	558	6B	19	8
Financial Assets				
Investment in Subsidiaries	560	7	15,805	16,423
Investment in Associates and Joint Ventures	561	8	190	160
Other Investments	562	9A	8,009	8,515
Loans	563	10	174	45
Derivatives	564	11	120	174
Other Financial Assets	572	12	1,438	232
Non-Current Tax Assets (Net)	572	13	-	-
Other Non-Current Assets	576	14	1,036	760
Total Non-Current Assets			**61,862**	**60,190**
Current Assets				
Inventories	577	15	20,186	20,948
Financial Assets				
Investments	563	9B	5,762	4,557
Trade Receivables	577	16	2,610	2,671
Cash and Cash Equivalents	579	17	472	3,405
Bank Balances other than Cash and Cash Equivalents	579	18	1,317	3,015
Loans	563	10	5	172
Derivatives	564	11	516	507
Other Financial Assets	572	12	524	1,156
Other Current Assets	576	14	3,647	2,433
			35,039	38,864
Non-Current Assets Held for Sale	579	19	21	3
Total Current Assets			**35,060**	**38,867**
Total Assets			**96,922**	**99,057**
EQUITY AND LIABILITIES				

(₹ in Crore)

	Page No.	Note	As At 31/03/2023	As At 31/03/2022
Equity				
Equity Share Capital	580	20	222	222
Other Equity	582	21	58,267	54,206
Total Equity			**58,489**	**54,428**
Liabilities				
Non-Current Liabilities				
Financial Liabilities				
Borrowings	584	22A	11,559	11,668
Lease Liabilities	555	3B	649	277
Derivatives	564	11	4	387
Other Financial Liabilities	588	24	61	13
Provisions	589	25	276	332
Employee Benefit Obligations	591	26	145	142
Deferred Tax Liabilities (Net)	572	13	4,704	2,948
Other Non-Current Liabilities	602	27	654	585
Total Non-Current Liabilities			**18,052**	**16,352**
Current Liabilities				
Financial Liabilities	587	22B	749	7,411
Borrowings				
Lease Liabilities	555	3B	114	65
Supplier's Credit	603	28	5,635	2,456
Trade Payables	587	23		
(I) Outstanding dues of Micro and Small Enterprises			161	96
(II) Outstanding dues of creditors other than Micro and Small Enterprises			9,582	10,919
Derivatives	564	11	190	3,376
Other Financial Liabilities	588	24	747	1,000
Provisions	589	25	914	731
Employee Benefit Obligations	591	26	282	275
Contract Liabilities	603	29	193	180
Current Tax Liabilities (Net)	572	13	1,244	1,121
Other Current Liabilities	601	27	570	647
Total Current Liabilities			**20,381**	**28,277**
Total Liabilities			**38,433**	**44,629**
Total Equity and Liabilities			**96,922**	**99,057**
Basis of Preparation and Significant Accounting Policies	526	1		

The accompanying Notes are an integral part of the Standalone Financial Statements

This is the Standalone Balance Sheet referred in our report of even date

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership No. 045255

Place : Mumbai
Dated : May 24, 2023

For and on behalf of the Board of **Hindalco Industries Limited**

Praveen Kumar Maheshwari
Whole-time Director & Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN No.: 00026078

Standalone Statement of Profit and Loss

for the year ended March 31, 2023

(₹ in Crore)

	Page No.	Note	Year ended 31/03/2023	Year ended 31/03/2022
INCOME				
Revenue from Operations	603	30	76,878	67,653
Other Income	605	31	586	535
Total Income			**77,464**	**68,188**
EXPENSES				
Cost of Materials Consumed	605	32	45,793	41,979
Trade Purchases	606	33	1,553	1,922
Changes in inventories of Finished Goods, Work-in-Progress and Stock-in-Trade	606	34	1,062	(3,344)
Employee Benefits Expense	607	35	2,218	2,058
Power and Fuel	607	36	11,318	6,781
Finance Cost	607	37	1,300	1,417
Depreciation and Amortization Expense	608	38	1,874	1,752
Impairment Loss/ (Reversal) on Non-Current Assets (Net)	608	39	53	95
Impairment Loss/ (Reversal) on Financial Assets (Net)	609	40	12	2
Other Expenses	609	41	7,447	6,962
Total Expenses			**72,630**	**59,624**
Profit/(Loss) before Exceptional Items and Tax			4,834	8,564
Exceptional Income/ (Expenses) (Net)	610	42	41	(107)
Profit/(Loss) before Tax			**4,875**	**8,457**
Tax Expense	572	13		
Current Tax Expense			917	1,496
Deferred Tax Expense			632	1,454
Profit/(Loss) for the year			**3,326**	**5,507**

(₹ in Crore)

	Page No.	Note	Year ended 31/03/2023	Year ended 31/03/2022
Other Comprehensive Income/ (Loss)	611	43		
Items that will not be reclassified to Statement of Profit and Loss				
Remeasurement of Defined Benefit Obligation			(10)	(5)
Change in Fair Value of Equity Instruments Designated as FVTOCI			(485)	1,108
Income Tax effect			37	(231)
Items that will be reclassified to Statement of Profit and Loss				
Change in Fair Value of Debt Instruments Designated as FVTOCI			(13)	(9)
Effective Portion of Cash flow Hedges			3,269	(1,867)
Cost of Hedging Reserve			64	(75)
Income Tax effect			(1,160)	682
Other Comprehensive Income/ (Loss) for the year			**1,702**	**(397)**
Total Comprehensive Income/ (Loss) for the year			**5,028**	**5,110**
Earnings Per Share	612	44		
Basic (₹)			14.96	24.76
Diluted (₹)			14.94	24.73
Basis of Preparation and Significant Accounting Policies	526	1		

The accompanying Notes are an integral part of the Standalone Financial Statements

This is the Standalone Statement of Profit and Loss referred in our report of even date

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership No. 045255

Place : Mumbai
Dated : May 24, 2023

For and on behalf of the Board of **Hindalco Industries Limited**

Praveen Kumar Maheshwari
Whole-time Director & Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN No.: 00026078

Standalone Statement of Changes in Equity

for the Year ended March 31, 2023

A. **Equity Share Capital** **(₹ in Crore)**

Particulars	Note	Amount
Balance as at 01/4/2021	**20**	222
Changes in Equity Share Capital		-
Balance as at 31/03/2022	**20**	222
Changes in Equity Share Capital		-
Balance as at 31/03/2023	**20**	222

B. **Other Equity** **(₹ in Crore)**

Particulars	Note	Share Application Money Pending Allotment	Reserves and Surplus									Other Reserves				Total Other Equity
			Capital Reserve	Capital Redem-ption Reserve	Business Recons-truction Reserve	Securities Premium	Debenture Redemption Reserve	Employee Stock Options	Treasury Shares held by ESOP Trust	General Reserve	Retained Earnings	Gain/ (Loss) on Equity Instruments FVTOCI	Gain/ (Loss) on Debt Instruments FVTOCI	Effective portion of Cash Flow Hedge	Cost of Hedging Reserve	
Balance as at 01/4/2021		**-**	**145**	**102**	**7,715**	**8,224**	**1,350**	**55**	**(129)**	**21,354**	**5,494**	**6,117**	**1**	**(596)**	**10**	**49,842**
Profit/ (Loss) for the year										5,507						5,507
Other Comprehensive Income/ (Loss) for the year		-	-	-	-	-	-	-	-	-	(2)	874	(6)	(1,214)	(49)	(397)
Total Comprehensive Income/ (Loss) for the year		-	-	-	-	-	-	-	-	-	5,505	874	(6)	(1,214)	(49)	5,110
Hedging (Gain)/ Loss and cost of hedging transferred to non-financial assets		-	-	-	-	-	-	-	-	-	-	-	-	(41)	-	(41)
Realised Gain/ (Loss) on Equity FVTOCI transferred to Retained Earnings		-	-	-	-	-	-	-	-	-	68	(68)	-	-	-	-
Transfer to Debenture Redemption Reserve		-	-	-	-	-	150	-	-	-	(150)	-	-	-	-	-
Transactions with owners in their capacity as owners																
Shares Acquired by the Trust		-	-	-	-	-	-	-	(94)	-	-	-	-	-	-	(94)
Shares Issued by the Trust		-	-	-	-	-	-	(11)	24	-	2	-	-	-	-	15
Employee Share Based Transactions		-	-	-	-	9	-	(3)	-	-	-	-	-	-	-	6
Employee Share Options Expenses		-	-	-	-	-	-	35	-	-	-	-	-	-	-	35
Employee Share Options Lapsed/Forfeited		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends Paid		-	-	-	-	-	-	-	-	-	(667)	-	-	-	-	(667)
Balance as at 31/03/2022	**21**	**-**	**145**	**102**	**7,715**	**8,233**	**1,500**	**76**	**(199)**	**21,354**	**10,252**	**6,923**	**(5)**	**(1,851)**	**(39)**	**54,206**

Particulars	Note	Share Application Money Pending Allotment	Reserves and Surplus									Other Reserves				Total Other Equity
			Capital Reserve	Capital Redem-ption Reserve	Business Recons-truction Reserve	Securities Premium	Debenture Redemption Reserve	Employee Stock Options	Treasury Shares held by ESOP Trust	General Reserve	Retained Earnings	Gain/ (Loss) on Equity Instruments FVTOCI	Gain/ (Loss) on Debt Instruments FVTOCI	Effective portion of Cash Flow Hedge	Cost of Hedging Reserve	
Balance as at 31/03/2022	**21**	**-**	**145**	**102**	**7,715**	**8,233**	**1,500**	**76**	**(199)**	**21,354**	**10,252**	**6,923**	**(5)**	**(1,851)**	**(39)**	**54,206**
Profit/ (Loss) for the year		3,326	3,326													
Other Comprehensive Income/ (Loss) for the year		-	-	-	-	-	-	-	-	-	(7)	(451)	(9)	2,127	42	1,702
Total Comprehensive Income/ (Loss) for the year		-	-	-	-	-	-	-	-	-	3,319	(451)	(9)	2,127	42	5,028
Hedging (Gain)/ Loss and cost of hedging transferred to non-financial assets		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Realised Gain/ (Loss) on Equity FVTOCI transferred to Retained Earnings		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer to Retained Earnings from Debenture Redemption Reserve		-	-	-	-	-	(1,500)	-	-	-	1,500	-	-	-	-	-
Transactions with owners in their capacity as owners																
Shares Acquired by the Trust		-	-	-	-	-	-	-	(131)	-	-	-	-	-	-	(131)
Shares Issued by the Trust		-	-	-	-	1	-	(15)	24	-	(3)	-	-	-	-	7
Employee Share Based Transactions		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Employee Share Options Expenses		-	-	-	-	-	-	47	-	-	-	-	-	-	-	47
Employee Share Options Lapsed/Forfeited		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dividends Paid		-	-	-	-	-	-	-	-	-	(890)	-	-	-	-	(890)
Balance as at 31/03/2023	**21**	**-**	**145**	**102**	**7,715**	**8,234**	**-**	**108**	**(306)**	**21,354**	**14,178**	**6,472**	**(14)**	**276**	**3**	**58,267**
Basis of Preparation and Significant Accounting Policies	**1**															

The accompanying notes are an integral part of the Standalone Financial Statements

This is the Standalone Statement of Changes in Equity referred in our report of even date

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership No. 045255

Place : Mumbai
Dated : May 24, 2023

For and on behalf of the Board of **Hindalco Industries Limited**

Praveen Kumar Maheshwari
Whole-time Director & Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN No.: 00026078

Standalone Statement of Cash Flows

for the Year ended March 31, 2023

(₹ in Crore)

	Note	Year ended 31/03/2023	Year ended 31/03/2022
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit/ (Loss) before Tax		4,875	8,457
Adjustment for :			
Finance Cost	37	1,300	1,417
Depreciation and Amortization Expense	38	1,874	1,752
Equity settled share-based payment	35	47	35
Impairment Loss/ (Reversal) on Non-Current Assets	39	53	95
Impairment Loss/ (Reversal) on Financial Assets (Net)	40	12	2
Other Non-Operating (Income)/Expenses (Net)		(180)	(117)
Unrealised Foreign Exchange (Gain)/ Loss (Net)		(59)	29
Unrealised (Gain)/ Loss on Derivative Transactions (Net)		(445)	53
Fair Value (Gain)/ Loss on modification of Borrowings (Net)		(48)	(53)
(Gain)/ Loss on Assets held for Sale (Net)		-	-
(Gain)/ Loss on Property, Plant and Equipment and Intangible Assets Sold/Discarded (Net)	31	31	31
Interest Income	31	(290)	(144)
Dividend Income	31	(33)	(31)
Exceptional (Income)/ Expense (Net)	42	(41)	107
Changes in Cash Flow Hedges (realised)		1	(34)
(Gain)/ Loss on Investments measured at FVTPL (Net)	31	(163)	(263)
Operating Profit before Working Capital Changes		**6,934**	**11,336**
Changes in Working Capital:			
(Increase)/ Decrease in Inventories (Net)		846	(4,797)
(Increase)/ Decrease in Trade Receivables		51	(1,030)
(Increase)/ Decrease in Other Financial Assets		19	(91)
(Increase)/ Decrease in Other Non-Financial Assets		(1,148)	(767)
Increase/ (Decrease) in Trade Payables		(1,092)	1,898
Increase/ (Decrease) in Other Financial Liabilities		(6)	32
Increase/ (Decrease) in Non-Financial Liabilities (including Contract Liabilities)		26	179
Cash Generated from Operation before Tax		**5,630**	**6,760**
Refund/ (Payment) of Income Tax (Net)		(794)	(1,552)
Net Cash Generated/ (Used) - Operating Activities		**4,836**	**5,208**
B. CASH FLOW FROM INVESTING ACTIVITIES			
Payments to acquire Property Plant and Equipment, Intangible Assets and Investment Property		(2,726)	(1,506)
Proceeds from disposal of Property Plant and Equipment, Intangible Assets and Investment Property		52	67
Acquisition of business		-	(265)
Investment in Subsidiaries		(4)	(26)
Return of Capital from Subsidiary		793	557
Investment in Associates and Joint Ventures		(17)	(1)
(Purchase)/ Sale of Investment in Equity Shares at FVTOCI (Net)		-	102
(Purchase)/ Sale of Other Investments (Net)		(1,047)	2,966
Loans and Deposits given		(3,022)	(4,029)
Receipt of Loans and Deposits given		4,224	44
Interest Received		233	123
Dividend Received		33	31
Net Cash Generated/ (Used) - Investing Activities		**(1,481)**	**(1,937)**

(₹ in Crore)

	Note	Year ended 31/03/2023	Year ended 31/03/2022
C. CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from issue of Equity Shares (Including Share Application Money)		-	6
Treasury Shares acquired by ESOP Trust		(131)	(94)
Proceeds from Shares issued by ESOP Trust		6	15
Proceeds from Non-Current Borrowings	22A	700	2,500
Pre-payment of Non-Current Borrowings	22A	(74)	(460)
Repayment of Non-Current Borrowings	22A	(6,002)	(8)
Principal Payments of Leases Liabilities	22A	(132)	(71)
Proceeds from/ (Repayment of) Current Borrowings (Net)	22A	(1,378)	(2,923)
Proceeds from Current Borrowings from Subsidiary		-	1,000
Repayment of Current Borrowings from Subsidiary		-	(1,000)
Increase/ (Decrease) in Supplier's Credit (Net)	28	3,214	2,161
Finance Cost Paid		(1,603)	(1,328)
Dividend Paid		(890)	(667)
Net Cash Generated/ (Used) - Financing Activities		**(6,290)**	**(869)**
Net Increase/(Decrease) in Cash and Cash Equivalents		**(2,935)**	**2,402**
Add: Opening Cash and Cash Equivalents		3,405	1,003
Closing Cash and Cash Equivalents		**470**	**3,405**
Reconciliation of Closing Cash and Cash Equivalents with Balance Sheet:			
Cash and Cash Equivalents as per Balance Sheet	17	**472**	**3,405**
Less: Temporary Overdraft Balance in Current Accounts	24	(2)	-
Cash and Cash Equivalents as per Cash Flow Statement		**470**	**3,405**
Supplemental Information			
Non Cash Transactions from Investing and Financing Activities:			
Acquisition of Right of Use Assets	3A	**555**	**131**
Basis of Preparation and Significant Accounting Policies	**1**		

The accompanying Notes are an integral part of the Standalone Financial Statements

This is the Standalone Statement of Cash Flows referred in our report of even date

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration Number: 304026E/ E-300009

Sarah George
Partner
Membership No. 045255

Place : Mumbai
Dated : May 24, 2023

For and on behalf of the Board of **Hindalco Industries Limited**

Praveen Kumar Maheshwari
Whole-time Director & Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN No.: 00026078

Company Information:

Hindalco Industries Limited ("the Company"), bearing Corporate Identity Number L27020MH1958PLC011238, is a public limited company incorporated in India in the year 1958. The Company is domiciled in India and its registered office is at Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road, Andheri (East), Mumbai 400093. The equity shares of the Company are listed on National Stock Exchange of India Limited (NSE) and BSE Limited (BSE) and its Global Depositary Receipts (GDR) are listed on the Luxembourg Stock Exchange.

The Company along with its subsidiaries has manufacturing operations in ten countries including India spread over four continents viz North America, South America, Asia and Europe. The Company is primarily engaged in two main streams of business namely Aluminium and Copper. In Aluminium business, the Company has presence across the entire value chain starting from mining of bauxite and coal through production of primary Aluminium and value added products like flat rolled product, extrusion and light gauge products for use in various applications like packaging, can, foil, food and beverage as well as products for use in aerospace, automotive, electronic, transportation, building and construction and other industrial segments.

In Copper business, the Company has one of the largest single location Copper smelting facility in India. The Company produces copper cathode, copper rods and precious metals.

The standalone financial statements ("the financial statements") presents the financial position of the Company and it includes the financial information of two joint operations consolidated on proportionate basis and two trusts. The list of entities incorporated in the standalone financial statements are provided in Note 53.

The standalone financial statements for the year ended March 31, 2023 have been approved for issue by the Board of Directors of the Company in their meeting held on May 24, 2023.

1. Basis of Preparation and Significant Accounting Policies

The basis of preparation and the accounting policies have been applied consistently to all the periods presented in the standalone financial statements, unless otherwise stated. The accounting policies adopted are the same as those which were applied for the previous financial year.

Statement of Compliance

The standalone financial statements comply in all material aspects with the Indian Accounting Standards ("Ind-AS") as prescribed under section 133 of the Companies Act 2013 ("the Act"), other relevant provisions of the Act as notified under the Companies (Indian Accounting Standards) Rules, 2015, (including subsequent amendments) and other accounting principles generally accepted in India.

1A. Basis of preparation

The standalone financial statements have been prepared and presented on the going concern basis using accrual basis of accounting and under the historical cost convention except for following assets and liabilities:

- Derivative financial instruments; see Note 1B(R) for accounting policy
- Certain financial assets and liabilities; see Note 1B(Q) for accounting policy
- Assets held for sale; see Note 1B(I) for accounting policy
- Employee's defined benefit plan assets; see Note 1B(V) for accounting policy
- Liability for cash based share-based payments; see Note 1B(W) for accounting policy
- Assets and liabilities acquired under business combination; see Note 1B(FF) for accounting policy
- Inventories those are designated in a fair value hedge relationship; see Note 1B(N), (R) for accounting policy
- Assets and liabilities designated as hedged items in fair value hedges that would otherwise be carried at cost; see Note 1B(R) for accounting policy

Historical cost is generally based on the fair value of the consideration in exchange for goods and services.

The Company has determined current and non-current classification of its assets and liabilities in the standalone financial statements as per the Company's normal operating cycle, and other criteria set out in Schedule III of the Companies Act, 2013. Based on the nature of products and the time lag between the acquisition of assets for processing and their realisation in cash and cash equivalents, the Company has ascertained its normal operating cycle as 12 months for the purpose of current and non-current classification of its assets and liabilities.

The standalone financial statements have been presented in Indian Rupees (₹), which is the functional currency of the Company and the currency of the primary economic environment in which the Company operates. All financial information presented in Indian Rupees has been rounded off to nearest Crore Rupees (₹ 1 Crore = ₹ 10,000,000) without any decimal unless otherwise stated. Amounts below rounding off convention are considered as Nil in the standalone financial statements.

1B. Significant Accounting Policies

A summary of the significant accounting policies applied in the preparation of the financial statements are as given below. These accounting policies have been applied consistently to all the periods presented in the financial statements.

(A) **Investment in Subsidiaries and Joint Ventures**

The investments in subsidiaries and joint ventures are carried in the financial statements at historical cost except when the investment, or a portion thereof, is classified as held for sale, in which case measured at lower of carrying amount and fair value less costs to sell. When the Company is committed to a sale plan involving disposal of an investment, or a portion of an investment, in any subsidiary or joint venture, the investment or the portion of the investment that will be disposed of is classified as held for sale when the criteria described above are met. Any retained portion of an investment in a subsidiary or a joint venture that has not been classified as held for sale continues to be accounted for at historical cost.

Investments in subsidiaries and joint ventures carried at cost are tested for impairment in accordance with Ind AS 36 Impairment of Assets. The carrying amount of the investment is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount, any impairment loss recognised reduces the carrying amount of the investment.

(B) **Investment in Associates**

The investments in associates are carried in these financial statements at fair Value through Other Comprehensive Income (OCI).

(C) **Investment in Joint Operations**

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

When the Company undertakes its activities under joint operations, the Company as a joint operator recognises in relation to its interest in a joint operation:

- its assets, including its share of any assets held jointly;
- its liabilities, including its share of any liabilities incurred jointly;
- its revenue from the sale of its share of the output arising from the joint operation;
- its share of the revenue from the sale of the output by the joint operation; and
- its expenses, including its share of any expenses incurred jointly.

The Company accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the standard applicable to the particular assets, liabilities, revenues and expenses.

When the Company transacts with a joint operation in which the Company is a joint operator (such as a sale or contribution of assets), the Company is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognised in the financial statements only to the extent of other parties' interests in the joint operation.

When the Company transacts with a joint operation in which the Company is a joint operator (such as a purchase of assets), the Company does not recognise its share of the gains and losses until it resells those assets to a third party.

See Note 7 - Investment in Subsidiaries for further details.

See Note 8 - Investment in Associates and Joint Ventures for further details.

(D) **Property, Plant and Equipment**

Property, plant and equipment held for use in the production or/and supply of goods or services, or for administrative purposes, are stated in the balance sheet at cost, less any subsequent accumulated depreciation and subsequent accumulated impairment losses except for freehold land which is carried at historical cost.

The initial cost at cash price equivalent of property, plant and equipment acquired comprises its purchase price, including import duties and non-refundable purchase taxes, any directly attributable costs of bringing the assets to its working condition and location and present value of any obligatory decommissioning costs for its intended use. Cost may also include effective portion on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment transferred from hedge reserve as basis adjustment.

In case of self-constructed assets, cost includes the costs of all materials used in construction, direct labour, allocation of overheads, directly attributable borrowing costs and effective portion of cash flow hedges of foreign currency transferred from the hedge reserve as basis adjustment.

Subsequent expenditure on major maintenance or repairs includes the cost of the replacement of parts of assets and overhaul costs. Where an asset or part of an asset is replaced and it is probable that future economic benefits associated with the item will be available to the Company, the expenditure is capitalised and the carrying amount of the item replaced is derecognised.

Similarly, overhaul costs associated with major maintenance which can be measured reliably are capitalised and depreciated over their useful lives where it is probable that future economic benefits will be available and any remaining carrying amounts of the cost of previous overhauls are derecognised. All other costs are charged to profit and loss during the reporting period in which they are incurred.

Capital Work-in-Progress

Capital work-in-progress comprises of tangible items in the course of construction for production or/and supply of goods or services or administrative purposes are carried at cost, less any accumulated impairment loss. At the point when an asset is capable of operating at management's intended use, the cost of construction is transferred to the appropriate category of property, plant and equipment. Costs associated with the commissioning of an asset are capitalised.

Depreciation

Depreciation is charged so as to write off the cost or value of assets, net off their residual values, over their estimated useful lives. Depreciation is recorded using the straight line basis. The estimated useful lives and residual values are reviewed at each year end, with the effect of any changes in estimate accounted for on a prospective basis. Each component of an item of property, plant and equipment with a cost that is significant in relation to the total cost of that item is depreciated separately if its useful life differs from the others components of the asset.

Depreciation commences when the assets are ready for their intended use. Depreciated assets and accumulated depreciation amounts are retained fully until they are removed/retired from active use.

Leasehold improvements are depreciated over the shorter of their useful life or the lease term, unless the entity expects to use the assets beyond the lease term.

The useful life of the items of Property, Plant and Equipment estimated by the management for the current and comparative period are in line with the useful life as per Schedule II of the Companies Act, 2013, (refer Note 2).

Disposal of assets

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between net disposal proceeds and the carrying amount of the asset and is recognised in the statement of profit and loss.

See Note 2 - Property, Plant and Equipment and Capital Work-in-Progress for further details.

See Note 38 - Depreciation and Amortization Expense for further details.

(E) **Investment Properties**

Investment properties held to earn rentals or for capital appreciation or both are stated in the balance sheet at cost, less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Subsequent expenditure on major maintenance or repairs includes the cost of the replacement of parts of assets. Where an asset or part of an asset is replaced and it is probable that future economic benefits associated with the item will be available to the Company, the expenditure is capitalised and the carrying amount of the item replaced is derecognised. All other repairs and maintenance costs are recognised in the statement of profit and loss. Depreciation is charged on a straight line basis over their estimated useful lives. Any gain or loss on disposal of investment property is determined as the difference between net disposal proceeds and the carrying amount of the property and is recognized in the statement of profit and loss. Transfer to, or from, investment property is done at the carrying amount of the property.

See Note 4 - Investment Properties for further details.

See Note 38 - Depreciation and Amortization Expense for further details.

(F) **Intangible Assets (Other than Goodwill)**

Intangible assets acquired separately

Intangible assets acquired are reported at cost less accumulated amortization and accumulated impairment losses. Amortization is charged on a straight line basis over their estimated useful lives other than Mining rights. The estimated useful life and amortization method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Internally-generated intangible assets

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if all of the following can be demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- management's intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset is recognised. Where no internally-generated intangible asset can be recognized, development expenditure is charged to the statement of profit and loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets acquired separately.

Intangible assets acquired in a business combination

Identified intangible assets acquired in a business combination and recognised separately from goodwill are initially recognised at their fair values at the acquisition date.

Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets acquired separately.

Mineral Reserves, Resources and Rights (Mining Rights)

Mineral reserves, resources and rights (together referred to as 'mining rights') which can be reasonably valued, are recognised in the assessment of fair values on acquisition. Exploitable mineral rights are amortised using the unit of production basis over the commercially recoverable reserves. Mineral resources are included in amortisation calculations where there is a high degree of confidence that they will be extracted in an economic manner. Commercially recoverable reserves are proved and probable reserves. Changes in the commercial recoverable reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

Exploration for and evaluation of mineral resources

Expenditures associated with exploration for and evaluation of mineral resources after obtaining of legal rights to explore a specific area but before technical feasibility and commercial viability of extracting mineral resources are demonstrable are recognized as Exploration and Evaluation assets.

If a project does not prove viable, all irrecoverable exploration and evaluation expenditure associated with the project net of any related impairment allowances is written off to the statement of profit and loss.

The Company measure its Exploration and Evaluation assets at cost and classifies it as Property, Plant and Equipment or Intangible Assets according to the nature of assets acquired and applies the classification consistently.

As the assets is not available for use, it is not depreciated but are monitored for indication of impairment. An exploration and evaluation asset is no longer classified as such when the technical feasibility and commercial viability of extracting minerals resources are demonstrable and the development of the deposit is intended by the management. The carrying value of such exploration and evaluation asset is reclassified as Mining Rights.

De-recognition of intangible assets

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset are recognised in the statement of profit and loss when the asset is derecognised.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment annually, and whenever there is an indication that the asset may be impaired.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 38 - Depreciation and Amortization Expense for further details.

(G) Goodwill

Goodwill arising on acquisition is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any. For the purpose of impairment testing, goodwill is allocated to each of the cash-generating units expected to benefit from the synergies of the combination.

Cash-generating units to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognised for goodwill is not reversed in a subsequent period.

See Note 5 - Goodwill for further details.

(H) Stripping cost

Stripping costs incurred during the mining production phase are allocated between cost of inventory produced and the existing mine asset. The stripping ratio, as approved by the regulatory authority, for the life of the mine is obtained by dividing the estimated quantity of overburden by the estimated quantity of mineable coal / bauxite reserve to be extracted over the life of the mine. This ratio is periodically reviewed and changes, if any, are accounted for prospectively.

Stripping costs are allocated and included as a component of the mine asset when they represent significantly improved access to ore, provided all the following conditions are met:

- it is probable that the future economic benefit associated with the stripping activity will be realised;
- the component of the ore body for which access has been improved can be identified; and
- the costs relating to the stripping activity associated with the improved access can be reliably measured.

The overburden removal costs are included in Mining Rights under Intangible assets and amortised based on stripping ratio on the quantity of coal / bauxite excavated.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 38 - Depreciation and Amortization Expense for further details.

(I) Non-Current Assets or Disposal Group Held for Sale and Discontinued Operations

Non-current assets and disposal group are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the asset (or disposal group) is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such asset (or disposal group) and its sale is highly probable. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current assets (and disposal group) classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell except for those assets that are specifically exempt under relevant Ind AS. Once the assets are classified as "Held for sale", those are not subjected to depreciation till disposal.

An impairment loss is recognised for any initial or subsequent write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognised.

A gain or loss not previously recognised by the date of the sale of the non-current asset (or disposal group) is recognised at the date of derecognition.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the balance sheet.

Discontinued Operations

A discontinued operation is a component of the entity that has been disposed off or is classified as held for sale and that represents a separate major line of business or geographical area of operations, is part of a single co-ordinated plan to dispose of such a line of business or area of operations, or is a subsidiary acquired exclusively with a view to resale. The results of discontinued operations are presented separately in the statement of profit and loss.

See Note 19 - Non-Current Assets Held For Sale for further details.

(J) Impairment of Non-Current Assets (excluding Goodwill)

At the end of each reporting period, the Company reviews the carrying amounts of its tangible, intangible and other 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/cash generating unit is estimated in order to determine the extent of the impairment loss (if any). Recoverable amount is the higher of fair value less cost to sell and value in use. Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

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 for which the estimates of future cash flows have not been adjusted.

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 immediately in the statement of profit and loss.

Non-current assets (other than Goodwill) that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period. Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in the statement of profit and loss.

See Note 2 - Property, Plant and Equipment and Capital Work-in-Progress for further details.

See Note 4 - Investment Properties for further details.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 39 - Impairment Loss on Non-Current Assets (Net) for further details.

(K) Foreign currency Transactions and Translation

In preparing the financial statements, transactions in currencies other than the Company's functional currency (foreign currencies) are recognised at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are translated at the rates prevailing at that date. Non-monetary items are measured at historical cost.

Exchange differences on monetary items are recognised in the statement of profit and loss in the period in which they arise, except for:

- eligible exchange differences on foreign currency borrowings relating to qualifying assets under construction are included in the cost of those assets when they are regarded as an adjustment to interest costs; and
- exchange differences on transactions entered into in order to hedge certain foreign currency risks (see below for hedge accounting policies).

Changes in the fair value of non-monetary equity instruments irrevocably classified as fair value through other comprehensive income includes gain or loss on account of exchange differences.

The fair value of financial liabilities and financial assets denominated in a foreign currency are translated at the spot rate at the end of the reporting period. The foreign exchange component forms part of its fair value gain or loss. Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was measured.

See Note 37 - Finance Cost for further details.

See Note 41 - Other Expenses for further details.

See Note 43 - Other Comprehensive Income/ (Loss) for further details.

(L) Provisions and Contingencies

Provisions are recognized when there is a present obligation (legal or constructive) as a result of a past event and it is probable ("more likely than not") that it is required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the estimated cash flows to settle the present obligation, its carrying amount is the present value of those cash flows. The discount rate used is a pre-tax rate that reflects current market assessments of the time value of money in that jurisdiction and the risks specific to the liability.

Onerous contracts

An onerous contract is considered to exist when a contract under which the unavoidable costs of meeting the obligations exceed the economic benefits expected to be received from it.

A provision for onerous contracts is recognised when the expected benefits to be derived by the Company from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract.

Restructurings

A restructuring provision is recognised when there is a detailed formal plan for the restructuring which has raised a valid expectation in those affected that the Company will carry out the restructuring by stating to implement the plan or announcing its main feature to those affected by it. The measurement of a restructuring provision includes only the direct expenditures arising from the restructuring which are both necessarily entailed by the restructuring and not associated with the ongoing activities of the Company.

Restoration (including Mine closure), rehabilitation and decommissioning

Close-down and restoration costs are provided for in the accounting period when the obligation arising from the related disturbance occurs, based on the net present value of the estimated future costs of restoration to be incurred during the life of the mining operation and post closure. Provisions for close-down and restoration costs do not include any additional obligations which are expected to arise from future disturbance.

The initial close-down and restoration provision is capitalised. Subsequent movements in the close-down and restoration provisions for ongoing operations, including those resulting from new disturbance related to expansions or other activities qualifying for capitalisation, updated cost estimates, changes to the estimated lives of operations, changes to the timing of closure activities and revisions to discount rates are also capitalised within "Property, plant and equipment". The effect of time value of money on the restoration, rehabilitation and decommissioning liabilities is recognised in the statement of profit and loss as interest expense.

Environmental Liabilities

Environment liabilities are recognised when the Company becomes obliged, legally or constructively, to rectify environmental damage or perform remediation work. The effect of time value of money on the environmental liabilities is recognised in the statement of profit and loss as interest expense.

Litigation

Provision relating to legal, tax and other matters is recognised once it has been established that the Company has a present obligation based on consideration of the information which becomes available up to the date on which the Company's financial statements are approved and may in some cases entail seeking expert advice in making the determination on whether there is a present obligation.

Contingent Liabilities and Assets

A contingent liability is a possible obligation that arises from a past event, with the resolution of the contingency dependent on uncertain future events, or a present obligation where no outflow is probable. Material contingent liabilities are disclosed in the financial statements unless the possibility of an outflow of economic resources is remote. Contingent assets are not recognized in the financial statements unless it is virtually certain that the future event will confirm the asset's existence and the asset will be realised.

Enterprise Social Commitment

Enterprise Social Commitment is the amount to be spent on social and economic development of the surrounding area over a period of time where any new project is set up. Such obligation arises out of conditions mentioned in the Environment Clearance Certificate given by the Government for new projects and are generally defined as a percentage of total project cost. Present value of such future cash flows discounted at appropriate and applicable discount rates are capitalised against the obligation created. Actual cash flows that happen over the period are adjusted against the obligation. The effect of time value of money on the environmental liabilities is recognised in the statement of profit and loss as interest expense.

Renewable Power Obligation

Provision towards Renewable Power obligation is created to the extent any obligated unit is unable to source renewable energy as a replacement to carbon energy as per requirement of the applicable regulation during the reporting period and is carried in books till the obligation is discharged by purchasing Renewable Energy Certificate from any of the authorised exchanges.

See Note 25 - Provisions for further details.

See Note 48 - Contingent Liabilities and Commitments for further details.

(M) **Leases**

The Company as Lessee

The Company assesses whether a contract is or contains a lease, at inception of the contract. The Company recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets. For these leases, the Company recognises the lease payments as an operating expense on a straight-line basis over the lease term, unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed. Contingent and variable rentals are recognized as expense in the periods in which they are incurred.

Lease Liability

The lease payments that are not paid at the commencement date are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases in the Company, the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions.

To determine the incremental borrowing rate, the Company uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk and makes adjustments specific to the lease, e.g. term, security etc.

Lease payments included in the measurement of the lease liability comprise:

- Fixed lease payments (including in-substance fixed payments) payable during the lease term and under reasonably certain extension options, less any lease incentives;
- Variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- The amount expected to be payable by the lessee under residual value guarantees;
- The exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- Payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance liability for each period.

The lease liability is presented as a separate line in the Standalone Balance Sheet.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Company remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) to reflect any re-assessment, lease modification, or revised in-substance fixed lease payments.

Right of Use (ROU) Assets

The ROU assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

Whenever the Company incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under Ind AS 37 Provisions, Contingent Liabilities and Contingent Assets. The costs are included in the related right-of-use asset.

For the certain class of assets, the Company allocates lease or non-lease components on the basis of their relative stand-alone prices while assessing a contract at its inception or on reassessment.

The Company applies Ind AS 36- Impairment of Assets to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as per its accounting policy on 'property, plant and equipment'.

Extension and termination options are included in many of the leases. In determining the lease term, the management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option.

ROU assets are depreciated over the shorter period of the lease term and useful life of the underlying asset. If the Company is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life. The depreciation starts at the commencement date of the lease.

Deferred tax on the deductible temporary difference and taxable temporary differences in respect of carrying value of right of use assets and lease liability and their respective tax bases are recognised separately.

The Company as Lessor

The Company enters into lease arrangements as a lessor with respect to some of its investment properties and buildings.

Leases for which the Company is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as finance lease. All other leases are classified as operating leases.

When the Company is an intermediate lessor, it accounts for the head lease and sublease as two separate contracts. The sublease is classified as finance or operating lease by reference to the right-of-use asset arising from the head lease.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the lease term.

Amounts due from lessees under finance leases are recognised as receivables at the amount of the Company's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Company's net investment outstanding in respect of the leases.

When a contract includes lease and non-lease components, the Company applies Ind AS 115, Revenue from Contracts with Customers to allocate the consideration under the contract to each component.

See Note 3 – Right of Use Assets and Lease Liabilities for further details.

See Note 37 – Finance Cost for further details.

See Note 41 – Other Expenses for further details.

(N) **Inventories**

Inventories are stated at the lower of cost and net realizable value. The cost of finished goods and work in progress includes raw materials, direct labour, other direct costs and related production overheads. Costs of inventories include the transfer from equity any gains/losses on qualifying cash flow hedges for purchases of raw materials.

Cost of raw material and Traded Goods comprises of Cost of purchases and also include all other costs incurred in bringing the inventories to their present location and condition and are net of rebates and discounts.

The Inventories are measured at Fair Value only in those cases where the Inventories are designated into a fair value hedge relationship.

Cost is determined using the weighted average cost basis. However, the same cost basis is applied to all inventories of a particular class. Inventories of stores and spare parts are valued at weighted average cost basis after providing for cost of obsolescence and other anticipated losses, wherever considered necessary.

Net realizable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

Materials and other supplies held for use in the production of inventories (finished goods, work-in-progress) are not written down below the cost if the finished products in which they will be used are expected to sell at or above the cost.

See Note 15 – Inventories for further details.

(O) **Trade Receivables**

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. If the receivable is expected to be collected within a period of 12 months or less from the reporting date (or in the normal operating cycle of the business, if longer), they are classified as Current Assets otherwise as Non-Current Assets.

Trade receivables are measured at their transaction price on initial recognition, unless it contains a significant financing component or pricing adjustments embedded in the contract in which cases it is recognised at fair value. Trade receivables are held with the objective of collecting the contractual cash flows and therefore are subsequently measured at amortised cost less loss allowance.

Trade receivables which are subject to a factoring arrangement without recourse are de-recognized from the Balance Sheet in its entirety. Under this arrangement, the Company transfers relevant receivables to the factor in exchange for cash and does not retain late payment and credit risk.

Trade receivables which arise from contracts where the sale price is provisional and revenue model have the character of a commodity derivative are measured at fair value. The fair value is measured at forward rate and subsequent changes are recognised as Other Operating Revenue.

See Note 16 – Trade Receivables for further details

(P) **Trade and Other Payables**

These amounts represent liabilities for goods and services provided to the Company and are unpaid at the end of the financial year. The amounts are unsecured and usually paid within time limits as contracted. Trade and other payables are presented as current liabilities unless the payment is not due within 12 months after the reporting period.

They are recognised initially at their transactional value which represents the fair value and subsequently measured at amortised cost using the effective interest method wherever applicable.

See Note 23 – Trade Payables for further details.

(Q) **Financial Instruments**

All financial assets are recognised on trade date when the purchase of a financial asset is under a contract whose term requires delivery of the financial asset within the timeframe established by the market concerned. Financial assets are initially measured at fair value, plus transaction costs, except for those financial assets which are classified as at fair value through profit or loss (FVTPL) at inception. All recognised financial assets are subsequently measured in their entirety at either amortised cost or fair value.

Classification of financial assets

Financial assets are classified as 'equity instrument' if it is a non-derivative and meets the definition of 'equity' for the issuer. All other non-derivative financial assets are 'debt instruments'.

Financial assets at amortised cost and the effective interest method

Debt instruments are measured at amortised cost if both of the following conditions are met:

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

Debt instruments meeting these criteria are subsequently measured at amortised cost using the effective interest method less any impairment, with interest recognised on an effective yield basis in other income.

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest over the relevant period. The effective interest rate is the rate that exactly discounts the estimated future cash receipts (including all fees or and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

The Company may irrevocably elect at initial recognition to classify a debt instrument (on an instrument-by-instrument basis) that meets the amortised cost criteria above as at FVTPL if that designation eliminates or significantly reduces an accounting mismatch had the financial asset been measured at amortised cost.

Financial assets at fair value through other comprehensive income (FVTOCI)

Debt instruments are measured at FVTOCI if both of the following conditions are met:

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

Debt instruments meeting these criteria are subsequently measured at fair value with any gains or losses arising on re-measurement recognised in other comprehensive income, except for impairment gains or losses, interest income and foreign exchange gains or losses which are recognised in the statement of profit and loss. Interest calculated using the effective interest method is recognised in the statement of profit and loss in other income. When the debt instrument is derecognised the cumulative gain or loss previously recognised in other comprehensive income is reclassified to the statement of profit and loss account as a reclassification adjustment.

At initial recognition, an irrevocable election is made (on an instrument-by-instrument basis) to designate investments in equity instruments (other than held for trading purpose) at FVTOCI.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Company manages together and has evidence of a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated in an effective hedge relationship as a hedging instrument or not a financial guarantee.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognised in other comprehensive income and accumulated in the 'Gain/ (Loss) on Equity Instruments FVTOCI'. Where the asset is disposed of, the cumulative gain or loss previously accumulated in the 'Gain/ (Loss) on Equity Instruments FVTOCI' is directly reclassified to retained earnings.

For equity instruments measured at fair value through other comprehensive income, no impairments are recognised in the statement of profit and loss.

Financial assets at Fair Value through profit and loss (FVTPL)

Financial assets that do not meet the criteria of classifying as amortised cost or fair value through other comprehensive income described above, or that meet the criteria but the entity has chosen to designate as at FVTPL at initial recognition, are measured at FVTPL.

Investments in equity instruments are classified as at FVTPL, unless the Company designates an investment that is not held for trading at FVTOCI at initial recognition.

Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on re-measurement recognised in statement of profit and loss. Interest income from these financial assets is included in other income.

Impairment of financial assets

On initial recognition of the financial assets, a loss allowance for expected credit loss is recognised for debt instruments carried at amortised cost and FVTOCI. For debt instruments that are measured at FVTOCI, the loss allowance is recognised in the statement of profit and loss.

Expected credit losses of a financial instrument is measured in a way that reflects:

- an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- the time value of money; and
- reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

At each reporting date, the Company assesses whether the credit risk on a financial instrument has increased significantly since initial recognition.

When making the assessment, the Company compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition and consider reasonable and supportable information, that is available without undue cost or effort, that is indicative of significant increases in credit risk since initial recognition.

If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, the Company measures the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If, the credit risk on that financial instrument has increased significantly since initial recognition, the Company measures the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses.

For Trade Receivables and Contract Assets, the Company applies the simplified approach required by Ind AS 109, which requires expected life time losses to be recognized from initial recognition of the receivables.

The amount of expected credit losses (or reversal) that is required to adjust the loss allowance at the reporting date is recognised as an impairment gain or loss in the statement of profit and loss.

De-recognition of financial assets

The Company derecognises a financial asset on trade date only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity or when it retains contractual rights to retain contractual cash flows from financial assets, but assumes a contractual obligation to pay the cash flows to one or more recipient. If the Company neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Company recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Company retains substantially all the risks and rewards of ownership of a transferred financial asset, the Company continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On de-recognition of a financial asset other than in its entirety (e.g. when the Company retains an option to repurchase part of a transferred asset), the Company allocates the previous carrying amount of the financial asset between the part it continues to recognise under continuing involvement, and the part it no longer recognises on the basis of the relative fair values of those parts on the date of the transfer. The difference between the carrying amount allocated to the part that is no longer recognised and the sum of the consideration received for the part no longer recognised and any cumulative gain or loss allocated to it that had been recognised in other comprehensive income is recognised in the statement of profit and loss. Cumulative gain or loss that had been recognised in other comprehensive income is allocated between the part that continues to be recognised and the part that is no longer recognised on the basis of the relative fair values of those parts.

Financial liabilities and equity instruments issued by the Company

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognised at the proceeds received, net of direct issue costs.

Compound instruments

The component parts of compound instruments (convertible instruments) issued by the Company are classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangement. At the date of issue, the fair value of the liability component is estimated using the prevailing market interest rate for a similar non-convertible instrument. This amount is recorded as a liability on an amortised cost basis using the effective interest method until extinguished upon conversion or at the instrument's maturity date. The equity component is determined by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This is recognised and included in equity, net of income tax effects, and is not subsequently re-measured.

Financial guarantee contract liabilities

Financial guarantee contract liabilities are initially measured at their fair values and, if not designated as at FVTPL, are subsequently measured at the higher of:

- the amount of loss allowance is determined by using expected credit loss model as per Ind AS 109; and
- the amount initially recognised less, where appropriate, cumulative amount of income recognised in accordance with the revenue recognition policies.

Financial liabilities

Financial liabilities are classified as either financial liabilities 'at FVTPL' or 'other financial liabilities'.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- it has been acquired or incurred principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Company manages together and for which there is evidence of a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading may also be designated as at FVTPL upon initial recognition if:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is

evaluated on a fair value basis, in accordance with the Company's documented risk management or investment strategy, and information about the Company is provided internally on that basis; or

- it forms part of a contract containing one or more embedded derivatives, and Ind-AS 109 Financial Instruments permits the entire combined contract to be designated as at FVTPL.

Financial liabilities at FVTPL are stated at fair value, with any gains or losses arising on re-measurement recognised in the statement of profit and loss, except for the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability which is recognised in other comprehensive income.

The net gain or loss recognised in the statement of profit and loss incorporates any interest paid on the financial liability.

Other financial liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs.

Other financial liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis.

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 payments through the expected life of the financial liability, or (where appropriate) a shorter period, to the net carrying amount on initial recognition.

De-recognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit or loss.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Company or the counterparty.

See Note 9A and 9B –Investments for further details.

See Note 10 – Loans for further details.

See Note 12 – Other Financial assets for further details.

See Note 18 – Bank Balance other than Cash and Cash Equivalents for further details.

See Note 22A and 22B – Borrowings for further details.

See Note 31 – Other Income for further details.

See Note 40 – Impairment Loss/ (Reversal) on Financial Assets (Net) for further details.

See Note 51 – Financial Instruments for further details.

See Note 52 – Financial Risk Management for further details.

See Note 50 – Offsetting Financial Liabilities and Financial Assets for further details.

(R) **Derivatives and Hedge Accounting**

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value at the end of each reporting date. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The Company has a policy to designate certain derivatives as either:

(a) hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedge); or

(b) hedges of a particular risk associated with the cash flow of recognised assets or liabilities or a highly probable forecast transaction (cash flow hedge);

The Company documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Company also documents the nature of the risk being hedged and how the Company will assess whether the hedging relationship meets the hedge effectiveness requirements (including its analysis of the sources of hedge ineffectiveness and how it determines the hedge ratio).

Change in Fair value of derivatives that are not designated in any hedge relationship as mentioned above are accounted through the Statement of Profit and Loss at each reporting date.

The Company also identifies embedded derivatives in certain transactions. Embedded derivatives closely related to the host contracts are not separated. Derivatives embedded in a host contract that is an asset within the scope of Ind AS 109 are not separated. Derivatives embedded in all other host contract are separated only if the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host and are measured at fair value through profit or loss. Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest. These derivatives are designated into a hedge relationship if they meet hedge accounting criteria. Change in Fair Value of such embedded derivatives are accounted in Other Comprehensive Income if they are designated in a cash flow hedge relationship. Fair Value change of all other embedded derivatives including those that are not designated in any hedge relationship are accounted through the statement of profit and loss.

The full fair value of a hedging derivative is classified as a non-current asset or liability when the residual maturity of the derivative is more than 12 months and as a current asset or liability when the residual maturity of the derivative is less than 12 months.

Fair value hedge

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the statement of profit and loss, together with any changes in the fair value of the hedged item that are attributable to the hedged risk.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer qualifies for hedge accounting. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortised to the statement of profit and loss from that date except for inventory that is charged to statement of profit and loss on sale of goods.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated under the heading cash flow hedging reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in the statement of profit and loss, and is included in the '(Gain) / Loss in Fair Value of Derivatives' line item.

Amounts previously recognised in other comprehensive income and accumulated in equity are reclassified to the statement of profit and loss in the periods when the hedged item affects the statement of profit and loss, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in other comprehensive income and accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability as a basis adjustment.

If the hedge ratio for risk management purposes in no longer optimal but the risk management objective remains unchanged and the hedge continues to qualify for hedge accounting, the hedge relationship will be rebalanced by adjusting either the volume of the hedging instrument or the volume of the hedged item so that the hedge ratio aligns with the ratio used for risk management purposes. Any hedge ineffectiveness is calculated and accounted for in the statement of profit and loss at the time of the hedge relationship rebalancing.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer qualifies for hedge accounting. Any gain or loss recognised in other comprehensive income and accumulated in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the statement of profit and loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognised immediately in the statement of profit and loss.

See Note 11 – Derivatives Financial Instruments for further details.

See Note 51 - Financial Instruments for further details.

(S) **Cash and Cash Equivalents**

Cash and cash equivalents comprise of cash at bank and in hand, short-term deposits and short term highly liquid investments with an original maturity of three months or less that are readily convertible to known amounts of cash and are subject to insignificant risk of changes in value.

See Note 17 – Cash and Cash Equivalents for further details.

(T) **Borrowing Cost**

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. The Company considers a period of twelve months or more as a substantial period of time. Qualifying assets are assets that necessarily take a substantial period of time to get ready for their intended use or sale.

Transaction costs in respect of long-term borrowings are amortised over the tenure of respective loans using effective interest method. All other borrowing costs are expensed in the period in which they are incurred.

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

See Note 2 - Property, Plant and Equipment and Capital Work-in-Progress for further details.

See Note 6 - Other Intangible Assets and Intangible Assets under Development for further details.

See Note 37 - Finance Cost for further details.

(U) **Government Grants**

Government grants are recognized at fair value when there is reasonable assurance that we will comply with the conditions attached to them and that the grants will be received.

Government grants are recognised in the statement of profit and loss on a systematic basis over the periods in which the Company recognises as expenses the related costs for which the grants are intended to compensate. Government grants whose primary condition is that the Company should purchase, construct or otherwise acquire non-current assets are recognized in the balance sheet by setting up the grant as deferred income and its amortization is recognized in 'Other Income' on straight line basis over expected useful lives of related assets.

Other government grants (grants related to income) are recognized as income over the periods necessary to match them with the costs for which they are intended to compensate, on a systematic basis. Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of providing immediate financial support with no future related costs are recognized in the statement of profit and loss in the period in which they become receivable.

Grants related to income are presented under 'Other Income' or 'Other Operating Revenue' in the statement of profit and loss depending upon the nature of the underlying grant, except for grants received in the form of rebate or exemptions related to expenditures, which are deducted in reporting the related expense.

The benefit of a government loan at a below-market rate of interest is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

See Note 30 – Revenue from Operations for further details.

See Note 31 – Other Income for further details.

(V) **Employee Benefits**

Retirement benefit and termination benefits

A defined contribution plan is a pension plan under which the Company pays fixed contributions into a separate entity. The Company has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Payments to defined contribution retirement benefit plans are recognised as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement and medical plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each annual reporting period. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market yields of government bonds having terms approximating to the terms of related obligation.

Re-measurement, comprising of actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected in the balance sheet with a charge or credit recognised in other comprehensive income in the period in which they occur. Re-measurement recognised in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to the statement of profit and loss. Past service cost is recognised in the statement of profit and loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are categorised as follows:

- service cost (including current service cost, past service cost, as well as gains and losses on curtailments and settlements);
- net interest expense or income; and
- re-measurements

The Company presents the first two components of defined benefit costs in the statement of profit and loss in the line item employee benefits expense. Curtailment gains and losses are accounted for as past service costs.

The retirement benefit obligation recognised in the balance sheet represents the actual deficit or surplus in the Company's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

A liability for a termination benefit is recognised at the earlier of when the entity can no longer withdraw the offer of the termination benefit or when the entity recognises any related restructuring costs which involves the payment of terminations benefits.

In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than 12 months after the end of the reporting period are discounted to their present value.

Short-term and other long-term employee benefits

A liability is recognised for benefits accruing to employees in respect of wages and salaries in the period the related service is rendered at the undiscounted amount of the benefits expected to be paid in exchange for that service.

Liabilities recognised in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

Liabilities recognised in respect of other long-term employee benefits such as annual leave and sick leave are measured at the present value of the estimated future cash outflows expected to be made by the Company in respect of services provided by employees up to the reporting date. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit retirement plans. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to the statement of profit and loss in the period in which they arise. These obligations are valued annually by independent qualified actuaries.

The obligations are presented as current liabilities in the balance sheet if the entity does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

See Note 26 - Employee Benefit Obligations for further details.

See Note 35 – Employee Benefits Expense for further details

(W) **Employee Share-based Payments**

Equity settled share-based payments to employees are measured at the fair value of the options at the grant date.

The fair value of option at the grant date is expensed over the respective vesting period in which all of the specified vesting conditions are to be satisfied with a corresponding increase in equity as "Employee Stock Options Account". In case of forfeiture of unvested option, portion of amount already expensed is reversed. In a situation where the vested option forfeited or expires unexercised, the related balance standing to the credit of the "Employee Stock Options Account" are transferred to the "Retained Earnings".

When the options are exercised, the Company issues new equity shares of the Company of ₹ 1/- each fully paid-up. The proceeds received and the related balance standing to credit of the Employee Stock Options Account, are credited to share capital (nominal value) and Securities Premium Account.

Share appreciation rights which are cash settled, are recognised as employee benefit expense over the relevant service period. The liability is fair valued at each reporting date and are presented as employee benefit obligations in the balance sheet.

Employee Stock Option Scheme administered by any independent trust is deemed as extended arm of the Company and is consolidated in the standalone financial statements. When the options are exercised, the trust transfers the appropriate number of shares to the employee. The proceeds received, net of any directly attributable transaction costs, are credited directly to equity.

See Note - 26 Employee Benefit Obligations for further details

See Note - 35 Employee Benefits Expense for further details

(X) **Income Taxes**

Income tax expense represents the sum of the tax currently payable and deferred tax.

Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from 'profit before tax' as reported in the statement of profit and loss because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date.

Deferred tax

Deferred tax is recognised on differences between the carrying amounts of assets and liabilities in the balance sheet and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognised for all taxable temporary differences.

Deferred tax assets are generally 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. Such assets and liabilities are not recognised if the temporary difference arises from initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that at the time of transaction affects neither the taxable profit nor the accounting profit.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company 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 when they relate to income taxes levied by the same taxation authority. Current tax assets and tax liabilities are offset where the Company has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Minimum Alternative Tax (MAT) is recognized as an asset only when and to the extent there is convincing evidence that the Company will pay normal income tax during the specified period. In the year in which the MAT credit becomes eligible to be recognized as an asset, the said asset is created by way of credit to the statement of profit and loss and included in deferred tax assets. The Company reviews the same at each balance sheet date and writes down the carrying amount of MAT entitlement to the extent there is no longer convincing evidence to the effect that Company will pay normal income tax during the specified period.

Current and deferred tax for the period

Current and deferred tax are recognised in the statement of profit and loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity, respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation and considers whether it is probable that the taxation authority will accept tax position taken by the Company. Uncertain tax positions are reflected in the overall measurement of the Company's tax expense and are based on the most likely amount or the expected value arrived at by the Company which provides a better prediction of the resolution of uncertainty. Uncertain tax positions are monitored and updated as and when new information becomes available, typically upon examination or action by the taxing authorities or through statute expiration and judicial precedent.

The Company considers when a particular amount payable for interest and penalties on income taxes is determined to be within the scope of Ind AS 37, it is presented as part of financing cost or other expenses, respectively unless when there is an overall settlement with tax authority and the interest and penalties cannot be identified separately in which case it is determined to be part of income taxes and accounted under Ind AS 12.

See Note 13 – Income Taxes for further details

(Y) **Revenue Recognition**

The Company derives revenue principally from sale of hydrate, speciality alumina, aluminium and aluminium value added products, di-ammonium phosphate, copper, precious metals (gold and silver) and other materials.

The Company recognizes revenue when it satisfies a performance obligation in accordance with the contract with the customer. This is achieved when control of the product has been transferred to the customer, which is generally determined when legal title, physical possession, risk of obsolescence, loss and rewards of ownership pass to the customer and the Company has the present right to payment, all of which occurs at a point in time upon shipment or delivery of the product. The Company considers shipping and handling activities as costs to fulfil the promise to transfer the related products and the customer payments for shipping and handling costs are recorded as a component of revenue.

In situations where revenue is recognized on shipment of goods, shipping and handling services are treated as a distinct separate performance obligation and the Company recognises revenue for such services when the performance obligation is completed.

The Company considers the terms of the contract in determining the transaction price. The transaction price is based upon the amount the Company expects to be entitled to in exchange for transferring of promised goods and services to the customer after deducting incentive programs, including but not limited to discounts, volume rebates etc. Transaction price excludes taxes and duties collected on behalf of the government.

For incentives offered to customers, the Company makes estimates related to customer performance and sales volume to determine the total amounts earned and to be recorded as deductions from "Revenue from contracts with customers". In making these estimates, the Company considers historical results that have a predictive value of the amount that the Company expects to be entitled to for the transferred goods and services. If historical results have limited predictive value or the Company has limited experience with similar types of incentives, the estimate is made in such a manner, which ensures that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The actual amounts may differ from these estimates and are accounted for prospectively. No element of significant financing is deemed present as the sales are made with a credit term, which is consistent with market practice. The Company's obligation to repair or replace faulty products under the standard warranty terms is recognised as a cost with a corresponding provision.

For certain customer contracts, final prices are determined based on the underlying market index of commodity prices at a future date, for example prices on the London Metal Exchange Limited (LME) or London Bullion Markets Association (LBMA). In such contracts, the Company records revenue on a provisional basis considering current market price when control is transferred to the customer. At the end of each period, prior to final settlement date, adjustments are made to the provisional sale price based on movements in the underlying market index of commodity prices up to the date of final price determination. Such variable price movement is accounted as other operating revenue.

Revenue from irrevocable bill and hold/ holding certificate contracts is recognised when it is probable that delivery will be made, goods have been identified and kept separately, are ready for delivery in the present condition and the Company does not have the ability to use the product or to direct it to another customer. Under these arrangements, revenue is recognised once legal title has passed and control of the asset sold is transferred to the customer.

Export incentives and subsidies are recognized when there is reasonable assurance that the Company will comply with the conditions and the incentive will be received.

Claim on insurance companies, railway authorities and others are accounted for on acceptance basis.

Revenue excludes any taxes and duties collected on behalf of the government.

See Note 30 – Revenue from Operations for further details

(Z) **Contract Liability**

Contract liability is recognised when a payment is received from the customer before the Company transfers goods or services to the customer.

As these are contracts that the Company expects, and has the ability, to fulfil through delivery of a non-financial item, these are presented as advance from customers and are recognised as revenue as and when control of respective commodities is transferred or service is provided to the customers under the agreements. The portion of the advance where either the Company does not have a unilateral right to defer settlement beyond twelve months or expects settlement within twelve months from the balance sheet date is classified as a current liability.

See Note 29 – Contract Liabilities for further details

(AA) **Dividend and Interest Income**

Dividend Income

Dividend income on investments are recognised in the statement of profit and loss when the Company's right to receive payment is established, it is probable that the economic benefits associated with the dividend will flow to the entity; and the amount of the dividend can be measured reliably.

Interest Income

Interest income from a financial asset is recognised when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably. Interest income is accrued on a time proportion basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

See Note 31 – Other Income for further details

(BB) **Exceptional Items**

Exceptional items include income or expense that are considered to be part of ordinary activities, however are of such significance and nature that separate disclosure enables the user of the financial statements to understand the impact in a more meaningful manner. Exceptional items are identified by virtue of their size, nature and incidence so as to facilitate comparison with prior periods and to assess underlying trends in the financial performance of the Company.

See Note 42 – Exceptional Income/ (Expenses) (Net) for further details

(CC) **Earnings Per Share**

Basic earnings per share is computed by dividing the net profit for the period attributable to the equity shareholders of the Company by the weighted average number of equity shares outstanding during the period. The weighted average number of equity shares outstanding during the period and for all periods presented is adjusted for events, such as bonus shares, other than the conversion of potential equity shares that have changed the number of equity shares outstanding, without a corresponding change in resources. Partly paid-up shares are included as fully paid equivalents according to the fraction paid-up.

Diluted earnings per share adjusts the figures used in the determination of basic earnings per share to take into account the after income tax effect of interest and other financing costs associated with dilutive potential equity shares and the weighted average number of additional equity shares that would have been outstanding assuming the conversion of all dilutive potential equity shares.

Treasury shares are excluded from weighted average numbers of equity shares used as a denominator in the calculation of basic as well as diluted earnings per share.

See Note 44 – Earnings Per Share for further details

(DD) **Statement of Cash Flows**

Cash flows are reported using the indirect method, whereby the profit before tax is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments and item of income or expenses associated with investing or financing cash flows. The cash flows from operating, investing and financing activities of the Company are segregated.

For the purposes of the statement of cash flow, cash and cash equivalents is net of outstanding bank overdrafts which are integral part of cash management activities. In the standalone balance sheet, bank overdrafts are shown within borrowings in current liabilities.

(EE) **Treasury Shares**

Treasury shares are the own equity instruments of the Company that are re-acquired by the Company. Treasury shares are recognised at cost and the par value of treasury shares is reduced from equity share capital whereas the difference between cost and par value is deducted from other equity. No gain or loss is recognised in the statement of profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments. Consideration received on issue or sale is recognised directly in equity.

(FF) **Business Combination**

Business combinations are accounted for using the acquisition method. The consideration transferred in a business combination comprises the fair values of the assets transferred, liabilities incurred to the former owners of the acquired business, equity interests issued by the Company and fair value of any assets or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred.

At the acquisition date, the identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured at their acquisition date fair values. However, certain assets and liabilities i.e. deferred tax assets or liabilities, assets or liabilities related to employee benefit arrangements, liabilities or equity instruments related to share-based payment arrangements, lease liabilities under Ind AS 116 and assets or disposal groups that are classified as held for sale, acquired or assumed in a business combination are measured as per the applicable Ind-AS.

The excess of the consideration transferred over the fair value of the net identifiable assets acquired is recorded as goodwill.

Any gain on a bargain purchase is recognised in other comprehensive income and accumulated in equity as Capital Reserve if there exists clear evidence of the underlying reasons for classifying the business combination as resulting in a bargain purchase, otherwise the gain is recognised directly in equity as Capital Reserve.

Where settlement of any part of cash consideration is deferred, the amounts payable in future are discounted to their present value as at the date of exchange. The discount rate used is entity's incremental borrowing rate, being the rate at which similar borrowing could be obtained from an independent financier under comparable terms and conditions. Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not re-measured subsequently and settlement is accounted for within equity. Other contingent consideration is re-measured at fair value at each reporting date and changes in the fair value of contingent consideration are recognised in profit or loss.

When a business combination is achieved in stages, any previously held equity interest in the acquiree is re-measured at its acquisition-date fair value and the resulting gain or loss, if any, is recognised in the statement of profit and loss or other comprehensive income, as appropriate.

Where it is not possible to complete the determination of fair values by the end of the reporting period in which the combination occurs, a provisional assessment of fair values is made and any adjustments required to those provisional values, and the corresponding adjustments to goodwill, are finalised within 12 months of the acquisition date.

See Note 54 – Business Combinations for further details.

(GG) **Fair value measurement of Financial Instruments**

The estimated fair value of the financial instruments is based on market prices and valuation techniques. Valuations are made with the objective to include relevant factors that market participants would consider in setting a price, and to apply accepted economic and financial methodologies for the pricing of financial instruments. References for less active markets are carefully reviewed to establish relevant and comparable data.

Marketable and non-marketable Equity Securities

Fair value for listed shares is based on quoted market prices as of the reporting date. Fair value for unlisted shares is calculated based on commonly accepted valuation techniques utilizing significant unobservable data, primarily cash flow based models.

Derivatives

Fair value of financial derivatives is estimated as the present value of future cash flows, calculated by reference to quoted price curves and exchange rates as of the balance sheet date. Options are valued using appropriate option pricing models and credit spreads are applied where deemed to be significant.

Embedded Derivatives

Embedded derivatives that are separated from the host contract are valued by comparing the forward curve at contract inception to the forward curve as of the balance sheet date. Changes in the present value of the cash flows related to the embedded derivative are recognized in the consolidated balance sheet and in the consolidated statement of profit and loss.

1C. Critical Accounting Judgment and Key Sources of Estimation Uncertainty

The preparation of standalone financial statements, in conformity with the Ind AS, requires judgements, estimates and assumptions to be made, that affect reported amounts of assets and liabilities and the disclosure of contingent liabilities as at the date of the financial statements and the amounts of revenue and expenses during the reported period. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. Any revision to such estimates is recognised in the period in which the same is determined. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and future periods affected.

Key source of estimation of uncertainty at the date of financial statements, that have significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial year, are given below:

a. **Impairment of Non-Current Assets (excluding Goodwill)**

Ind AS 36 requires that the Company assesses conditions that could cause an asset or a Cash Generating Unit (CGU) to become impaired and to test recoverability of potentially impaired assets. These conditions include changes resulting from market and economic environment, including internal and external factors such as the Company's market capitalization, significant changes in the Company's planned use of the assets or a significant adverse change in the expected prices, sales volumes or raw material cost. The identification of CGUs involves judgment, including assessment of where active markets exist, and the level of interdependency of cash inflows. CGU is usually the individual plant, unless the asset or asset Company is an integral part of a value chain where no independent prices for the intermediate products exist, a Company of plants is combined and managed to serve a common market, or where circumstances otherwise indicate significant interdependencies.

Determination of the recoverable amount involves management estimates on highly uncertain matters, such as commodity prices and their impact on markets and prices for upgraded products, development in demand, inflation, currency rate movements, input cost prices, operating expenses and tax and legal environment. The Company uses internal business plans, quoted market prices and the Company's best estimate of commodity prices, currency rates, discount rates and other relevant information. A detailed forecast is developed for a period of three to five years with projections thereafter. (The policy has been detailed in Note 1B (J) and further information are set out in Note 39)

b. **Inventory Measurement**

Measurement of bulk inventory quantities (such as coal, bauxite, copper concentrates, etc.) lying at yards and work in progress of precious metals at smelter and refinery is material, complex and involves significant judgement and estimate resulting from measuring the surface area, dip measurement of materials in tanks/silos, etc.

The Company performs physical counts of above inventory on a periodic basis using internal / external experts to perform volumetric surveys and assessments, basis which the estimate of quantity for these inventories is determined. The variations noted between book records and physical quantities of above inventories are evaluated and appropriately accounted in the books of accounts. (The policy has been detailed in Note 1B (N) and further information are set out in Note 15)

c. **Taxes Uncertainties and Valuation Allowances**

The Company calculates income tax expense based on reported income. Deferred income tax expense is calculated based on the differences between the carrying value of assets and liabilities for financial reporting purposes and their respective tax basis that are considered temporary in nature. Valuation of deferred tax assets is dependent on management's assessment of future recoverability of the deferred tax benefit. Expected recoverability may result from expected taxable income in the future, planned transactions or planned tax optimizing measures. Economic conditions may change and lead to a different conclusion regarding recoverability. (The policy has been detailed in Note 1B (X) and further information are set out in Note 13)

d. **Contingent Liabilities and Provisions**

There are various legal, direct and indirect tax matters and other obligations including environmental, mining, local and state levies, income tax holiday, availing input tax credits etc., which may impact the Company. Evaluation of uncertain liabilities and contingent liabilities and assets arising out of above matters require management judgment and assumptions, regarding the probability outflow or realization of economic resources and the timing and amount, or range of amounts, that may ultimately be determined. Such estimates may vary from the ultimate outcome as a result of differing interpretations of laws and facts, or application of relevant judicial precedents. (The policy has been detailed in Note 1B (L) and further information are set out in Note 48)

e. **Fair value measurements of Financial Instruments**

The Company applies valuation techniques to determine the fair value of financial instruments (where active market quotes are not available) and non-financial assets. This involves developing estimates and assumptions consistent with the market participants to price the instrument. The Company's assumptions are based on observable data as far as possible, otherwise on the best information available. Estimated fair values may vary from the actual prices that would be achieved in an arm's length transaction at the reporting date. (The policy has been detailed in Note 1B (GG) and further information are set out in Note 51)

1D Recent Accounting Pronouncements

a. **New and amended standards adopted by the Company**

The Ministry of Corporate Affairs had vide notification dated March 23, 2022 notified Companies (Indian Accounting Standards) Amendment Rules, 2022 which amended certain accounting standards, and are effective April 1, 2022. These amendments did not have any impact on the amounts recognised in prior periods and are not expected to significantly affect the current or future periods.

b. **New and amended standards issued but not effective**

The Ministry of Corporate Affairs has vide notification dated March 31, 2023 notified Companies (Indian Accounting Standards) Amendment Rules, 2023 (the 'Rules') which amends certain accounting standards, and are effective April 1, 2023.

The Rules predominantly amend Ind AS 12, Income taxes, and Ind AS 1, Presentation of financial statements. The other amendments to Ind AS notified by these rules are primarily in the nature of clarifications.

These amendments are either not applicable to the Company or not expected to have a material impact on the Company in the current or future reporting periods and on foreseeable future transactions.

2. Property, Plant and Equipment and Capital Work-in-Progress

Refer Note 1B (D) for accounting policy on Property, Plant and Equipment
Refer Note 1B (J) for accounting policy on Impairment of Non-Current Assets
Refer Note 1B (T) for accounting policy on Borrowing cost

A. Property, Plant and Equipment

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Property, Plant and Equipment - Cost	51,048	50,394
Less: Accumulated Depreciation and Impairment	20,744	19,468
Net Carrying amount of Property, Plant and Equipment	**30,304**	**30,926**

(₹ in Crore)

Particulars	ORIGINAL COST					ACCUMULATED DEPRECIATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at 01/04/2022	Additions	Addition due to acquisition	Disposal/ Adjustments	As at 31/03/2023	As at 01/04/2022	Additions	Disposal/ Adjustments	As at 31/03/2023	As at 01/04/2022	Recognised/ (Reversed)	Disposal/ Adjustments	As at 31/03/2023	As at 31/03/2023	As at 31/03/2022
Freehold Land	638	10	-	-	648	18	4	-	22	1	-	-	1	625	619
Buildings	8,389	92	-	(30)	8,451	2,467	259	(12)	2,714	100	-	(14)	86	5,651	5,822
Plant and Machinery	39,817	881	-	(412)	40,286	15,255	1,291	(270)	16,276	746	-	(63)	683	23,327	23,816
Vehicles and Aircraft	444	44	-	(21)	467	239	31	(14)	256	-	-	-	-	211	205
Railway Wagons	189	51	-	-	240	113	11	-	124	-	-	-	-	116	76
Railway Sidings	506	1	-	-	507	232	28	-	260	17	-	-	17	230	257
Furniture and Fixtures	174	14	-	-	188	108	7	-	115	1	-	-	1	72	65
Office Equipment	237	30	-	(6)	261	170	24	(6)	188	1	-	-	1	72	66
Total	**50,394**	**1,123**	**-**	**(469)**	**51,048**	**18,602**	**1,655**	**(302)**	**19,955**	**866**	**-**	**(77)**	**789**	**30,304**	**30,926**

(₹ in Crore)

Particulars	ORIGINAL COST					ACCUMULATED DEPRECIATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at 01/04/2021	Additions	Addition due to acquisition	Disposal/ Adjustments	As at 31/03/2022	As at 01/04/2021	Additions	Disposal/ Adjustments	As at 31/03/2022	As at 01/04/2021	Recognised/ (Reversal)	Disposal/ Adjustments	As at 31/03/2022	As at 31/03/2022	As at 31/03/2021
Freehold Land	611	5	22	-	638	14	4	-	18	1	-	-	1	619	596
Buildings	8,178	176	53	(18)	8,389	2,210	263	(6)	2,467	86	14	-	100	5,822	5,882
Plant and Machinery	39,001	1,022	56	(262)	39,817	14,229	1,213	(187)	15,255	689	62	(5)	746	23,816	24,083
Vehicles and Aircraft	447	38	-	(41)	444	242	28	(31)	239	-	-	-	-	205	205
Railway Wagons	189	-	-	-	189	103	10	-	113	-	-	-	-	76	86
Railway Sidings	496	10	-	-	506	204	28	-	232	17	-	-	17	257	275
Furniture and Fixtures	152	24	-	(2)	174	101	9	(2)	108	1	-	-	1	65	50
Office Equipment	217	29	1	(10)	237	158	21	(9)	170	1	-	-	1	66	58
Total	**49,291**	**1,304**	**132**	**(333)**	**50,394**	**17,261**	**1,576**	**(235)**	**18,602**	**795**	**76**	**(5)**	**866**	**30,926**	**31,235**

(a) The Company's share in Jointly owned assets has been grouped together with the relevant class of Property, Plant and Equipment. The proportion of the Original Cost and Carrying amount included in relevant class of assets are given below:

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Original Cost	Net Carrying Amount	Original Cost	Net Carrying Amount
Freehold Land	52	52	52	52
Buildings	54	40	54	40
Plant and Machinery	6	1	6	1
Furniture & Fixtures	29	19	27	22
Office Equipment	8	1	9	2

(b) Refer Note 22A (b) for details of Property, Plant and Equipments (except Jointly owned assets) pledged and hypothecated against borrowings.

(c) Useful life of Property, Plant and Equipment are given below :

Items of Property, Plant and Equipment	Useful Life (Years)$
Freehold land	Infinite ^
Buildings	30-60
Plant and Machinery	15-40
Vehicles and Aircraft	8-20
Railway Wagons	15
Railway Sidings	15
Furniture and Fixtures	8-10
Office Equipment	3-6

^ Includes freehold land used for mining is depreciated over 8 - 30 years.

$ Cost incurred subsequent to capitalisation, accounted as a separate component, is depreciated over the remaining useful life of the underlying asset.

(d) Residual values and useful life of Property, Plant and Equipment are reviewed, and adjusted if appropriate, at the end of each reporting period. The Company has not revalued its property, plant and equipment during the current or previous year.

(e) Refer Note 55 for the details of Immovable properties for which registration/ transfer of title deeds is pending.

(f) During the previous year, the Company had impaired certain assets related to Di Ammonium Phosphate (DAP) plant amounting to ₹ 76 Crore, Refer Note 39 (c) for further details.

B. Capital Work-in-Progress

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Capital Work-in-Progress	2,968	1,573
	2,968	**1,573**

(a) The Company's share in Jointly owned assets has been grouped together with the Capital Work-in-Progress. The cost amount are given below:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Capital Work-in-Progress	135	101
	135	**101**

(b) Capital Work-in-Progress comprise of various projects and expansions spread over all units. Major Capital Work-in-Progress are related to the following Segments :

(₹ in Crore)

	As at	
Segment	**31/03/2023**	**31/03/2022**
Aluminium - Upstream	1,439	852
Aluminium - Downstream	1,155	500
Copper	227	119
Others - Not Allocable to segment	147	102
Total	**2,968**	**1,573**

(c) The Company has tested the carrying value of Capital Work-in-Progress for impairment as at reporting date and has impaired ₹ 65 Crore (year ended 31/03/2022 ₹ 19 Crore), Refer Note 39 (a) and 39 (d) for further details.

(d) During the current year, interest capitalised on qualifying assets is ₹ 48 Crore (year ended 31/03/2022 ₹ 18 Crore), Refer Note 37 for further details.

(e) Capital Work-in-Progress (CWIP) ageing schedule as at 31/03/2023

(₹ in Crore)

Particulars	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	2,055	374	280	124	2,833
Projects temporarily suspended	1	1	-	133	135
Total	**2,056**	**375**	**280**	**257**	**2,968**

Capital Work-in-Progress (CWIP) ageing schedule as at 31/03/2022

(₹ in Crore)

Particulars	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	835	354	96	87	1,372
Projects temporarily suspended	1	2	21	177	201
Total	**836**	**356**	**117**	**264**	**1,573**

(f) CWIP completion schedule for projects, whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2023 are given below :

(₹ in Crore)

Particulars	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Project in Progress					
Strategic Projects	60	5	-	-	65
Environmental, Occupational Health and Safety Projects	211	-	-	-	211
Project temporarily suspended					
Strategic Projects	-	-	4	73	77
Environmental, Occupational Health and Safety Projects	-	-	-	-	-
Total	**271**	**5**	**4**	**73**	**353**

CWIP completion schedule for projects, whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2022 are given below :

(₹ in Crore)

Particulars	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Project in Progress					
Strategic Projects	37	-	-	-	37
Environmental, Occupational Health and Safety Projects	79	-	-	-	79
Project temporarily suspended					
Strategic Projects	-	69	-	73	142
Environmental, Occupational Health and Safety Projects	-	-	-	-	-
Total	**116**	**69**	**-**	**73**	**258**

(g) Refer Note 48B for capital expenditures contracted but not incurred.

3. Right of Use Assets and Lease Liabilities

Refer Note 1B (M) for accounting policy on Leases

A. Right of Use Assets

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Right of Use Assets	1,476	1,020
Less: Accumulated Depreciation and Impairment	204	187
Net Carrying amount of Right of Use Assets	**1,272**	**833**

(₹ in Crore)

Particulars	ORIGINAL COST				ACCUMULATED DEPRECIATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at 01/04/2022	Additions	Disposal/ Adjustments	As at 31/03/2023	As at 01/04/2022	Additions	Disposal/ Adjustments	As at 31/03/2023	As at 01/04/2022	Recognised/ (Reversed)	Deduction/ Adjustments	As at 31/03/2023	As at 31/03/2023	As at 31/03/2022
Leasehold Land	783	67	(3)	847	65	31	(3)	93	-	-	-	-	754	718
Buildings	89	116	(61)	144	60	29	(58)	31	-	-	-	-	113	29
Plant and Machinery	53	352	(12)	393	27	36	(12)	51	-	-	-	-	342	26
Vehicles	42	20	(13)	49	14	12	(13)	13	-	-	-	-	36	28
Railway Wagons	41	-	-	41	12	4	-	16	-	-	-	-	25	29
Railway Sidings	2	-	-	2	-	-	-	-	-	-	-	-	2	2
Furniture and Fixtures	10	-	(10)	-	9	-	(9)	-	-	-	-	-	-	1
Total	**1,020**	**555**	**(99)**	**1,476**	**187**	**112**	**(95)**	**204**	**-**	**-**	**-**	**-**	**1,272**	**833**

(₹ in Crore)

Particulars	ORIGINAL COST				ACCUMULATED DEPRECIATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at 01/04/2021	Additions	Disposal/ Adjustments	As at 31/03/2022	As at 01/04/2021	Additions	Disposal/ Adjustments	As at 31/03/2022	As at 01/04/2021	Recognised/ (Reversed)	Deduction/ Adjustments	As at 31/03/2022	As at 31/03/2022	As at 31/03/2021
Leasehold Land	760	57	(34)	783	54	32	(21)	65	-	-	-	-	718	706
Buildings	84	15	(10)	89	44	26	(10)	60	-	-	-	-	29	40
Plant and Machinery	83	30	(60)	53	50	14	(37)	27	-	-	-	-	26	33
Vehicles	19	29	(6)	42	10	10	(6)	14	-	-	-	-	28	9
Railway Wagons	41	-	-	41	8	4	-	12	-	-	-	-	29	33
Railway Sidings	2	-	-	2	-	-	-	-	-	-	-	-	2	2
Furniture and Fixtures	10	-	-	10	7	2	-	9	-	-	-	-	1	3
Total	**999**	**131**	**(110)**	**1,020**	**173**	**88**	**(74)**	**187**	**-**	**-**	**-**	**-**	**833**	**826**

(a) Disposal/ Adjustments for the lease hold land includes Nil (31/03/2022 ₹ 16 Crore) transferred from right of use assets to mining rights under intangible assets, Refer Note 6A for further details.

(b) Refer Note 55 for the details of Immovable properties for which registration/ transfer of title deeds is pending.

B. Lease Liabilities

(a) Lease liabilities recognised against Right of Use Assets are as follows:

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Lease liabilities against Right of Use Assets	649	114	277	65
	649	**114**	**277**	**65**

4. Investment Properties

Refer Note 1B (E) for accounting policy on Investment properties
Refer Note 1B (J) for accounting policy on Impairment of Non-Current Assets

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Cost	13	13
Less: Accumulated Depreciation and Impairment	6	5
Net Carrying amount	**7**	**8**

(₹ in Crore)

Particulars	ORIGINAL COST				ACCUMULATED DEPRECIATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at April 01, 2022	Addition	Disposal/ Adjustments	As at March 31, 2023	As at April 01, 2022	Addition	Disposal/ Adjustments	As at March 31, 2023	As at April 01, 2022	Recognised/ (Reversed)	Disposal/ Adjustments	As at March 31, 2023	As at March 31, 2023	As at March 31, 2022
Freehold Land	1	-	-	1	-	-	-	-	-	-	-	-	1	1
Buildings	12	-	-	12	5	1	-	6	-	-	-	-	6	7
Total	**13**	**-**	**-**	**13**	**5**	**1**	**-**	**6**	**-**	**-**	**-**	**-**	**7**	**8**

(₹ in Crore)

Particulars	ORIGINAL COST				ACCUMULATED DEPRECIATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at April 01, 2021	Addition	Disposal/ Adjustments	As at March 31, 2022	As at April 01, 2021	Addition	Disposal/ Adjustments	As at March 31, 2022	As at April 01, 2021	Recognised/ (Reversed)	Disposal/ Adjustments	As at March 31, 2022	As at March 31, 2022	As at March 31, 2021
Freehold Land	1	-	-	1	-	-	-	-	-	-	-	-	1	1
Buildings	12	-	-	12	5	-	-	5	-	-	-	-	7	7
Total	**13**	**-**	**-**	**13**	**5**	**-**	**-**	**5**	**-**	**-**	**-**	**-**	**8**	**8**

(₹ in Crore)

		Year ended 31/03/2023	Year ended 31/03/2022
(a)	Amount recognised in the Statement of Profit and Loss for Investment Properties are as under:		
	Rental income	3	3
	Direct operating expenses (including repairs and maintenance) on properties generating rental income	(1)	-
	Direct operating expenses (including repairs and maintenance) on properties not generating rental income	-	-

(b) The Company has no contractual obligations to purchase, construct or develop investment properties or for repairs, maintenance and enhancements. There is no restrictions on the realisability of investment properties or the remittance of income and proceeds of disposal on the Company.

(c) **Fair value of the Investment properties :**

(i) The fair value of the Company's investment properties as at March 31, 2023 and March 31, 2022 have been arrived at on the basis of valuation carried out at the respective dates by an external, independent valuer who is registered under Rule 2 of Companies (Registered Valuers and Valuation) Rules, 2017.

(ii) The fair value measurement for all the investments properties has been categorised as Level 2 based on the inputs to the valuation technique used. Considering the type of the assets, market approach (sales comparable method) to estimate the fair value of the subject properties is adopted. Fair Value of Investment Properties are given below :

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Freehold Land	1	1
Buildings	51	50
	52	**51**

(d) Useful life of Investment Properties are given below :

Items of Investment Properties	**Useful Life (Years)**
Freehold Land	Infinite
Buildings	60

(e) Refer Note 55 for the details of Immovable properties for which registration/ transfer of title deeds is pending.

5. Goodwill

Refer Note 1B (G) for accounting policy on Goodwill

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Cost	4	4
Less: Accumulated Impairment	-	-
Net Carrying amount of Goodwill	**4**	**4**

(i) Goodwill was generated during the previous year on acquisition of extrusion business of Kuppam unit. The Company tested the goodwill for impairment as at 31/03/2023 and no impairment has been identified.

(ii) Refer Note 54 Business Combination for further details.

6. Other Intangible Assets and Intangible Assets under Development

Refer Note 1B (F) for accounting policy on Intangible Assets (Other than Goodwill)
Refer Note 1B (H) for accounting policy on Stripping cost
Refer Note 1B (J) for accounting policy on Impairment of Non-Current Assets
Refer Note 1B (T) for accounting policy on Borrowing cost

A. Other Intangible Assets

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Cost	1,162	1,076
Less: Accumulated Amortization and Impairment	646	547
Net Carrying amount of Intangible Assets	**516**	**529**

(₹ in Crore)

Particulars	ORIGINAL COST					ACCUMULATED AMORTIZATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at 01/04/ 2022	Addition	Addition due to acquisition	Disposal/ Adjust-ments	As at 31/03/ 2023	As at 01/04/ 2022	Addition	Disposal/ Adjust-ments	As at 31/03/ 2023	As at 01/04/ 2022	Recognised/ (Reversed)	Disposal/ Adjust-ments	As at 31/03/ 2023	As at 31/03/ 2023	As at 31/03/ 2022
Mining rights	760	88	-	-	848	390	80	-	470	44	-	-	44	334	326
Technology and Software	301	5	-	(7)	299	113	24	(7)	130	-	-	-	-	169	188
Customer related Intangible Assets	15	-	-	-	15	-	2	-	2	-	-	-	-	13	15
Total	**1,076**	**93**	**-**	**(7)**	**1,162**	**503**	**106**	**(7)**	**602**	**44**	**-**	**-**	**44**	**516**	**529**

(₹ in Crore)

Particulars	ORIGINAL COST					ACCUMULATED AMORTIZATION				ACCUMULATED IMPAIRMENT				NET CARRYING AMOUNT	
	As at April 01, 2021	Addition	Addition due to acquisition	Disposal/ Adjust-ments	As at March 31, 2022	As at April 01, 2021	Addition	Disposal/ Adjust-ments	As at March 31, 2022	As at April 01, 2021	Recognised/ (Reversed)	Disposal/ Adjust-ments	As at March 31, 2022	As at March 31, 2022	As at 31/03/ 2021
Mining rights	661	86	-	13	760	304	85	1	390	44	-	-	44	326	313
Technology and Software	116	179	8	(2)	301	108	7	(2)	113	-	-	-	-	188	8
Customer related Intangible Assets	-	-	15	-	15	-	-	-	-	-	-	-	-	15	-
Total	**777**	**265**	**23**	**11**	**1,076**	**412**	**92**	**(1)**	**503**	**44**	**-**	**-**	**44**	**529**	**321**

(a) Addition in Mining Rights includes ₹ 86 Crore (as at 31/03/2022, ₹ 57 Crore) and amortization expense includes ₹ 67 Crore (as at 31/03/2022, ₹ 76 Crore) towards stripping activity assets.

(b) Useful life of Other Intangible Assets are given below :

Items of Other Intangible Assets	Useful Life (Years)
Mining rights	8-41
Technology and Software	3-10
Customer related Intangible assets	5

(c) Remaining amortisation period of Mining rights, Technology and Software and Customer related Intangible assets ranges between 1 -33 years.

(d) The useful life of Intangible assets are reviewed, and adjusted if appropriate, at the end of each reporting period.

(e) During the current year, interest capitalised was Nil (31/03/2022: ₹ 8 Crore), Refer Note 37 (d) for further details.

B. Intangible Assets Under Development

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Intangible Assets under Development	19	8
	19	**8**

(a) The Company has tested the carrying value of Intangible Asset under Development for impairment as at reporting date and no impairment has been identified.

(b) Intangible asset under development (IAUD) ageing schedule as at 31/03/2023 :

(₹ in Crore)

Particulars	Amount in IAUD for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	12	1	4	2	19
Projects temporarily suspended	-	-	-	-	-
Total	**12**	**1**	**4**	**2**	**19**

Intangible asset under development (IAUD) ageing schedule as at 31/03/2022 :

(₹ in Crore)

Particulars	Amount in IAUD for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	2	4	2	-	8
Projects temporarily suspended	-	-	-	-	-
Total	**2**	**4**	**2**	**-**	**8**

(c) Intangible asset under development completion schedule for projects, whose completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2023 are given below:

(₹ in Crore)

Particulars	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Project in Progress					
Strategic Projects	3	-	-	-	3
Environmental, Occupational Health and Safety Projects	-	-	-	-	-
Project temporarily suspended					
Strategic Projects	-	-	-	-	-
Environmental, Occupational Health and Safety Projects	-	-	-	-	-
Total	**3**	**-**	**-**	**-**	**3**

No Intangible Assets under Development projects completion is overdue or has exceeded its cost compared to its original plan as at 31/03/2022.

7. Investment in Subsidiaries

(Fully paid-up unless otherwise stated)

Refer Note 1B (A) for accounting policy on Investment in subsidiaries

(₹ in Crore)

	Face Value Per Unit	Numbers as at 31/03/2023	Numbers as at 31/03/2022	Value as at 31/03/2023	Value as at 31/03/2022
Investment in Equity Shares at Cost - (a) and (e)					
Unquoted					
A V Minerals (Netherlands) N.V. - (b)	€ 499.04	2,376,838	2,376,838	9,155	9,778
Dahej Harbour & Infrastructure Limited	₹ 10	50,000,000	50,000,000	50	50
East Coast Bauxite Mining Company Pvt Limited	₹ 10	7,400	7,400	-	-
Hindalco Almex Aerospace Limited	₹ 5	172,115,744	172,115,744	83	83
Lucknow Finance Company Limited	₹ 10	9,902,500	9,902,500	10	10
Minerals & Minerals Limited	₹ 10	50,000	50,000	-	-
Renuka Investments & Finance Limited	₹ 10	34,250,000	34,250,000	34	34
Renukeshwar Investments & Finance Limited	₹ 10	4,795,000	4,795,000	5	5
Suvas Holdings Limited	₹ 10	22,149,714	22,149,714	22	22
Utkal Alumina International Limited	₹ 10	6,251,482,818	6,251,482,818	6,362	6,362
Hindalco K.K. Japan - (d)	JPY 10,000	3,000	-	2	-
Kosala Livelihood and Social Foundation	₹ 10	4,000,000	1,600,000	4	1
				15,727	**16,345**
Other Equity Investment - (c) (Fair Value of Financial Guarantee given for)					
Utkal Alumina International Limited				75	75
A V Minerals (Netherlands) N.V.				3	3
				78	**78**
				15,805	**16,423**

(a) None of the subsidiaries are listed on any stock exchange in India or outside India and these investments are carried at cost. There is no accumulated impairment as at current or previous year end.

(b) A V Minerals (Netherlands) N.V., a wholly owned subsidiary of the Company has remitted $ 100 Million (₹ 793 Crore) towards return of capital by reducing the nominal value of its shares from € 541.05 to € 499.04 . The Company has accounted for the same as reduction in Company's carrying value of investment in the said subsidiary by ₹ 622 Crore and the foreign exchange gain arising on account of this transaction amounting to ₹ 171 Crore has been recognised in the standalone financial statements as "(Gain)/ Loss on Foreign Currency Transactions (Net)" under 'Other Expenses'.

(c) Financial guarantees given to subsidiaries were initially recognised at fair value will continue to be accounted as Other Equity Investment until the investment in subsidiaries are derecognised or impaired.

(d) During the current year, the Company has made investment in Hindalco K.K. Japan, a wholly owned subsidiary.

(e) Refer Note 47 Related Party Disclosure for information on principal place of business of the above Subsidiaries.

8. Investment in Associates and Joint Ventures

(Fully paid-up unless otherwise stated)

Refer Note 1B (B) for accounting policy on Investment in Associates

Refer Note 1B (A) for accounting policy on Investment in Joint Ventures

(a) Investments in Associates

(₹ in Crore)

	Face Value Per Unit	Numbers as at 31/03/2023	Numbers as at 31/03/2022	Value as at 31/03/2023	Value as at 31/03/2022
Investment in Equity Shares at FVTOCI - (i) and (iv)					
Unquoted					
Aditya Birla Science and Technology Company Private Limited	₹ 10	9,800,000	9,800,000	110	59
Aditya Birla Renewables Subsidiary Limited	₹ 10	6,895,200	6,895,200	7	47
Aditya Birla Renewables Solar Limited	₹ 10	24,084,015	8,307,000	68	48
Total (a)				**185**	**154**

(b) Investments in Joint Ventures

	Face Value Per Unit	Numbers as at 31/03/2023	Numbers as at 31/03/2022	Value as at 31/03/2023	Value as at 31/03/2022
Investment in Equity Shares at Cost - (i) and (iv)					
Unquoted					
MNH Shakti Limited - (ii)	₹ 10	5,265,000	5,265,000	5	5
Hydromine Global Minerals GMBH Limited (iii)	$ 100	66,562	66,562	-	1
Total (b)				**5**	**6**
Investment in Associates and Joint Ventures (a+b)				**190**	**160**
(i) Aggregate cost of investments is given below:					
Unquoted investments in Associates				42	25
Unquoted investments in Joint Ventures				38	38
Impairment on unquoted investments in a Joint Venture				(33)	(32)

(ii) Pursuant to an order received by MNH Shakti Limited from the Hon'ble NCLT related to its capital reduction, the Company received an amount of ₹ 8 Crore during the previous year ended 31/03/2022.

(iii) During the year, the Company has impaired the value of its investment in Joint Venture, Hydromine Global Minerals GMBH Limited, amounting to ₹ 1 Crore.

(iv) Refer Note 47 Related Party Disclosure for information on principal place of business of the above Associates and Joint Ventures.

9. Other Investments

Refer Note 1B (Q) for accounting policy on Financial Instruments

A. Other Investments, Non-Current

(Fully paid-up unless otherwise stated)

(a) Equity instruments at FVTOCI

(₹ in Crore)

	Face Value	Numbers as at		Value as at	
	Per Unit	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Quoted					
Grasim Industries Limited	₹ 2	28,222,468	28,222,468	4,607	4,696
UltraTech Cement Limited	₹ 10	1,258,515	1,258,515	959	831
Aditya Birla Fashion & Retail Limited	₹ 10	50,239,794	50,239,794	1,077	1,518
Vodafone Idea Limited	₹ 10	751,119,164	751,119,164	436	725
Aditya Birla Capital Limited	₹ 10	39,511,455	39,511,455	607	425
				7,686	**8,195**
Unquoted					
Sai Wardha Power Generation Limited	₹ 10	2,830,352	2,830,352	-	-
Birla International Limited	CHF 100	2,500	2,500	6	5
Woodlands Multi Speciality Hospital Limited	₹ 10	7,200	-	-	-
Bharuch Dahej Railway Company Limited	₹ 10	13,530,000	13,530,000	19	10
				25	**15**
Total (a)				**7,711**	**8,210**
(b) Debt Instruments at FVTOCI					
Quoted					
Government Securities					
6.83% Government of India Bond, 2039	2,000,000	2,000,000		19	20
6.57% Government of India Bond, 2033	5,000,000	5,000,000		47	48
6.45% Government of India Bond, 2029	5,000,000	5,000,000		48	49
5.79% Government of India Bond, 2030	10,000,000	10,000,000		93	94
6.19% Government of India Bond, 2034	10,000,000	10,000,000		91	92
Total (b)				**298**	**303**
(c) Debt Instruments at FVTPL					
Unquoted					
Mutual Funds					
Investments in Debt Schemes of Mutual Funds				-	2
Total (c)				**-**	**2**
Other Investments (a+b+c)				**8,009**	**8,515**

(₹ in Crore)

		Value as at	
		31/03/2023	31/03/2022
(i)	Aggregate amount of Quoted and Unquoted Investments, Market value of Quoted Investments are given below:		
	Aggregate Cost of Quoted Investments	1,484	1,484
	Aggregate Market value of Quoted Investments	7,984	8,498
	Aggregate Cost of Unquoted Investments	17	25
	Aggregate amount of impairment in value of investments	3	3
	Aggregate Carrying value of Quoted and Unquoted Investments	8,009	8,515
(ii)	Investments in Government Securities include ₹ 24 Crore (as at 31/03/2022 ₹ 25 Crore) being deposit as margin money with counter parties for derivative transactions.		

B. Other Investments, Current

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Quoted		
Investments in Government securities at FVTOCI	5	72
Investments in Commercial Paper at FVTPL	97	-
Investment in Debentures and Bonds at FVTPL	130	152
Investments in Mutual Funds at FVTPL - (b)	5,530	4,333
	5,762	**4,557**

(a)	Aggregate amount of Quoted and Unquoted Investments, Market value of Quoted Investments are given below:		
	Aggregate Cost of Quoted Investments	5,641	4,425
	Aggregate Market value of Quoted Investments	5,762	4,557
	Aggregate Cost of Unquoted Investments	-	-
	Aggregate amount of impairment in value of investments	-	-
	Aggregate Carrying value of Quoted and Unquoted Investments	5,762	4,557
(b)	Investments in Debt Schemes of Mutual Funds include ₹ 338 Crore (as at 31/03/2022 ₹ 320 Crore) being deposit as margin money with counter parties for derivative transactions.		

10. Loans

(Unsecured, Considered Good unless otherwise stated)

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Loan to Related Parties - (a), (b) and (c)	169	-	38	167
Loan to Employees	5	5	7	5
	174	**5**	**45**	**172**

(a) There is no Loans or Advances in the nature of loans granted to promoters, directors, KMPs and related parties, that are repayable on demand as on 31/03/2023 and 31/03/2022.

(b) Refer Note 47 for balances with related parties.

(c) Refer Note 58 (b)(ii) and (iii) for disclosure as per section 186(4)of the Companies Act 2013 and SEBI (LODR) 2015.

11. Derivatives

Refer Note 1B (Q) for accounting policy on Financial Instruments
Refer Note 1B (R) for accounting policy on Derivatives and hedge accounting

The Company uses derivative financial instruments such as forwards, futures, options etc. to hedge its risks associated with foreign exchange fluctuation and price risk movements. Risks associated with fluctuation in the price of the products (copper, aluminium, coal, furnace oil, natural gas, coal tar pitch and precious metals) are minimized by undertaking appropriate derivative instruments. Derivatives embedded in other contracts are treated as separate derivatives when their risks and characteristics are not closely related to their host contracts. In some cases, the embedded derivatives may be designated in a hedge relationship. The fair values of all such derivative financial instruments are recognized as assets or liabilities at the balance sheet date.

The Company also applies hedge accounting using certain foreign currency non-derivative monetary items which are used as hedging instruments for hedging foreign exchange risk.

(a) The Asset and Liability position of various outstanding derivative financial instruments is given below:

(₹ in Crore)

Particulars	Nature of Risk being Hedged	As at 31/03/2023			As at 31/03/2022		
		Liability	Asset	Net Fair Value	Liability	Asset	Net Fair Value
Current							
Cash flow hedges							
Commodity contracts	Price Risk Component	(1)	303	302	(2,772)	16	(2,756)
Foreign currency contracts	Exchange rate movement risk	(33)	59	26	(7)	214	207
Fair Value Hedge							
Commodity contracts	Price Risk Component	(197)	-	(197)	(183)	67	(116)
Foreign currency contracts	Exchange rate movement risk	(5)	1	(4)	(12)	1	(11)
Non-designated hedges							
Commodity contracts	Price Risk Component	(66)	253	187	(414)	224	(190)
Foreign currency contracts	Exchange rate movement risk	(3)	15	12	(12)	8	(4)
Total		**(305)**	**631**	**326**	**(3,400)**	**531**	**(2,869)**
Offsetting		115	(115)	-	24	(24)	-
Total (A)		**(190)**	**516**	**326**	**(3,376)**	**507**	**(2,869)**

(₹ in Crore)

Particulars	Nature of Risk being Hedged	As at 31/03/2023			As at 31/03/2022		
		Liability	Asset	Net Fair Value	Liability	Asset	Net Fair Value
Non - current							
Cash flow hedges							
Commodity contracts	Price Risk Component	-	21	21	(387)	2	(385)
Foreign currency contracts	Exchange rate movement risk	(6)	99	93	-	172	172
Non-designated hedges							
Foreign currency contracts	Exchange rate movement risk	(1)	3	2	-	-	-
Total		**(7)**	**123**	**116**	**(387)**	**174**	**(213)**
Offsetting		**3**	**(3)**	**-**	**-**	**-**	**-**
Total (B)		**(4)**	**120**	**116**	**(387)**	**174**	**(213)**
Current							
Fair Value Hedge							
Embedded Derivatives (i)	Risk of change in Fair Value of unpriced inventory	(428)	23	(405)	(489)	5	(484)
Total (C)		**(428)**	**23**	**(405)**	**(489)**	**5**	**(484)**
Grand Total (A+B+C)		**(622)**	**659**	**37**	**(4,252)**	**686**	**(3,566)**

(i) Fair Value net loss of ₹ 405 Crore (31/03/2022 net Loss ₹ 484 Crore) is classified as part of Trade Payables.

The maturity profile for Commodity forwards, future and Options ranges from April 2023 to March 2024, Foreign Exchange Forwards ranges from April 2023 to March 2027. Hedge Ratio of 1:1 is used by the Company.

(b) Outstanding position and fair value of various foreign exchange derivative financial instruments:

Particulars	Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Weighted Average Strike Rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)	Weighted Average Strike Rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Foreign currency options							
Cash flow hedges							
Sell	USD_INR	84.00	204	6	-	-	-
Foreign currency forwards							
Cash flow hedges							
Sell	USD_INR	86.87	1,066	113	81.22	1,196	379
Total				**119**			**379**
Fair Value hedges							
Buy	USD_INR	82.64	181	(4)	76.85	189	(11)
Total				**(4)**			**(11)**

Particulars	Currency Pair	As at 31/03/2023			As at 31/03/2022		
		Weighted Average Strike Rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)	Weighted Average Strike Rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss) (₹ in Crore)
Non-Designated							
Buy	EUR_INR	-	-	-	98.96	0	(0)
Buy	USD_INR	82.19	31	-	77.04	0	(0)
Sell	USD_INR	82.59	215	6	76.35	182	7
Buy	CNY_USD	6.80	10	-	-	-	-
Buy	EUR_USD	1.08	56	8	1.19	16	(11)
Total				**14**			**(4)**
Grand Total				**129**			**364**

(c) Outstanding position and fair value of various foreign exchange non-derivative financial instruments used as hedging instruments:

(₹ in Crore)

Particulars	Note No	Currency Pair	As at 31/03/2023			As at 31/03/2022		
			Average exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss)	Average exchange rate	Notional Value in foreign currency (in Million)	Fair Value Gain/ (Loss)
Foreign currency monetary items								
Cash flow hedges								
Debt	22B	USD_INR	-	-	-	74.55	185	(25)
Liability for Copper Concentrate								
Host Liability		USD_INR	82.39	519	12	75.51	695	(19)
Supplier's credit	28	USD_INR	81.80	560	(20)	74.77	324	(39)
Total					**(8)**			**(83)**

(d) Outstanding position and fair value of various commodity derivative financial instruments

(i) Outstanding position and fair value of various commodity derivative financial instruments as at 31/03/2023

(₹ in Crore)

Particulars		Currency	Weighted Average Strike Rate	Quantity	Unit	Notional value USD (in millions)	Fair Value Gain/(Loss)
Commodity Futures/Forwards/Swaps							
Cash Flow Hedge							
Aluminium	Sell	USD	2,859	102,475	MT	293	319
Furnace Oil	Buy	USD	375	52,000	MT	19	4
Total							**323**
Fair Value Hedge							
Copper	Sell	USD	8,333	10,700	MT	89	(57)
Gold	Sell	INR	5,630,292	4,425	KGS	24,914	(140)
Total							**(197)**

(₹ in Crore)

Particulars		Currency	Weighted Average Strike Rate	Quantity	Unit	Notional value USD (in millions)	Fair Value Gain/(Loss)
Non Designated hedges							
Aluminium	Buy	USD	2,298	47,300	MT	109	29
Aluminium	Sell	USD	2,501	47,300	MT	118	49
Copper	Buy	USD	8,601	12,225	MT	105	39
Copper	Sell	USD	8,854	14,275	MT	126	(16)
Gold	Buy	INR	5,693,633	3,028	KGS	17,240	75
Silver	Buy	USD	22	909,754	TOZ	20	13
Silver	Sell	USD	24	514,516	TOZ	12	(2)
Total							**187**
Embedded derivatives							
Fair Value Hedge							
Copper	Sell	USD	8,705	130,979	MT	1,140	(300)
Gold	Sell	USD	1,857	98,953	TOZ	184	(98)
Silver	Sell	USD	22	399,859	TOZ	9	(6)
Total							**(405)**
Grand Total							**(92)**

(ii) Outstanding position and fair value of various commodity derivative financial instruments as at 31/03/2022

(₹ in Crore)

Particulars		Currency	Weighted Average Strike Rate	Quantity	Unit	Notional value USD (in millions)	Fair Value Gain/(Loss)
Commodity Futures/Forwards/Swaps							
Cash Flow Hedge							
Aluminium	Sell	USD	2,535	456,000	MT	1,156	(3,141)
Total							**(3,141)**
Fair Value Hedge							
Copper	Sell	USD	10,552	37,600	MT	397	50
Gold	Sell	INR	4,972,320	7,543	KGS	37,506	(159)
Silver	Sell	USD	23	485,904	TOZ	11	(7)
Total							**(116)**
Non Designated hedges							
Aluminium	Buy	USD	3,546	32,150	MT	114	(14)
Aluminium	Sell	USD	1,902	32,100	MT	61	(386)
Copper	Buy	USD	10,156	27,400	MT	278	45
Copper	Sell	USD	10,763	35,500	MT	382	105
Gold	Buy	INR	5,041,209	4,352	KGS	21,939	51
Silver	Buy	USD	25	244,244	TOZ	6	-
Silver	Sell	USD	24	244,244	TOZ	6	(1)
Furnace Oil	Buy	USD	241	3,335	MT	1	10
Furnace Oil	Sell	USD	634	3,335	MT	2	-
Total							**(190)**

(₹ in Crore)

Particulars		Currency	Weighted Average Strike Rate	Quantity	Unit	Notional value USD (in millions)	Fair Value Gain/(Loss)
Embedded derivatives							
Fair Value Hedge							
Copper	Sell	USD	9,838	120,552	MT	1,186	(487)
Gold	Sell	USD	1,949	29,697	TOZ	58	2
Silver	Sell	USD	25	371,143	TOZ	9	0
Total							**(484)**
Grand Total							**(3,931)**

(e) The following table presents details of amount held in Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and the period during which these are going to be released and affecting Statement of Profit and Loss.

(₹ in Crore)

Effective Portion of Cash Flow Hedges	As at 31/03/2023			As at 31/03/2022		
	Closing Value Cash Flow Hedges	Release		Closing Value Cash Flow Hedges	Release	
		Within 12 Months	After 12 Months		Within 12 Months	After 12 Months
	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)
Commodity Forwards/Futures/Swaps						
Aluminium	316	316	-	(3,132)	(2,987)	(145)
Copper	-	-	-	-	-	-
Furnace Oil	5	5	-	-	-	-
	321	**321**	**-**	**(3,132)**	**(2,987)**	**(145)**
Non-Derivative Financial Instruments						
Debt	-	-	-	(25)	(25)	-
Liability for Copper Concentrate						
Host Liability	(5)	(5)	-	(29)	(29)	-
Supplier's credit	(3)	(3)	-	(39)	(39)	-
Foreign currency Forwards						
USD_INR	112	20	92	379	207	172
Foreign currency Options						
USD_INR	(1)	(1)	-	-	-	-
	103	**11**	**92**	**286**	**114**	**172**
Total	**424**	**332**	**92**	**(2,846)**	**(2,873)**	**27**
Deferred Tax on above	(148)	(116)	(32)	995	1,004	(9)
Total	**276**	**216**	**60**	**(1,851)**	**(1,869)**	**18**

(₹ in Crore)

Cost of Hedging Reserve	As at 31/03/2023			As at 31/03/2022		
	Closing Value Cost of Hedge Reserve	Release		Closing Value Cost of Hedge Reserve	Release	
		Within 12 Months	After 12 Months		Within 12 Months	After 12 Months
	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)	Gain/(Loss)
Commodity Forwards/Swaps						
Copper	(4)	(4)	-	(60)	(60)	-
Foreign currency Options						
USD_INR	8	8	-	-	-	-
	4	**4**	**-**	**(60)**	**(60)**	**-**
Deferred Tax on above	(1)	(1)	-	21	21	-
Total	**3**	**3**	**-**	**(39)**	**(39)**	**-**

(f) Gain/(loss) recognized in OCI, recycled and closing position:

(i) The following tables presents the amount of gain/(loss) recognized in Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and recycled during the financial year 2022-23 along with closing amount in hedging reserve:

(₹ in Crore)

Effective Portion of Cash Flow Hedges	Opening Balance	Net Amount recognised	Recycled			Closing Balance
			Net Amount to P&L	Net Amount added to Non-Financial Assets	Total Amount recycled	
Commodity	(3,132)	3,493	40	-	40	321
Forex	286	(847)	(664)	-	(664)	103
Total	**(2,846)**	**2,646**	**(624)**	**-**	**(624)**	**424**
Deferred Tax on above	995	(925)	218	-	218	(148)
Total	**(1,851)**	**1,721**	**(406)**	**-**	**(406)**	**276**

(₹ in Crore)

Cost of Hedging Reserve	Opening Balance	Net Amount recognised	Recycled			Closing Balance
			Net Amount to P&L	Net Amount added to Non-Financial Assets	Total Amount recycled	
Commodity	(60)	(71)	(127)	-	(127)	(4)
Forex	-	8	-	-	-	8
Total	**(60)**	**(63)**	**(127)**	**-**	**(127)**	**4**
Deferred Tax on above	21	22	44	-	44	(1)
Total	**(39)**	**(41)**	**(83)**	**-**	**(83)**	**3**

(ii) The following tables presents the amount of gain/(loss) recognized in Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and recycled during the financial year 2021-22 along with closing amount in hedging reserve:

(₹ in Crore)

Effective Portion of Cash Flow Hedges	Opening Balance	Net Amount recognised	Recycled			Closing Balance
			Net Amount to P&L	Net Amount added to Non-Financial Assets	Total Amount recycled	
Commodity	(1,292)	(4,286)	(2,508)	62	(2,446)	(3,132)
Forex	373	(67)	20	-	20	286
Total	**(919)**	**(4,353)**	**(2,488)**	**62**	**(2,426)**	**(2,846)**
Deferred Tax on above	323	1,520	869	(21)	848	995
Total	**(596)**	**(2,833)**	**(1,619)**	**41**	**(1,578)**	**(1,851)**

Cost of Hedging Reserve	Opening Balance	Net Amount recognised	Recycled			Closing Balance
			Net Amount to P&L	Net Amount added to Non-Financial Assets	Total Amount recycled	
Commodity	15	(360)	(285)	-	(285)	(60)
Forex	-	-	-	-	-	-
Total	**15**	**(360)**	**(285)**	**-**	**(285)**	**(60)**
Deferred Tax on above	(5)	126	100	-	100	21
Total	**10**	**(234)**	**(185)**	**-**	**(185)**	**(39)**

(g) The following table presents the amount of gain/ (loss) recycled from Effective portion of Cash Flow Hedge and Cost of Hedging Reserve and reference of the line item in the Statement of Profit and Loss where those amounts are included:

(₹ in Crore)

Note No.	Note Description	Particulars	Year Ended 31/03/2023	Year Ended 31/03/2022
30	Revenue From Operations	Commodity	40	(2,634)
30	Revenue From Operations	Forex	(664)	20
30	Revenue From Operations	Precious Metals	-	-
41	Other Expenses	Gain/(Loss) on Derivatives	(127)	(159)
			(751)	**(2,773)**

(h) The adjustment as a part of the carrying value of inventories arising on account of fair value hedges is as follows:

(₹ in Crore)

Increase/ (Decrease) in Inventory Value	As at 31/03/2023			As at 31/03/2022		
Inventory Type	**Raw Material**	**WIP and Finished Goods**	**Total**	**Raw Material**	**WIP and Finished Goods**	**Total**
Copper	300	3	303	486	(48)	438
Gold	98	29	127	(2)	69	67
Silver	7	-	7	-	6	6
Total	**405**	**32**	**437**	**484**	**27**	**511**

(i) The Company's hedging policy allows for effective hedge relationships to be established. The effective portion of hedge is recognised in OCI, while ineffective portion of hedge is recognised immediately in the Statement of Profit and Loss. For Cash flow hedges, the Company uses hypothetical derivative method to assess effectiveness based on "lower off" assessment.

Sources of Hedge ineffectiveness summarised by risk category are as follows :

Risk Category	Sources of Hedge Ineffectiveness	Type of Hedge
	Critical terms Mismatch	Cash Flow and Fair Value Hedge
Price Risk	Basis Risk	Fair Value Hedge
	Credit Risk Adjustment	Cash Flow and Fair Value Hedge
Exchange Risk	Credit Risk Adjustment	Cash Flow Hedge

The amount of gain/ (loss) recognised in the Statement of Profit and Loss on account of hedge ineffectiveness is as follows:

(₹ in Crore)

Note No.	Note Description	Note Description	Type of Hedge	Year Ended 31/03/2023	Year Ended 31/03/2022
41	Other Expenses	Gain/(Loss) on Derivatives	Cash Flow Hedges	39	(162)
41	Other Expenses	Gain/(Loss) on Derivatives	Fair Value Hedges	(261)	(130)
				(222)	**(292)**

(j) Certain hedges of forecast sale transaction for hedging currency risk were discontinued during the current and previous year since the hedged forecast transaction was not expected to occur.

12. Other Financial Assets

(Unsecured, Considered Good unless otherwise stated)

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Security Deposits	136	64	122	53
Deposit with Banks - (a)	644	-	43	-
Deposit with Non-Banking Financial Companies	650	260	60	915
Accrued Interest	-	101	-	44
Deposit with Others	8	-	7	-
Other Receivables				
Unsecured, Considered Good	-	99	-	144
Unsecured, Considered Doubtful	-	2	-	2
Less: Loss Allowances	-	(2)	-	(2)
	1,438	**524**	**232**	**1,156**

(a) Deposit with Banks include ₹ 44 Crore (as at 31/03/2022 ₹ 43 Crore) towards earmarked balances lying in escrow accounts/ under lien with various authorities.

13. Income Taxes

Refer Note 1B (X) for accounting policy on Income Taxes

A. Current Tax and Deferred Tax Expense

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
(a) Income tax expenses recognised in Statement of Profit and Loss		
Current Tax		
Current income tax Expenses for the year	864	1,496
Tax Adjustment for earlier years	53	-
	917	**1,496**
Deferred Tax		
Deferred Income Tax (benefits)/expenses for the year	175	1,040
MAT Credit Entitlement	684	397
Tax Adjustment for earlier years**	(227)	17
	632	**1,454**
Total Income Tax Expenses recognised in Statement of Profit and Loss for the year	**1,549**	**2,950**

** During the year ended March 31, 2023, the Company has made an assessment of the impact of the Taxation law (Amendment) Ordinance, 2019 and decided to continue with the existing tax structure until utilization of accumulated Minimum Alternate Tax (MAT) Credit and deduction available under section 80IA of the Income Tax Act 1961. However, in accordance with the accounting standards, the Company has remeasured the deferred tax liability that is expected to reverse in future when the Company would migrate to the new tax regime. Accordingly, the Company has written back its net deferred tax liability to the extent of ₹ 184 Crore in Q4 FY 23.

(b) Reconciliation of estimated Income Tax Expenses at Indian Statutory Income Tax Rate to Income Tax Expenses reported in Statement of the Comprehensive Income

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Profit before Income Taxes	4,875	8,457
Indian Statutory Income Tax Rate *	34.94%	34.94%
Estimated Income Tax Expenses	**1,704**	**2,955**
Tax effect of adjustments to reconcile expected Income Tax expenses to reported Income Tax Expenses:		
Income Exempt from Tax & Deduction	(13)	(1)
Long-Term Capital (Gains)/Loss	(5)	(3)
Expenses not deductible in determining Taxable Profit	76	51
Reversal / (Deduction) on Power Plant u/s 80IA of the Income Tax Act during tax holiday period	21	(13)
Exchange gain on Return on Capital	(60)	(56)
Tax adjustment for earlier years - Deferred Tax Reversal (refer footnote to (a) above)	(184)	-
Tax adjustment for earlier years - Deferred Tax - Others	(43)	17
Tax adjustment for earlier years - Current Tax	53	-
	(155)	**(5)**
Income Tax Expenses recognised in the Statement of Profit and Loss	**1,549**	**2,950**
*Applicable Indian statutory tax rate for the years ended 31/03/2023 and 31/03/2022 is 34.94%.		
(c) Income Tax expenses recognised in OCI - Refer Note - 43 for further details	**1,123**	**(451)**
(d) Income Tax expense recognised directly in Equity - Basis adjustment on Cash flow hedges & others	**-**	**(21)**

B. Deferred Tax Assets and Liabilities (Net)

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Deferred Tax Assets		
Deferred Tax Assets	877	1,845
MAT Credit Entitlement	1,356	2,040
	2,233	**3,885**
Deferred Tax Liabilities		
Deferred Tax Liabilities	(6,937)	(6,833)
	(6,937)	**(6,833)**
Net Deferred Tax Assets/(Liabilities)	**(4,704)**	**(2,948)**

a) Movement in Deferred Tax Assets and (Liabilities) as of and during the year ended :

(₹ in Crore)

Particulars	Opening Balance As at 01/04/2022	Recognised in the Statement of Profit and Loss	Recognised in Other Comprehensive Income	Deferred tax on basis adjustment	As at 31/03/2023
Deferred Income Tax Assets					
Provisions deductible for tax purposes in future period	525	170	-	-	695
Retirement Benefits and Compensated Absences	59	(49)	3	-	13
Deferred Income	200	(31)	-	-	169
Cash flow hedges	1,016	-	(1,016)	-	-
MAT Credit Entitlement	2,040	(684)	-	-	1,356
Others	45	(45)	-	-	-
	3,885	(639)	(1,013)	-	2,233
Deferred Income Tax Liabilities					
PPE Depreciation and Intangible Amortisation	(6,558)	108	-	-	(6,450)
Cash Flow Hedges	-	-	(149)	-	(149)
Fair Value Measurements of Financial Instruments	(275)	-	66	-	(209)
Others	-	(101)	(27)	-	(128)
	(6,833)	7	(110)	-	(6,937)
Net Deferred Tax Assets/(Liabilities) (Net)	**(2,948)**	**(632)**	**(1,123)**	**-**	**(4,704)**

(₹ in Crore)

Particulars	As at 01/04/2021	Recognised in the Statement of Profit and Loss	Recognised in Other Comprehensive Income	Deferred tax on basis adjustment	As at 31/03/2022
Deferred Income Tax Assets					
Provisions deductible for tax purposes in future period	481	44	-	-	525
Tax Losses/Benefits carry forwards (Net) *	1,015	(1,015)	-	-	-
Retirement Benefits and Compensated Absences	71	(15)	3	-	59
Deferred Income	207	(7)	-	-	200
Cash Flow Hedges	316	-	679	21	1,016
MAT Credit Entitlement	2,436	(396)	-	-	2,040
Others	15	30	-	-	45
	4,541	(1,359)	**682**	**21**	3,885
Deferred Income Tax Liabilities					
PPE Depreciation and Intangible Amortisation	(6,470)	(88)	-	-	(6,558)
Fair Value Measurements of Financial Instruments	(37)	(7)	**(231)**	-	(275)
	(6,507)	(95)	**(231)**	-	(6,833)
Net Deferred Tax Assets/(Liabilities) (Net)	**(1,966)**	**(1,454)**	**451**	**21**	**(2,948)**

* Tax Losses/Benefits carry forwards represents deferred income tax asset on unabsorbed depreciation carried forward under the Income Tax Act, for which there is no expiry period.

(b) Deferred tax assets and deferred tax liabilities have been offset wherever the Company has a legally enforceable right to set-off current tax assets against current tax liabilities and where the deferred tax assets and deferred tax liabilities relates to income tax levied by the same taxation authorities.

(c) The Company has not recognised deferred tax assets on following long term capital losses as presently it is not probable of recovery.

(₹ in Crore)

Description	AY@	Amount	Tax impact	Year of Expiry
Long Term Capital Loss	2016-17	34	8	AY 2024-25
Long Term Capital Loss	2017-18	901	210	AY 2025-26
		935	**218**	

@ Assessment Year (AY).

(d) The Company has not recognised deferred tax asset in respect of deductible temporary differences related to certain subsidiaries and associates as presently it is not probable that future taxable long term capital gain will be available in the foreseeable future to recover such deferred tax assets.

C. Income Tax Assets and Liabilities with Tax Authorities

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Income Tax Assets		
Non-Current Tax Assets (Net)	-	-
	-	**-**
Income Tax Liabilities (Net)		
Current Tax Liabilities (Net)	1,244	1,121
	1,244	**1,121**

The Company is subject to tax assessments and ongoing proceedings, which are pending before various Tax Appellate Authorities. Management periodically evaluates the positions taken in tax returns with respect to above matters, including unresolved tax disputes, which involves interpretation of applicable tax regulations and judicial precedents. Current tax liability and tax asset balances are presented, after recognising as appropriate, provision for taxes payable and contingencies basis management's assessment of outcome of such ongoing proceedings and amounts that may become payable to the tax authorities. Considering the nature of such estimates and uncertainties involved, the amount of such provisions may change upon final resolution of the matters with tax authorities, Refer Note 1C

14. Other Non-Current and Current Assets
(Unsecured, Considered Good unless otherwise stated)

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Considered Good				
Capital Advance - (a)	523	-	221	-
Advance to Employees	-	7	-	6
Deposit with Government and Other Authorities	-	34	-	30
Advance to Supplier for Goods and Services - (f)	2	1,691	2	1,158
Prepaid Expenses - (b) and (c)	27	106	6	72
Others - (d) and (e)	484	1,809	531	1,167
Considered Doubtful				
Advance to Supplier for Goods and Services	12	110	22	108
Others	-	40	-	11
Less: Loss Allowances	(12)	(150)	(22)	(119)
	1,036	**3,647**	**760**	**2,433**

(a) Gujarat Industrial Development Corporation ('GIDC') is constructing a common desalination plant (the 'Plant') at Dahej Industrial Area in Gujarat through a SPV, having total estimated cost of ₹ 1,140 Crore. The Company particpation is 10% of total MLD. The Company has paid an advance of ₹ 91 Crore to GIDC (representing 80% of our share out of total planned cost). Pending finalisation of the structure of the SPV, this amount has been recorded under Capital Advance.

(b) Prepaid Expenses - current include Nil (as at 31/03/2022 ₹ 24 Crore) towards excess CSR spent carried forward to subsequent years, Refer Note 58(a) for further details.

(c) Prepaid Expenses - current includes ₹ 50 Crore (as at 31/03/2022 Nil) towards surplus Plan Assets of Gratuity Fund recognised, Refer Note 26A (I)(a)(iv) for further details.

(d) Mainly includes unutilised Indirect tax credits and claims receivables from Indirect Tax Authorities.

(e) Includes ₹ 192 Crore (Garepalma mines at Chattisgarh ₹ 74 Crore and Kathautia mines in Jharkhand ₹ 118 Crore) [as at 31/03/2022 ₹ 192 Crore (Garepalma mines ₹ 74 Crore and Kathautia mines ₹ 118 Crore)] towards appropriation of Performance Bank Guarantee by Nominated Authority (NA), Refer Note 45 (a) for further details.

(f) Refer Note 47 for balances with related parties.

15. Inventories
Refer Note 1B (N) for accounting policy on Inventories

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	In Hand	In Transit	Total	In Hand	In Transit	Total
Raw Materials	3,873	4,921	8,794	3,061	5,529	8,590
Work-in-Progress	7,666	41	7,707	8,211	57	8,268
Finished Goods	2,174	269	2,443	1,832	248	2,080
Stock-in-Trade	20	-	20	884	-	884
Stores and Spares	845	80	925	699	16	715
Coal and Fuel	192	105	297	402	9	411
	14,770	**5,416**	**20,186**	**15,089**	**5,859**	**20,948**

(a) The Company has applied fair value hedge accounting on its inventory which forms part of Work-in-Progress and Finished Goods. Fair value hedges are mainly used to hedge the exposure to change in fair value of commodity price risks. The fair value adjustment remains part of the carrying value of inventory and is taken to the statement of profit and loss when the inventory is either sold or consumed, Refer Note 11(a) and 11(h).

(b) For Inventories hypothecated against secured short-term borrowings, Refer Note 22B (a).

(c) Write downs of inventories (net of reversal) to net realizable value related to raw materials, work-in-progress and finished goods amounted to ₹ 625 Crore (as at 31/03/2022 ₹ 586 Crore). These were recognized as expense during the year and included in 'cost of material consumed' and 'change in value of inventories of Finished goods, Work-in-Progress and Stock in Trade' in the Statement of Profit and Loss.

(d) Inventories in hand include bulk materials of Coal, Bauxite and Copper Concentrate lying at yards, mines, plants and precious metals of Gold and Silver lying at Copper smelter and refinery aggregating to ₹ 4,232 Crore (as at 31/03/2022 ₹ 4,302 Crore).

16. Trade Receivables
Refer Note 1B (O) for accounting policy on Trade receivable

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Trade Receivables:		
Secured, Considered Good	-	3
Unsecured, Considered Good	2,624	2,671
Unsecured, Credit Impaired	34	34
	2,658	**2,708**
Less: Loss Allowances - (d)	(48)	(37)
	2,610	**2,671**

(a) Trade Receivable ageing schedule as at 31/03/2023 :

(₹ in Crore)

Particulars	Unbilled	Not due	Outstanding for following periods from due date of receipt					Total
			Less than 6 months	6 months - 1 year	1-2 years	2-3 yrs.	More than 3 yrs.	
(i) Undisputed – considered good	-	2,167	330	105	15	-	7	2,624
(ii) Undisputed – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed – credit impaired	-	-	-	-	-	-	13	13
(iv) Disputed – considered good	-	-	-	-	-	-	-	-
(v) Disputed – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed – credit impaired	-	-	-	-	-	-	21	21
Total	**-**	**2,167**	**330**	**105**	**15**	**-**	**41**	**2,658**
Less: Loss Allowances								(48)
Net Trade Receivables								**2,610**

Trade Receivable ageing schedule as at 31/03/2022 :

(₹ in Crore)

Particulars	Unbilled	Not due	Outstanding for following periods from due date of receipt					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 yrs.	More than 3 yrs.	
(i) Undisputed – considered good	-	2,439	219	9	1	-	6	2,674
(ii) Undisputed – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed – credit impaired	-	-	-	-	-	-	10	10
(iv) Disputed – considered good	-	-	-	-	-	-	-	-
(v) Disputed – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed – credit impaired	-	-	-	-	-	3	21	24
Total	**-**	**2,439**	**219**	**9**	**1**	**3**	**37**	**2,708**
Less: Loss Allowances								(37)
Net Trade Receivables								**2,671**

(b) For trade receivables hypothecated against borrowings, Refer Note 22B (a)

(c) No trade or other receivable are due from directors or other officers of the Company either severally or jointly with any other person. Further, no trade or other receivable are due from firms or private companies respectively in which any director is a partner, or director or member.

(d) Loss allowances includes provision of ₹ 14 Crore (31/03/2022: ₹ 3 Crore) made on account of expected credit loss on Trade Receivables: Refer Note 52 (c)(i).

(e) Refer Note 47 for balances with related parties.

17. Cash and Cash Equivalents

Refer Note 1B (S) for accounting policy on Cash and cash equivalents

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Cash on Hand	-	-
Cheques and Drafts on Hand including remittance in transit- (a)	39	14
Balances with Banks		
Current Accounts	433	281
Deposit with Initial maturity of less than three months	-	2,500
Short term liquid Investments in Mutual Funds	-	610
	472	**3,405**

(a) Includes ₹ 38 Crore (as at 31/03/2022- Nil) remittance in transit.

(b) There is no restriction with regard to cash and cash equivalents at the end of reporting period and prior periods.

18. Bank Balances other than Cash and Cash Equivalents

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Balances with Banks		
Earmarked Balances - (a)	15	14
Deposits with Initial Maturity more than three months	1,302	3,001
	1,317	**3,015**

(a) Includes unclaimed dividend of ₹ 6 Crore (as at 31/03/2022 ₹ 5 Crore)

19. Non-Current Assets classified as Held for Sale

Refer Note 1B (I) for accounting policy on Non-current assets (or disposal groups) held for sale

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Non-Current assets classified as Held for Sale	21	3
	21	**3**
(a) Details of Assets classified as held for sale		
Land and Building	-	1
Plant and Machinery	21	2
Total	**21**	**3**

(b) The Company is in the process of disposing the above assets.

(c) During the previous year ended 31/03/2022, the Company evaluated operational performance along with present environmental norms of its Di Ammonium Phosphate (DAP) Plant and decided to decommission the same. Accordingly it recognised impairment loss amounting to ₹ 76 Crore. During the year ended 31/03/2023, the Company has classified these assets having carrying amount of ₹ 14 Crore as held for sale.

(d) In earlier years, the Company had impaired certain equipment and accessories classified as held for sale resulting carrying amount ₹ 2 Crore as at 31/03/2022. During the year ended 31/03/2023, the Company has written back impairment loss on determination of its realizable value (Net of cost to sales) amounting to ₹ 12 Crore. Portion of such equipments are disposed during the year and rest with carrying amount ₹ 7 Crore lying as at 31/03/2023.

(e) The fair value of the assets held for sale approximates the carrying value.

20. Equity Share Capital

(₹ in Crore)

	Numbers as at		As at	
	31/03/2023	31/03/2022	31/03/2023	31/03/2022
<u>Authorised</u>				
Equity Shares of ₹ 1/- each	2,500,000,000	2,500,000,000	250	250
Redeemable Cumulative Preference Shares of ₹ 2/- each	25,000,000	25,000,000	5	5
			255	255
<u>Issued</u>				
Equity Shares of ₹ 1/- each - (a)	2,247,748,231	2,247,726,370	225	225
			225	225
<u>Subscribed and Paid-up</u>				
Equity Shares of ₹ 1/- each fully paid-up	2,247,740,834	2,247,718,973	225	225
Less: Face Value of Equity Shares forfeited	(546,249)	(546,249)	-	-
Add: Forfeited Shares (Amount originally Paid up)			-	-
	2,247,194,585	2,247,172,724	225	225
Less: Treasury Shares				
Equity Shares. - (b)(i)	(16,316,130)	(16,316,130)	(2)	(2)
Equity Shares - (b)(ii)	(9,219,067)	(7,064,997)	(1)	(1)
	2,221,659,388	**2,223,791,597**	**222**	**222**

(a) Issued Equity Capital as at 31/03/2023 includes 7,397 Equity Shares (as at 31/03/2022 7,397 Equity Shares) of ₹ 1/- each issued on Rights basis kept in abeyance due to legal case pending.

(b) Treasury shares include :

(i) Shares held by Trident Trust which represents equity shares of ₹ 1/- each fully paid-up of the Company issued, pursuant to a Scheme of Arrangements approved by the Hon'ble High Courts of Mumbai and of Allahabad, vide their Orders dated 31st October, 2002, and 18th November, 2002, respectively, to the Trident Trust, created wholly for the benefit of the Company and is being managed by trustees appointed by it. The tenure of the Trust is up to January 23, 2024.

(ii) Shares held by Hindalco Employee Welfare Trust (ESOP Trust) which represents equity shares of ₹ 1/- each fully paid-up of the Company. The Trust buys shares of the Company from the market, for giving shares to employees pursuant to the Employees Stock Option Scheme (ESOS), 2018. Refer Note 21 (a) (viii) for further details.

(c) Reconciliation of shares outstanding at the beginning and at the end of the reporting period:

	As at 31/03/2023		As at 31/03/2022	
	Numbers	₹ in Crore	Numbers	₹ in Crore
Equity shares outstanding at the beginning of the year	2,223,791,597	222	2,224,543,152	222
Equity shares allotted pursuant to exercise of ESOS 2006 & 2013	21,861	-	488,477	-
Equity shares purchased by Hindalco Employee Welfare Trust from market pursuant to ESOS 2018	(2,956,000)	-	(2,119,000)	-
Equity shares allotted pursuant to exercise of ESOS 2018 through Hindalco Employee Welfare Trust	801,930	-	878,968	-
Equity shares outstanding at the end of the year	2,221,659,388	222	2,223,791,597	222

(d) The Company has one class of equity shares having a par value of ₹ 1/- per share. Each shareholder is eligible for one vote per share held. The dividend proposed by the Board of Directors is subject to the approval of the shareholders in the ensuing Annual General Meeting, except in case of interim dividend. In the event of liquidation, the equity shareholders are eligible to receive the remaining assets of the Company after distribution of all preferential amounts, in proportion to their shareholding.

(e) Details of shareholders holding more than 5% Equity Shares in the Company on reporting date:

	As at 31/03/2023		As at 31/03/2022	
	Number of Shares Held	Percentage of Holding *	Number of Shares Held	Percentage of Holding *
IGH Holdings Private Limited	350,088,487	15.58%	350,088,487	15.58%
Birla Group Holdings Private Limited	228,292,308	10.16%	228,292,308	10.16%
Life Insurance Corporation of India and its Associates	216,823,769	9.65%	189,588,459	8.44%

* Percentage have been calculated on the basis of total number of shares outstanding (before adjusting Treasury shares), refer footnote (b) above.

(f) **Shares held by promoters at the end of the year and Movement**

Promoter's Name $	No. of Shares as at 31/03/2023	Percentage of total shares *	No. of Shares as at 31/03/2022	Percentage of total shares *	% Change during the Year
Kumar Mangalam Birla	901,635	0.04%	901,635	0.04%	-
Birla Group Holdings Private Limited	228,292,308	10.16%	228,292,308	10.16%	-
Total	**229,193,943**		**229,193,943**		

$ Promoter here means promoter as defined in Section 2(69) of the Companies Act, 2013.

* Percentage have been calculated on the basis of total number of shares outstanding (before adjusting Treasury shares), refer footnote (b) above.

(g) Shares reserved for issue under options:

The Company has reserved equity shares for issue under the Employee Stock Option Schemes, Refer Note 26B(b) - Employee Share-based Payments for details of Employee Stock Option Schemes.

(h) The Company during the preceding 5 years:

i. Has not allotted shares pursuant to contracts without payment received in cash.

ii. Has not issued shares by way of bonus shares.

iii. Has not bought back any shares.

21. Other Equity

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Share Application Money pending Allotment	-	-
Reserves and Surplus		
Capital Reserve	145	145
Capital Redemption Reserve	102	102
Business Reconstruction Reserve	7,715	7,715
Securities Premium	8,234	8,233
Debenture Redemption Reserve	-	1,500
Employee Stock Options	108	76
Treasury Shares held by ESOP Trust	(306)	(199)
General Reserve	21,354	21,354
Retained Earning	14,178	10,252
	51,530	**49,178**
Other Reserves		
Gain/ (Loss) on Equity Instruments FVTOCI	6,472	6,923
Gain/ (Loss) on Debt Instruments FVTOCI	(14)	(5)
Effective portion of Cash Flow Hedge	276	(1,851)
Cost of Hedging Reserve	3	(39)
	6,737	**5,028**
	58,267	**54,206**

(a) Brief Descriptions of items of Other Equity are given below:

(i) Share Application Money pending Allotment:

Share application money pending allotment represents amount received from employees who has exercised employee stock options for which shares are pending allotment as on balance sheet date.

(ii) Capital Reserve:

The Company has created capital reserve pursuant to past mergers and acquisitions.

(iii) Capital Redemption Reserve:

The Company has created capital redemption reserve as per the requirement of the Companies Act.

(iv) Business Reconstruction Reserve:

The Company had formulated a scheme of financial restructuring under sections 391 to 394 of the Companies Act 1956 ("the Scheme") between the Company and its equity shareholders approved by the High Court of judicature of Bombay to deal with various costs associated with its organic and inorganic growth plan. Pursuant to this, a separate reserve account titled as Business Reconstruction Reserve ("BRR") was created during the year 2008-09 by transferring balance standing to the credit of Securities Premium Account of the Company for adjustment of certain expenses as prescribed in the Scheme.

(v) Securities Premium:

Securities premium reserve is used to record the premium on issue of shares. The reserve is utilized in accordance with the provision of the Act.

(vi) Debenture Redemption Reserve:

The Company is required to create a debenture redemption reserve out of the profits which is available for payment of dividend, for the purpose of redemption of debentures.

(vii) Employee Stock Options:

The employee stock option account is used to recognize the grant date fair value of options /RSUs issued to employees under stock option schemes.

(viii) Treasury Shares held by ESOP Trust

The Company has created a trust, namely "Hindalco Employee Welfare Trust"(ESOP Trust) for providing share-based payments to its employees (including its Subsidiaries' employees). The Company uses this Trust as a vehicle for issuing shares to employees covered under the Scheme. The Trust buys shares of the Company from the stock exchange, for issuing shares to employees after excercising under the Employees Stock Option Scheme, 2018. Shares held by Trust are treated as Treasury shares. Equity instruments that are reacquired (Treasury shares) are recognised at cost and deducted from equity. No gain or loss is recognised in Statement of Profit and Loss on purchase, sale, issue or cancellation of Equity instruments. Share options whenever exercised, would be utilised from such treasury shares, Refer Note 26B(b).

(ix) General Reserve:

The Company has created this reserve by transferring certain amount out of the profit at the time of distribution of dividend in the past.

(x) Retained Earning

Amount of retained earnings represents accumulated profit and losses of the Company as on reporting date. Such profits and losses are after adjustment of payment of dividend, transfer to any reserves as statutorily required and adjustment for realised gain/loss on derecognition of equity instruments measured at FVTOCI. Actuarial Gain/ Loss arising out of Actuarial valuation is immediately transferred to Retained Earning.

(xi) Gain/ (Loss) on equity and debt instruments accounted as FVTOCI

The Company has elected to recognize changes in the fair value of certain investments in other comprehensive income. These changes are accumulated within the FVTOCI equity investments reserve and FVTOCI debt investment reserve within equity.

(xii) Effective portion of Cash Flow Hedge:

The Company uses hedging instruments as part of its risk management policy for commodity and foreign currency risk as described in note 11. The Cash Flow hedging reserve is used to recognise the effective portion of gain or loss on designated hedging relationship, Refer Note 11 (e) and 11 (f).

(xiii) Cost of Hedging Reserve:

The Company designates the spot component of some of its derivative instruments in fair value hedge relationship and cash flow hedge relationship. The Company defers changes in the forward element of such instruments in the cost of hedging reserve. For fair value hedge forward points at inception is amortized on a straight line basis from the OCI based on the remaining life of trade. For cash flow hedge the deferred cost of hedging are included in the initial cost of the related hedged items when it is recognized or reclassified to the statement of profit and loss when the hedged item effects the statement of profit and loss. The Company designates the intrinsic value of option contracts whereas the time value of option contracts is included in the cost of hedging reserve, Refer Note 11 (e) and 11 (f).

(b) Movement of each item of other equity is presented in Statement of Changes in Equity.

(c) Shareholders of the Company approved final dividend of ₹ 4 per fully paid up equity shares aggregating to ₹ 890 Crore (net of dividend on treasury shares) for the year ended 31/03/2022 which was paid during this financial year.

(d) The Board of Directors of the Company has recommended final dividend of ₹ 3 per fully paid up equity share aggregating to ₹ 667 Crore (net of dividend on treasury shares) for the year ended 31/03/2023 which has not been recognised in the financial statement, and is subject to the approval of shareholders in annual general meeting.

22. Borrowings

A. Borrowings, Non-Current

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Non-Current Portion	Current Maturities #	Total	Non-Current Portion	Current Maturities #	Total
Secured						
Non-Convertible Debentures - (a)	-	-	-	-	5,999	5,999
Rupee Term Loans - (b)	11,559	50	11,609	11,668	8	11,676
Unsecured						
Non-Convertible Debentures - (a)	-	699	699	-	-	-
	11,559	749	12,308	11,668	6,007	17,675

Current maturities of non-current borrowings have been disclosed under "Borrowings, Current", Refer Note 22B.

(a) Debentures comprise of following:

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022		Redemption Date
	Gross Amount	Carrying Value	Gross Amount	Carrying Value	
Secured - (i)					
30,000 9.55% Redeemable Non-Convertible Debentures of ₹ 10 lakhs each	-	-	3,000	3,000	25/04/2022
15,000 9.55% Redeemable Non-Convertible Debentures of ₹ 10 lakhs each	-	-	1,500	1,500	27/06/2022
15,000 9.60% Redeemable Non-Convertible Debentures of ₹ 10 lakhs each	-	-	1,500	1,499	02/08/2022
	-	-	6,000	5,999	
Unsecured - (ii)					
70,000 7.60% Redeemable Non-Convertible Debentures of ₹ 1 lakhs each	700	699	-	-	18/03/2024
	700	699	-	-	

(i) All the secured Debentures were secured by movable items of Property, Plant and Equipment, both present and future (except movable assets of Mahan Aluminium plant, Aditya Aluminium plant, Kalwa plant, Current Assets of the Company) and certain immovable properties of the Company: Refer Note 2A.

(ii) During the year, the Company has issued 70,000 7.60% Redeemable Non-Convertible Debentures amounting to ₹ 700 crore maturing on March 18, 2024 to meet the working capital requirement. These Non-Convertible debt securities has been issued to comply with provisions of SEBI Circular No. SEBI/HO/DDHS/CIR/P/2018/144 dated November 26, 2018 related to listed large corporate. As of March 31, 2023, the entire proceeds from issue of non-convertible debentures have been utilized for the purpose mentioned in the Debenture Trust Deed.

(b) Rupee term loan from banks comprise of the following:

(₹ in Crore)

	Note	Rate of Interest^ applicable as on 31/03/2023	As at 31/03/2023		As at 31/03/2022		End of tenure
			Gross Amount	Carrying Value	Gross Amount	Carrying Value	
Axis Bank		Repo Rate + 160 bps	619	603	619	602	31/03/2030
State Bank of India		MCLR 3 Month + 10 bps	2,239	2,228	2,239	2,216	31/03/2030
ICICI Bank			-	-	76	75	31/03/2030
Rupee Term Loans : (A)	(I)		2,858	2,831	2,934	2,893	
State Bank of India		MCLR 3 Month + 10 bps	4,672	4,665	4,672	4,665	01/09/2030
PNB Bank		Repo Rate + 160 bps*	256	258	256	255	01/09/2030
Axis Bank		Repo Rate + 160 bps	1,371	1,355	1,371	1,363	01/09/2030
Rupee Term Loans : (B)	(II)		6,299	6,278	6,299	6,283	
State Bank of India		MCLR 3 Month + 15 bps	2,500	2,500	2,500	2,500	20/01/2032
Rupee Term Loans : (C)	(III)		2,500	2,500	2,500	2,500	
Total Rupee Term Loans (A)+(B)+(C)			11,657	11,609	11,733	11,676	

* Benchmark changed, benchmark as at 31/03/22 was MCLR 1 month.
The Borrowings are subsequently measured at amortised cost and interest accrued thereon is included in Note 24 - Other Financial Liability.

^ **Definition of abbreviation used**

(i) 100 basis points (bps) is equal to 1%

(ii) Repo rate is the rate at which RBI lends funds to commercial banks.

(iii) Marginal Cost of funds based Lending Rate (MCLR) is a tenor-linked internal benchmark rate of respective bank

(I) The term loans from banks of ₹ 2,858 Crore (gross) (31/03/2022: ₹ 2,934 Crore) are secured by a first ranking charge/ mortgage/ security interest in respect of all the movable and immovable items of Property, Plant and Equipment of Mahan Aluminium plant, both present and future, carrying value ₹ 10,861 Crore (as at 31/03/2022 ₹ 11,238 Crore), Refer Note 2A. Term loan amounting to ₹ 2,858 Crore (gross) (31/03/2022: ₹ 2,934 Crore) is to be repaid in 17 quarterly instalments commencing from June 2026. ICICI Bank loan of ₹ 76 Crore has been prepaid in FY 2023.

(II) The term loan of ₹ 6,299 Crore (gross) (31/03/2022: ₹ 6,299 Crore) is secured by a first ranking charge/ mortgage/security interest in respect of all the movable and immovable items of Property, Plant and Equipment of Aditya Aluminium plant both present and future, carrying value of ₹ 11,320 Crore (as at 31/03/2022 ₹ 11,693 Crore), Refer Note 2A. Term loan amounting to ₹ 6,299 Crore (gross) (31/03/2022: ₹ 6,299 Crore) is to be repaid in 26 quarterly instalments commencing from 01/06/2024.

(III) The term loan of ₹ 2,500 Crore (gross) is secured by a first ranking charge/ mortgage/security interest in respect of all the movable and immovable items of Property, Plant and Equipment of Mahan Aluminium plant both present and future, carrying value ₹ 10,861 Crore (as at 31/03/2022 ₹ 11,238 Crore), Refer Note 2A.Term loan amounting to ₹ 2,500 Crore (gross) is to be repaid in 34 quarterly instalments commencing from October 2023.

(c) Changes in liabilities arising from financing activities as at 31/03/2023 :

(₹ in Crore)

Particulars	Other Assets -Cash and Cash Equivalents@	Liabilities from Financing Activities				Net
		Non-Current Borrowings	Current Borrowings	Lease Liabilities	Supplier's Credit	
Balance as at 31/03/2022 #	**3,405**	**18,202**	**1,409**	**342**	**2,456**	**19,004**
Additions	-	-	-	555	-	555
Cash Flows (Net)@	(2,933)	(5,376)	(1,378)	(132)	3,214	(739)
Foreign Exchange Adjustments	-	-	-	-	(32)	(32)
Fair Value Changes, Refer Note 31 (a)	-	(48)	(25)	-	-	(73)
Debt Issuance Costs and Amortisation	-	59	-	-	-	59
Interest Expense **	-	972	52	47	140	1,211
Interest Paid **	-	(1,420)	(58)	(43)	(74)	(1,595)
Other Changes/ Reclassification - Modification/ Reassessment	-	-	-	(6)	-	(6)
Balance as at 31/03/2023 #	**472**	**12,389**	**-**	**763**	**5,703**	**18,383**
Less: Accrued interest as at 31/03/2023	-	(81)	-	-	(69)	(150)
Balance as at 31/03/2023 as per Balance Sheet	**472**	**12,308**	**-**	**763**	**5,635**	**18,234**

Changes in liabilities arising from financing activities as at 31/03/2022 :

(₹ in Crore)

Particulars	Other Assets -Cash and Cash Equivalents@	Liabilities from Financing Activities				Net
		Non-Current Borrowings	Current Borrowings	Lease Liabilities	Supplier's Credit	
Balance as at 01/04/2021 #	**1,003**	**16,162**	**4,294**	**311**	**255**	20,019
Additions	-	-	-	131	-	131
Cash Flows (Net)@	2,402	2,032	(2,923)	(71)	2,161	(1,203)
Foreign Exchange Adjustments	-	1	36	-	40	77
Fair Value Changes, Refer Note 31 (a)	-	(53)	-	-	-	(53)
Debt Issuance Costs and Amortisation	-	57	-	-	-	57
Interest Expense **	-	1,201	63	26	8	1,298
Interest Paid **	-	(1,198)	(61)	(23)	(8)	(1,290)
Other Changes/ Reclassification - Modification/ Reassessment	-	-	-	(32)	-	(32)
Balance as at 31/03/2022 #	**3,405**	**18,202**	**1,409**	**342**	**2,456**	**19,004**
Less: Accrued interest as at 31/03/2022	-	(527)	(5)	-	-	(532)
Balance as at 31/03/2022 as per Balance Sheet	**3,405**	**17,675**	**1,404**	**342**	**2,456**	**18,472**

\# Borrowings include Interest accrued on borrowings and current maturities of related borrowings.

@ Include temporary overdraft balances in current accounts.

** Interest expense and interest paid relates to borrowings and lease liabilities before interest capitalisation.

B. Borrowings, Current

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Secured		
Rupee Loans from Banks - (a)	-	3
	-	**3**
Unsecured		
Foreign currency Loans from Indian Banks - (b)	-	1,401
	-	**1,401**
Current maturities of Long-Term Borrowings	749	6,007
	749	**7,411**

(a) Working Capital loan for Aluminium business, granted under the Consortium Lending Arrangement, are secured by a first pari-passu charge on entire stocks of raw materials, work-in-process, finished goods, consumable stores and spares and also book debts pertaining to the Company's Aluminium business, both present and future. Working Capital loan for the Copper business is secured by a first pari passu charge on stocks of raw materials, work-in-process, finished goods and consumable stores and spares and also book debts and other movable assets of Copper business, both present and future, Refer Note 15 (b) and 16 (b).

(b) Foreign currency loans from Indian Banks and Offshore branch of Foreign banks are mainly in nature of Buyers credit which has been availed for Copper business to meet its working capital requirement mostly to settle import payments of copper concentrate and certain other raw materials. Refer Note 11(c) on non-derivative financial instruments used as hedging instruments.

23. Trade Payables

Refer Note 1B (P) for accounting policy on Trade and other payables

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Micro and Small Enterprises - (b)	-	161	-	96
Other than Micro and Small Enterprises - (c) and (d)	-	9,582	-	10,919
	-	**9,743**	**-**	**11,015**

(a) Trade Payables ageing schedule as at 31/03/2023 :

(₹ in Crore)

S. No.	Particulars	Unbilled	Not due	Outstanding for following periods from due date of payment				Total
				Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i)	Micro and Small Enterprises	12	103	39	5	1	1	**161**
(ii)	Others	893	5,380	3,161	82	16	50	**9,582**
(iii)	Disputed dues - Micro and Small Enterprises	-	-	-	-	-	-	**-**
(iv)	Disputed dues - Others	-	-	-	-	-	-	**-**
	Total	**905**	**5,483**	**3,200**	**87**	**17**	**51**	**9,743**

Trade Payables ageing schedule as at 31/03/2022 :

(₹ in Crore)

S. No.	Particulars	Unbilled	Not due	Outstanding for following periods from due date of payment				Total
				Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i)	Micro and Small Enterprises	14	31	44	3	3	1	**96**
(ii)	Others	865	2,351	7,516	26	22	52	**10,832**
(iii)	Disputed dues - Micro and Small Enterprises	-	-	-	-	-	-	**-**
(iv)	Disputed dues - Others	-	-	21	22	44	-	**87**
	Total	**879**	**2,382**	**7,581**	**51**	**69**	**53**	**11,015**

(b) Information related to Micro and Small Enterprises, as per the Micro, Small and Medium Enterprises Development Act, 2006 (MSME Development Act), are given below. The information given below have been determined to the extent such enterprises have been identified on the basis of information available with the Company:

(₹ in Crore)

		As at 31/03/2023	As at 31/03/2022
(i)	Principal amount outstanding	159	94
(ii)	Interest on Principal amount due thereon	-	-
(iii)	Interest and Principal amount paid beyond appointed day	-	-
(iv)	The amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed date during the year) but without adding the amount of interest specified under MSME Development Act.	2	2
(v)	The amount of interest accrued and remaining unpaid at the end of the year.	4	2
(vi)	The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the Small enterprise, for the purpose of disallowance as a deductible expenditure under Section 23 of MSME Development Act.	2	2

(c) Refer Note 11 for Embedded derrivative and non-derivative financial instruments used as hedging instruments.

(d) Refer Note 47 for balances with related parties.

24. Other Financial Liabilities

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Interest Accrued but not due	-	150	-	532
Liability for Capital Expenditure	53	439	8	304
Retention Amount Payable	6	111	2	118
Security and Other deposits	2	39	3	41
Investor Education and Protection Fund				
Unclaimed Dividends - (a)	-	6	-	5
Temporary Book Overdraft	-	2	-	-
	61	**747**	**13**	**1,000**

(a) This amount do not include any amount due and outstanding, to be credited to Investor Education and Protection Fund except ₹ 0.09 Crore (as at 31/03/2022 ₹ 0.09 Crore) which is held in abeyance due to legal cases pending.

25. Provisions

Refer Note 1B (L) for accounting policy on Provisions and contingencies

(₹ in Crore)

	As at 31/03/2023			As at 31/03/2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Asset Retirement Obligations	112	-	112	110	-	110
Environmental Liability (d)	15	305	320	83	179	262
Enterprise Social Commitment	148	15	163	138	10	148
Legal Cases	-	304	304	-	383	383
Renewable Power Obligation (c)	-	283	283	-	148	148
Miscellaneous Provisions	1	7	8	1	11	12
	276	**914**	**1,190**	**332**	**731**	**1,063**

(a) **The details of provisions movement are as under:**

(₹ in Crore)

Particulars	Assets Retirement Obligations	Environ-mental Liability	Enterprise Social Commitment	Legal Cases	Renewable Power Obligation	Miscellaneous Provisions	Total
Balance as at 01/04/2021	**99**	**63**	**148**	**331**	**156**	**13**	**810**
Provision made during the year (d)	6	200	-	53	112	-	371
Reclassified	-	-	-	-	-	-	-
Provision utilised during the year	(1)	(2)	(10)	(1)	(107)	(1)	(122)
Provision reversed during the year	-	-	-	-	(13)	-	(13)
Unwinding of discount	6	1	10	-	-	-	17
Balance as at 31/03/2022	**110**	**262**	**148**	**383**	**148**	**12**	**1,063**
Provision made during the year	-	106	25	5	73	-	209
Reclassified	-	-	-	7	-	-	7
Provision utilised during the year (c)	(4)	(36)	(5)	(87)	94	(1)	(39)
Provision reversed during the year	-	(13)	(15)	(4)	(32)	(3)	(67)
Unwinding of discount	6	1	10	-	-	-	17
Balance as at 31/03/2023	**112**	**320**	**163**	**304**	**283**	**8**	**1,190**

(b) **Brief Description of Provisions**

(i) **Assets Retirement Obligations**

Asset Retirement Obligation (ARO) is a legal or constructive obligation associated with the ash ponds, ash pipeline and coal transportation system at captive power plants, red mud ponds at refineries and mining area where these lands need to be restored back to usable condition after closing of activities. This is a statutory requirement in which the timing or method of settlement may be conditional on one or multiple future events, the occurrence of which may not be within the control of the entity. The outflow of economic resources is expected over a period until FY 47. The same has been appropriately discounted.

(ii) Environmental Liability

Environmental Liability associated with Wild Life Conservation Plan (WLCP) and disposal of hazardous material generated during the course of manufacturing or mining operation e.g. disposal of spent pot lining, Gypsum, Slag, Ash etc. This disposal generally takes place as per the guidelines set by various regulatory authorities of States and Central Government. The outflow of economic resources is generally expected over a period until FY 31.

(iii) Enterprise Social Commitment

Enterprise Social Commitment is the amount to be spent on social and economic development of the surrounding area where new project is being setup. This is generally defined as a certain percentage of the total cost of the project. The outflow of economic resources is expected expected over a period until FY 56. This has been appropriately discounted wherever necessary.

(iv) Legal Cases

There are few Legal cases against which provision has been made since these events are probable to happen i.e. more likely than not but timing of occurrence of such events is uncertain as it depends on when the matter will be settled at the highest Court of Law.

(v) Renewable Power Obligation (RPO)

Some of our units situated in various states like Odisha, Madhya Pradesh , Maharashtra ,Gujarat, Jharkhand etc. who gets power from Captive power plants or procure power from open source, are obligated to purchase certain portion of their power consumption from Renewable Energy sources both solar and non-solar. This gives rise to Renewable Power Obligation (RPO). In case the obligated units fail to procure power from such renewable sources, they may satisfy the obligation by purchasing Renewable Energy Certificates from authorised exchanges as an alternative.

(vi) Miscellaneous Provision

Includes Statutory provisions related to Indirect Taxes, Coal Cess etc.

(c) During 2017-18, while purchasing Non-Solar Renewable Energy Certificates (REC) to meet our obligation, the Company had to pay ₹ 500 per REC aggregating to ₹ 134 Crore as deposit to the REC Exchange in an Escrow account pursuant the directives from the Supreme Court of India. Provision for RPO as at 31/03/2022 was net of these REC deposits under escrow amount. During the current year, the REC Exchange has returned this amount against the bank guarantee provided by the Company. Accordingly, the provision has been adjusted for the same.

(d) Pursuant to the notification dated 31/12/2021 issued by Ministry of Environment, Forest and Climate Change (MoEFCC), the Company recognised provision of ₹ 107 Crore for expected cost of disposal/stabilisation of legacy ash lying in ash dykes/ponds as at 31/03/2022. The estimate was based on the plan for disposal and/ or stabilisation of ash dykes/ponds considering feasibility of extraction of ash from ash dykes/ponds.

Subsequently, the MoEFCC, vide notification dated 30/12/2022 amended the said notification whereby, any new or operational thermal power plant may be permitted to designate its ash dykes/ponds as operational ash dyke/pond. The Central Pollution Control Board (CPCB) in consultation with the Central Electricity Authority (CEA) was directed to issue guidelines, on or before 31/03/2023, relating to technical specifications of operational as well as stabilised and reclaimed ash dykes/ ponds, procedure for annual certification of such ash dykes/ponds or on various aspects like safety, mode of disposal etc.

Considering that such guidelines are yet to be notified, the Company continues to recognise the balance provision amounting to ₹ 91 Crore as at 31/03/2023 towards expected cost of disposal/stabilisation under provision for Environmental Liability.

26. Employee Benefit Obligations

Refer Note 1B (V) for accounting policy on Employee Benefits

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Defined Benefit Plans				
Gratuity	102	4	96	5
Pension	39	4	42	4
Post-Retiral Medical Benefit	4	-	4	1
Other Employee Benefit Plans				
Compensated Absences	-	271	-	261
Stock Appreciation Right	-	3	-	4
	145	**282**	**142**	**275**

A. Post-Employment Benefits

The Company provides various benefit plans to its employees. Some of them are defined benefit in nature while some are contributory.

I. Defined Benefit Plans:

Major Post retiral defined benefit plans of the Company include Gratuity, Post retirement medical benefit and Provident Fund (to the extent of Company's obligation to fund any shortfall on the yield of the trust's investments over the administered interest rates on an annual basis by Central Provident Fund Organisation of Goverment of India). The Company does Actuarial valuation for its identified defined benefit plans.

Methodology for actuarial valuation of Defined Benefit Obligations:

The Projected Unit Credit (PUC) actuarial method has been used to assess the plan's liabilities, including those related to death-in-service and incapacity benefits.

Under PUC method a projected accrued benefit is calculated at the beginning of the year and again at the end of the year for each benefit that will accrue for all active members of the plan. The projected accrued benefit is based on the plan's accrual formula and upon service as of the beginning or end of the year, but using a member's final compensation, projected to the age at which the employee is assumed to leave active service. The plan liability is the actuarial present value of the projected accrued benefits for active members.

Defined benefit plans expose the Company to actuarial risks such as: Interest Rate Risk, Salary Risk and Demographic Risk.

(i) Interest Rate Risk: While calculating the defined benefit obligation a discount rate based on government bonds yields of matching tenure is used to arrive at the present value of future obligations. If the bond yield falls, the defined benefit obligation will tend to increase and plan assets will decrease.

(ii) Salary risk: Higher than expected increases in salary will increase the defined benefit obligation.

(iii) Demographic risk: This is the risk of variability of results due to unsystematic nature of decrements that include mortality, withdrawal, disability and retirement. The effect of these decrements on the defined benefit obligations is not straight forward and depends on the combination of salary increase, discount rate and vesting criteria. It is important not to overstate withdrawals because in the financial analysis the retirement benefit of a short career employee typically costs less per year as compared to a long service employee.

(a) Gratuity Plans

The Company has various schemes (funded/unfunded) for payment of gratuity to all eligible employees calculated at specified number of days (ranging from 15 days to 1 month) of last drawn salary depending upon the tenure of service for each year of completed service subject to minimum service of five years payable at the time of separation upon superannuation or on exit otherwise. These defined benefit gratuity plans are governed by the Payment of Gratuity Act, 1972.

(₹ in Crore)

(i) Change in Defined Benefit Obligations (DBO)	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
DBO at the beginning of the year	1,009	101	1,110	1,018	95	1,113
Current service cost	38	7	45	40	6	46
Interest Cost on the DBO	70	7	77	62	6	68
Acquisitions cost	-	-	-	-	2	2
Actuarial (gain)/ loss - experience	30	2	32	17	4	21
Actuarial (gain)/ loss - financial assumption	(39)	(5)	(44)	(60)	(7)	(67)
Benefits paid directly by Company	(47)	(6)	(53)	(42)	(5)	(47)
Benefits paid from plan assets	(23)	-	(23)	(26)	-	(26)
DBO at the end of the year	**1,038**	**106**	**1,144**	**1,009**	**101**	**1,110**

(₹ in Crore)

(ii) Change in Fair Value of Plan Assets	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Fair Value of Plan Assets at the beginning of the year	1,114	-	1,114	984	-	984
Interest Income on plan assets	79	-	79	62	-	62
Employer's contributions	49	-	49	52	-	52
Return on plan assets greater/(lesser) than discount rate	(34)	-	(34)	42	-	42
Benefits Paid	(23)	-	(23)	(26)	-	(26)
Fair Value of Plan Assets at the end of the year	**1,185**	**-**	**1,185**	**1,114**	**-**	**1,114**

(₹ in Crore)

(iii) Development of Net Balance Sheet Position	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
DBO	(1,038)	(106)	(1,144)	(1,009)	(101)	(1,110)
Fair Value of Plan Assets	1,185	-	1,185	1,114	-	1,114
Status {surplus/(deficit)}	147	(106)	41	105	(101)	4
Funded surplus not recognised - (xiv)	(97)	-	(97)	(105)	-	(105)
Net defined benefit asset/(liability) recognised in the Balance Sheet	**50**	**(106)**	**(56)**	**-**	**(101)**	**(101)**

(₹ in Crore)

(iv) Reconciliation of Net Balance Sheet Position	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Net Defined benefit asset/(Liability)at beginning of the year	-	(101)	(101)	(34)	(95)	(129)
Service cost	(38)	(7)	(45)	(40)	(6)	(46)
Net Interest on net defined benefit liability/(asset)	9	(7)	2	-	(6)	(6)
Actuarial gain/loss and return on plan assets recognised in OCI	(25)	3	(22)	85	3	88
Funded surplus recognised/(not recognised) in OCI - (xiv)	8	-	8	(105)	-	(105)
Employer's contributions	49	-	49	52	-	52
Benefit paid directly by Company	47	6	53	42	5	47
Acquisition credit/(cost)	-	-	-	-	(2)	(2)
Net Defined benefit asset/(Liability)at the end of the year	**50**	**(106)**	**(56)**	**-**	**(101)**	**(101)**

(₹ in Crore)

(v) Expense recognised during the year	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Current Service cost	38	7	45	40	6	46
Net Interest on net defined benefit liability/(asset)	(9)	7	(2)	-	6	6
Net Gratuity Cost	**29**	**14**	**43**	**40**	**12**	**52**

(₹ in Crore)

(vi) Other Comprehensive Income(OCI)	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Actuarial (Gain)/ Loss due to DBO experience	30	2	32	17	4	21
Actuarial (Gain)/ Loss due to DBO assumption changes	(39)	(5)	(44)	(60)	(7)	(67)
Actuarial (Gain)/ Loss arising during the period	(9)	(3)	(12)	(43)	(3)	(46)
Return on Plan Assets (greater)/less than discount rate	34	-	34	(42)	-	(42)
Funded surplus (recognised)/not recognised in OCI - (xiv)	(8)	-	(8)	105	-	105
Actuarial (Gain)/ Loss recognised in OCI	**17**	**(3)**	**14**	**20**	**(3)**	**17**

(₹ in Crore)

(vii) Defined Benefit Costs	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Service Cost	38	7	45	40	6	46
Net Interest on net defined benefit liability/(asset)	(9)	7	(2)	-	6	6
Actuarial (gain)/loss recognised in OCI	25	(3)	22	(85)	(3)	(88)
Funded surplus (recognised)/not recognised in OCI - (xiv)	(8)	-	(8)	105	-	105
Defined Benefit Cost	**46**	**11**	**57**	**60**	**9**	**69**

(viii) Principal Actuarial Assumptions

	Year ended	
	31/03/2023	31/03/2022
Discount rate (based on the market yields available on Government bonds at the accounting date with a term that matches that of the liabilities)	7.50%	7.00%
Salary escalation rate	7.50%	7.50%
Weighted average duration of the defined benefit obligation	8 years	8 years
Mortality Rate	Indian Assured Lives Mortality (2006-08) Ultimate	

(ix) Non-Current and Current portion of Employee Benefit Obligations (Refer Note 26) & Fair Value of Plan Assets (Refer Note 14)

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Current portion	50	(4)	46	-	(5)	(5)
Non-current portion	-	(102)	(102)	-	(96)	(96)
Assets/(Liabilites)	**50**	**(106)**	**(56)**	**-**	**(101)**	**(101)**

(x) Sensitivity analysis

Sensitivity analysis are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be co-related. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the defined benefit liability recognised in the balance sheet.

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Discount Rate						
Effect on DBO due to 1% increase in discount rate	(71)	(9)	(80)	(71)	(9)	(80)
Effect on DBO due to 1% decrease in discount rate	80	10	90	82	10	92
Salary Escalation Rate						
Effect on DBO due to 1% increase in salary escalation rate	79	10	89	80	10	90
Effect on DBO due to 1% decrease in salary escalation rate	(71)	(9)	(80)	(72)	(9)	(81)

(xi) The Expected Maturity Analysis of Undiscounted Gratuity is as follows:

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Funded	Unfunded	Total	Funded	Unfunded	Total
Within 1 year	67	4	71	61	5	66
From 1 year to 2 Year	101	6	107	93	6	99
From 2 year to 3 Year	105	8	113	96	6	102
From 3 year to 4 Year	106	9	115	98	8	106
From 4 year to 5 Year	108	10	118	101	9	110
From 5 year to 10 Year	591	75	666	552	66	618
Beyond 10 years	2,038	376	2,414	1,914	360	2,274

(xii) Composition of Plan Assets

Major categories of Plan Assets are as under: *

Cash & Bank Balances	1.29%	NA	1.29%	1.37%	NA	1.37%
Scheme of insurance - Conventional product	0.19%	NA	0.19%	0.20%	NA	0.20%
Scheme of insurance - ULIP product	98.52%	NA	98.52%	98.43%	NA	98.43%
	100.00%	**NA**	**100.00%**	**100.00%**	**NA**	**100.00%**

* Investment in Plan assets are unquoted.

(xiii) Expected Contributions to post employment benefit plan of Gratuity for the year ending 31st March, 2024 are nil.

(xiv) The Company has not recognised the surplus in its plan assets of gratuity fund since no future economic benefits are expected in the form of reduction in future contributions to the gratuity plan or refund from the gratuity plan.

(b) Post Retirement Medical Benefit

This is a defined benefit plan where the Company provides post retirement medical benefit to its certain retired employees. The scheme involves reimbursement of expenses towards medical treatment of self and dependents. The amount charged to the Statement Profit and Loss during the year is ₹ 0.33 Crore (year ended 31/03/2022 ₹ 0.32 Crore) and amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ (2) Crore (year ended 31/03/2022 ₹ (4) Crore). The obligation with respect to said scheme as at 31/03/2023 ₹ 4 Crore (year ended 31/03/2022 ₹ 5 Crore) .

(c) Junior and Senior Pension Plan

Junior and Senior Pension Plan provided to certain employees is in the nature of defined benefit plan which provides an annuity in the form of pension amount at retirement.

(d) Other Pension Plan

It is a pension benefit provided to erstwhile Managing Director. The amount charged to statement of Profit and Loss during the year is ₹ 3 Crore (year ended 31/03/2022 ₹ 3 Crore). Amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ (2) Crore (year ended 31/03/2022 ₹ 0 Crore). The obligation with respect to these schemes as at 31/03/2023 ₹ 43 Crore (year ended 31/03/2022 ₹ 46 Crore).

(e) Provident Fund (Managed by Trust)

The Company's contribution towards Provident Fund managed by approved trusts, which are substantially a defined benefit plan, is debited to the Statement of Profit and Loss. The Company has an obligation to fund any shortfall on the yield of the trust's investments over the administered interest rates on an annual basis by Central Provident Fund Organisation of Government of India. The amount debited to Statement of Profit and Loss during the year was ₹ 75 Crore (year ended 31/03/2022 ₹ 68 Crore). Based on actuarial valuation, the Company has recognised obligation of Nil as at 31/03/2023 (year ended 31/03/2022 Nil) towards shortfall on the yield of the trust's investments over the administered interest rates. Amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ (0) Crore (year ended 31/03/2022 ₹ (5) Crore).

(₹ in Crore)

	Year ended	
Sensitivity Analysis for Discount Rate :-	**31/03/2023**	**31/03/2022**
Provident Fund		
Effect on DBO due to 1% increase in discount rate	(6)	(3)
Effect on DBO due to 1% decrease in discount rate	7	4
Pension		
Effect on DBO due to 1% increase in discount rate	(0)	(0)
Effect on DBO due to 1% decrease in discount rate	0	0
Post Retirement Medical		
Effect on DBO due to 1% increase in discount rate	(0)	(0)
Effect on DBO due to 1% decrease in discount rate	0	0

Assumption use in determining the present value obligation of the interest rate guarantee under the Deterministic Approach:

	Year ended	
	31/03/2023	**31/03/2022**
Discount rate	7.50%	7.00%
Expected EPFO (Employees' Provident Fund Organisation) Return	8.15%	8.10%

II. Defined Contribution Plans

The Company has certain defined contribution plans such as provident funds (not managed by Trust), superannuation fund and family pension fund for the benefit of the employees. The Contributions are made to registered funds/ organisation administered by the government. The obligation of the Company is limited to the amount contributed and it has no further contractual nor any constructive obligation.

(a) Pension

It is a contributory benefit plan where the Company contributes a certain percentage of salary for all eligible employees in the managerial cadre towards Superannuation Funds with option to put certain portion in National Pension Scheme (NPS) and/or in funds managed by Birla Sunlife Insurance Company to be converted to annuity of Life Insurance Corporation of India at retirement. The amount charged to statement of Profit and Loss during the year is ₹ 17 Crore (year ended 31/03/2022 ₹ 16 Crore). Amount of actuarial (gain)/ loss recognised in Other Comprehensive Income during the year is ₹ 0 Crore (year ended 31/03/2022 ₹ 0 Crore).

(b) Provident Fund (Other than Trust)

In respect of certain employees, the Company's contribution towards Provident Fund as specified under the law is paid to the Regional Provident Fund Commissioner and is debited to the Statement of Profit and Loss. The Company also contributes to Coal Mines Provident Fund (CMPF) in respect of employees working in coal mines. The amount debited to Statement of Profit and Loss during the year is ₹ 30 Crore (year ended 31/03/2022 ₹ 32 Crore).

B. Other Employee Benefit plans

(a) Leave Obligation

The leave obligation cover the Company's liability for earned and sick leave. The entire amount of the provision of ₹ 271 Crore (year ended 31/03/2022 ₹ 261 Crore) is presented as current, since the Company does not have an unconditional right to defer settlement for these obligations. Expected amount towards settlement of Leave for the next 12 months are ₹ 44 Crore (31/03/2022 ₹ 41 Crore) .

(b) Employee Share-based Payments

Refer Note 1B (W) for accounting policy on Employee Share-based Payments

The Company has formulated employee share-based payment schemes with the objective to attract and retain talent and align the interest of employees with the Company as well as to motivate them to contribute to its growth and profitability. The Company views employee stock options as instruments that would enable the employees to share the value they create for the Company in the years to come. At present, the following employee share-based payment schemes are in operation, details of which are given below:

(i) Employee Stock Option Scheme 2006 ("ESOS 2006"):

The shareholders of the Company has approved on 23/01/2007 an Employee Stock Option Scheme 2006 ("ESOS 2006"), under which the Company may grant up to 3,475,000 stock options to its permanent employees in the management cadre, whether working in India or out of India, including Managing and the Whole Time Directors of the Company, in one or more tranches. The ESOS 2006 is administrated by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee"). Each stock option, when exercised, would be converted into one fully paid-up equity share of ₹ 1/- each of the Company. The stock options will vest in 4 equal annual instalments after completion of one year of service from the date of grant. The exercise price shall be average price of the equity shares of the Company in the immediate preceding seven day period on the date prior to the date on which the ESOS compensation committee finalises the specific numbers of Options to be granted to the employees discounted by such percentage not exceeding 30 % (thirty percent) to be determined by ESOS Compensation Committee in the best interest of the various stake holders in the prevailing market conditions. The maximum period of exercise is 5 years from the date of vesting and these stock options do not carry rights to dividends or voting rights till the date of exercise. Further, forfeited/ expired stock options are also available for grant. Further, on 23/09/2011 the ESOS 2006 has been partially modified and by which the Company may grant 6,475,000 stock options to its eligible employees.

Under the ESOS 2006, till 31/03/2023 the Committee has granted 4,328,159 stock options (31/03/2022: 4,328,159 stock options) to its eligible employees out of which 1,819,941 stock options (31/03/2022: 1,819,941 stock options) has been forfeited/ expired and are available for grant as per term of the Scheme.

A summary of movement of the stock options and weighted average exercise price (WAEP) is given below:

	As at 31/03/2023		As at 31/03/2022	
	Number	**WAEP**	**Number**	**WAEP**
Outstanding at beginning of the year	-	-	391,304	118.73
Granted during the year	-	-	-	-
Forfeited during the year	-	-	-	-
Exercised during the year	-	-	(391,304)	118.73
Expired during the year	-	-	-	-
Outstanding at year end	-	-	-	-
Vested and Exercisable at year end	-	-	-	-

Under ESOS 2006, as at 31/03/2023 exercise prices for stock options outstanding was Nil (31/03/2022: Nil) whereas the weighted average remaining contractual life of the stock options outstanding was Nil (31/03/2022: Nil).

The weighted average share price at the date of exercise of ESOS 2006 was Nil (31/03/2022 ₹ 428.07 per share).

(ii) Employee Stock Option Scheme 2013 ("ESOS 2013"):

The shareholders of the Company has approved on 10/09/2013 an Employee Stock Option Scheme 2013 ("ESOS 2013"), under which the Company may grant up to 5,462,000 Options (comprising of Stock Options and/ or Restricted Stock Units (RSU)) to the permanent employees in the management cadre and Managing and Whole time Directors of the Company and its subsidiary companies in India and abroad, in one or more tranches. The ESOS 2013 is administered by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee"). The stock options exercise price would be determined by the Committee, whereas the RSUs exercise price shall be the face value of the equity shares of the Company as at the date of grant of RSUs. Each stock option and each RSU entitles the holders to apply for and be allotted one fully paid-up equity share of ₹ 1/- each of the Company upon payment of exercise price during exercise period. The stock options will vest in 4 equal annual instalments after completion of one year of the services from the date of grant, whereas RSU will vest upon completion of three years of services from the date of grant. The maximum period of exercise is 5 years from the date of vesting and these stock option/ RSU do not carry rights to dividends or voting rights till the date of exercise. Further, forfeited/ expired stock options and RSUs are also available for grant.

In terms of ESOS 2013, till 31/03/2023 the Committee has granted 2,250,754 stock options and 2,252,254 RSUs (31/03/2022: 2,250,754 stock options and 2,252,254 RSUs) to the eligible employees of the Company and some of its subsidiary companies. Further, 301,381 stock options and 213,095 RSUs (31/03/2022: 301,381 stock options and 213,095 RSUs) has been forfeited/ expired and are available for grant as per term of the Scheme.

A summary of movement of stock options and RSUs and weighted average exercise price (WAEP) is given below:

	As at 31/03/2023				As at 31/03/2022			
	Stock Options		RSUs		Stock Options		RSUs	
	Number	WAEP	Number	WAEP	Number	WAEP	Number	WAEP
Outstanding at beginning of the year	26,248	135.39	27,553	1.00	110,700	132.68	55,691	1.00
Granted during the year	-	-	-	-	-	-	-	-
Re-instated during the year	-	-	-	-	-	-	-	-
Forfeited during the year	-	-	-	-	-	-	-	-
Exercised during the year	(21,861)	129.02	-	-	(80,067)	132.52	(17,106)	1.00
Expired during the year	(2)	119.45	-	-	(4,385)	119.45	(11,032)	1.00
Outstanding at year end	4,385	167.15	27,553	1.00	26,248	135.39	27,553	1.00
Vested and Exercisable at year end	4,385	167.15	27,553	1.00	26,248	135.39	27,553	1.00

Under ESOS 2013, the range of exercise prices for stock options outstanding as at 31/03/2023 was ₹ 119.45 to ₹ 167.15 (31/03/2022: ₹ 119.45 to ₹ 167.15) whereas exercise price in case of RSUs was ₹ 1.00 (31/03/2022: ₹ 1.00). The weighted average remaining contractual life for the stock options and RSUs outstanding as at 31/03/2023 was 1.72 years and 1.72 years, respectively (31/03/2022: 1.09 years and 2.73 years, respectively).

The weighted average share price at the date of exercise of ESOS 2013 was ₹ 392.76 per share (31/03/2022 ₹ 460.52 per share).

(iii) Employee Stock Option Scheme 2018 ("ESOS 2018"):

The shareholders of the Company has approved on 21/09/2018 an Employee Stock Option Scheme 2018 ("ESOS 2018"), formulated by the Company, under which the Company may grant not more than 13,957,302 [Stock Options and Restricted Stock Units('RSU')] to the permanent employees of the Company in management cadre including Managing and the Wholetime Director of the Company and its subsidiary companies in India and abroad, in one or more tranches. The ESOS 2018 is administered by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee") and the Hindalco Employees Welfare Trust ("Trust"). The Stock options exercise price would be determined by the Committee whereas the RSU exercise price shall be the face value of the equity shares of the Company as at the date of grant of RSUs. Each stock option and each RSU entitles the holders to apply for and be allotted one fully paid-up equity share of ₹ 1/- each of the Company upon payment of exercise price during the exercise period. The Options and RSUs Granted under the Scheme 2018 shall vest, subject to compliance with the minimum vesting period of one year, within a period of four years for Options and of three years for RSUs from the Grant Date, in the manner set out in the respective vesting letters to be issued by the Company to the Grantees from time to time. The maximum period of exercise is 5 years from the date of vesting and these stock options/RSUs do not carry rights to dividends or voting rights till the date of exercise. Further, forfeited/expired stock options and RSUs are also available for grant. The options shall lapse in case of performance linked vesting conditions are not met.

In terms of ESOS 2018, till 31/03/2023 the Committee has granted 9,465,173 stock options and 2,766,817 RSUs (31/03/2022: 7,062,503 stock options and 1,981,539 RSUs) to the eligible employees of the Company and some of its subsidiary companies. Further, 1,143,828 stock options and RSUs 203,461 (31/03/2022: 1,006,926 stock options and 149,597 RSUs) has been forfeited/ expired and are available for grant as per term of the Scheme. A summary of movement of stock options and RSUs and weighted average exercise price (WAEP) is given below:

	As at 31/03/2023				As at 31/03/2022			
	Stock Options		RSUs		Stock Options		RSUs	
	Number	WAEP	Number	WAEP	Number	WAEP	Number	WAEP
Outstanding at beginning of the year	5,324,888	302.51	1,640,675	1.00	4,277,702	226.06	1,279,318	1.00
Granted during the year	2,402,670	395.45	785,278	1.00	1,872,984	448.89	612,560	1.00
Re-instated during the year	-	-	-	-	17,719	278.05	-	-
Forfeited during the year	(136,902)	384.73	(53,864)	1.00	(155,816)	306.39	(59,936)	1.00
Exercised during the year	(251,593)	232.43	(550,337)	1.00	(687,701)	224.10	(191,267)	1.00
Expired during the year	-	-	-	-	-	-	-	-
Outstanding at year end	7,339,063	333.81	1,821,752	1.00	5,324,888	302.51	1,640,675	1.00
Vested and Exercisable at year end	3,720,192	261.63	640,908	1.00	2,370,953	228.84	966,695	1.00

Under ESOS 2018, the range of exercise prices for stock options outstanding as at 31/03/2023 was ₹ 159.30 to ₹ 453.95 (31/03/2022 was ₹ 159.30 to ₹ 453.95) whereas exercise price in case of RSUs was ₹ 1 (31/03/2022: ₹ 1). The weighted average remaining contractual life for the stock options and RSUs outstanding as at 31/03/2023 was 5.02 years and 5.90 years, respectively (31/03/2022 was 5.29 years and 5.50 years respectively).

The weighted average share price at the date of exercise of ESOS 2018 was ₹ 416.04 per share (31/03/2022 was ₹ 509.37 per share).

The fair values at grant date of stock options granted during the year ended 31/03/2023 was ₹ 159.32 to ₹ 215.70 (31/03/2022 was ₹ 176.04 to ₹ 220.36) and fair values in case of RSUs was ₹ 350.00 to ₹ 413.12 (31/03/2022 was ₹ ₹ 419.15 to ₹ 435.62), respectively. The fair valuation has been carried out by an independent valuer by applying Black and Scholes Model. The inputs to the model include the exercise price, the term of option, the share price at grant date and the expected volatility, expected dividends and the risk free rate of interest for terms of options.

The details of options granted, the key assumptions for Fair Value on the date of grant are as under :

	FY 2022-23					
	Tranche IX		Tranche X		Tranche XI	
	Stock Option	RSU	Stock Option	RSU	Stock Option	RSU
Grant date	22/07/2022	22/07/2022	11/11/2022	11/11/2022	09/02/2023	09/02/2023
Exercise price (₹)	375.95	1.00	415.10	1.00	436.50	1.00
Expected terms of options granted (years)	4.43 to 6.43 years	8 years	4.43 to 6.43 years	8 years	4.43 to 6.43 years	8 years
Share price on grant date (₹)	381.25	381.25	429.85	429.85	444.55	444.55
Expected volatility (%)	42.23%	42.23%	41.51%	41.51%	38.93%	38.93%
Expected dividend (%)	1.05%	1.05%	0.93%	0.93%	0.90%	0.90%
Risk free interest rate (%)	7.09% - 7.26%	7.23%	7.10% - 7.20%	7.23%	7.21% - 7.28%	7.29%

	FY 2021-22			
	Tranche VII		Tranche VIII	
	Stock Option	RSU	Stock Option	RSU
Grant date	06/08/2021	06/08/2021	12/11/2021	12/11/2021
Exercise price (₹)	443.25	1.00	453.95	1.00
Expected terms of options granted (years)	4.43 to6.43 years	6 to 8 years	4.43 to6.43 years	6 to 8 years
Share price on grant date (₹)	443.10	443.10	453.95	453.95
Expected volatility (%)	41.10%	41.10%	41.45%	41.45%
Expected dividend (%)	0.68%	0.68%	0.66%	0.66%
Risk free interest rate (%)	5.64% - 6.22%	6.12% - 6.54%	5.54% - 6.12%	6.01% - 6.44%

The expected volatility was determined based on the historical share price volatility over the past period depending on life of the options granted which is indicative of future periods and which may not necessarily be the actual outcome.

(iv) Stock Appreciation Rights ('SAR 2018'):

The Company till 31/03/2023, has granted 196,064 Option SAR and 57,150 RSU SAR (31/03/2022: 156,694 Option SAR and 50,665 RSU SAR) under the Share Appreciation Rights Scheme 2018 ("SAR 2018") to its eligible employees. The Options and RSU SAR Granted shall vest, in the manner set out in the respective vesting letters to be issued by the Company to the Grantees from time to time.The SAR 2018 is administered by the Nomination and Remuneration Committee of the Board of Directors of the Company ("the Committee"). The SAR 2018 have performance linked vesting conditions which are decided by the committee and are cash settled. The options shall lapse in case of performance linked vesting conditions are not met.

A summary of movement of SAR and weighted average exercise price (WAEP) is given below:

	As at 31/03/2023				As at 31/03/2022			
	Option SARs		RSU SARs		Stock Options		RSUs	
	Number	WAEP	Number	WAEP	Number	WAEP	Number	WAEP
Outstanding at beginning of the year	97,927	236.82	29,996	1.00	76,652	215.00	20,514	1.00
Granted during the year	39,370	351.58	6,485	1.00	60,879	255.50	30,151	1.00
Forfeited during the year	-	-	-	-	-	-		
Exercised during the year	(16,853)	262.78	(5,745)	1.00	(39,604)	223.29	(20,669)	1.00
Expired during the year	-	-	-	-	-	-	-	-
Outstanding at year end	120,444	270.70	30,736	1.00	97,927	236.82	29,996	1.00
Vested and Exercisable at year end	80,141	228.09	22,836	1.00	47,115	218.80	13,565	1.00

The range of exercise price of the Option SAR is ₹ 159.30 to ₹ 443.25 and RSU SAR is ₹ 1 (31/03/2022 : Option SAR is ₹ 159.30 to ₹ 443.25 and RSU SAR is ₹ 1). The fair values per Option SAR as at 31/03/2023 was ₹ 102.54 to ₹ 274.24 (31/03/2022 ₹ 248.38 to ₹ 440.84) and for RSU SAR as at 31/03/2023 was ₹ 384.00 to ₹ 397.73 (31/03/2022 ₹ 552.96 to ₹ 560.60). The fair value has been carried out by an independent valuer by applying Black and Scholes Model. The inputs to the model include the exercise price, the term of option, the share price at grant date and the expected volatility, expected dividends and the risk free rate of interest. The assumptions used for fair valuation for Option SAR and RSU SAR are given below:

	As at 31/03/2023		As at 31/03/2022	
	Option SARs	RSU SARs	Option SARs	RSU SARs
Valuation Date	31/03/2023	31/03/2023	31/03/2022	31/03/2022
Exercise price (₹)	159.30 - 443.25	1.00	159.30 - 443.25	1.00
Expected volatility (%)	39.50%	39.50%	40.05%	40.05%
Expected dividend (%)	0.99%	0.99%	0.53%	0.53%
Risk Free interest rate (%)	7.04% - 7.14%	7.04% - 7.14%	5.26% - 6.30%	5.26% - 6.30%

The weighted average remaining contractual life for the Option SAR as at 31/03/2023 is 1.70 to 5.31 years (31/03/2022: 2.70 to 5.35 years) and RSU SAR as at 31/03/2023 is 1.70 to 5.31 years (31/03/2022: 2.70 to 5.35 years).

The total intrinsic value at the end of the year of the vested Option SAR and RSU SAR is ₹ 2.86 Crore (31/03/2022 ₹ 2.42 Crore). The liability for outstanding option is of ₹ 3 Crore (31/03/2022: ₹ 4 Crore).

Effect of Employee Share-Based Payment transactions on Profit or Loss for the period and on financial position:

For the year ended 31/03/2023, the Company recognised total expenses of ₹ 47 Crore (31/03/2022 ₹ 40 Crore) related to equity-settled and cash-settled share based transactions. During the year ended 31/03/2023, the Company has directly allotted 21,861 (31/03/2022: 488,477) fully paid-up equity shares of ₹ 1/- each of the Company on exercise of equity settled options for which the Company has realised ₹ 0.28 Crore (31/03/2022: ₹ 6 Crore) as exercise prices. The Company has also allotted 801,930 (31/03/2022: 878,968) fully paid-up equity share of ₹ 1/- each of the Company through its ESOP trust on exercise of equity settled options for which the Company has realised ₹ 6 Crore (31/03/2022: ₹ 15 Crore) as exercise prices.

The Company has received ₹ 0.66 Crore (31/03/2022 ₹ 0.70 Crore) from Utkal Alumina International Limited and Hindalco - Almex Aerospace Limited (Subsidiaries) towards the grant of 112,836 Stock Options and 77,790 RSUs (31/03/2022: 91,611 Stock Options and 49,061 RSUs) under ESOS 2018 which is netted off from Employee Share-Based Payments Expenses.

C. Summary of Employee Benefits Obligations :

(₹ in Crore)

	Year ended 31/03/2023			Year ended 31/03/2022		
	Charge in P&L	Charge in OCI	Provision	Charge in P&L	Charge in OCI	Provision
(a) Defined Benefit Plans						
Gratuity Plans Employee	43	14	106	52	17	101
Post Retirement Medical Benefit	-	(2)	4	-	(4)	5
Other Pension	3	(2)	43	3	-	46
Provident Fund	75	-	-	68	(5)	-
Provident Fund Shortfall	-	-	-	-	(3)	-
	121	**10**	**153**	**123**	**5**	**152**
(b) Defined Contribution Funds						
Pension	17	-	-	16	-	-
Provident Fund	30	-	-	32	-	-
	47	**-**	**-**	**48**	**-**	**-**
(c) Other Employee Benefit plans						
Compensated Absences	-	-	271	-	-	261
Stock Appreciation Rights	(1)	-	3	5	-	4
Equity-settled share-based payment	47	-	-	35	-	-
	46	**-**	**274**	**40**	**-**	**265**
Grand Total	**214**	**10**	**427**	**211**	**5**	**417**

For (gain)/ loss recognised in Other Comprehensive Income (OCI), Refer Note 43

27. Other Non-Current and Current Liabilities

(₹ in Crore)

	As at 31/03/2023		As at 31/03/2022	
	Non-Current	Current	Non-Current	Current
Customer Refund Liability - (a)	-	139	-	119
Statutory Dues Payable	-	354	-	487
Deferred Income - (b)	622	26	554	20
Other Payable	32	51	31	21
	654	**570**	**585**	**647**

(a) Customer refund liability are recognised mainly for discount payable to customers.

(b) Represents deferred income in respect of grant related to Export Promotion Capital Goods (EPCG) amounting to ₹ 568 Crore (as at 31/03/2022 ₹ 574 Crore) and Manufacture and Other Operations in Warehouse Regulations (MOOWR) amounting to ₹ 80 Crore (as at 31/03/2022 Nil).

28. Supplier's Credit

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Supplier's Credit	5,635	2,456
	5,635	**2,456**

(a) Supplier's credit represents the extended interest bearing credit offered by the supplier which is secured against Usance Letter of Credit (LC). Under this arrangement, the supplier is eligible to receive payment from negotiating bank prior to the expiry of the extended credit period. The interest for the extended credit period payable to the bank on maturity of the LC has been presented under Finance Cost.

(b) Supplier's credit also includes amounts payable towards Accounts Receivable Purchase Scheme ("ARPS") entered into with the suppliers. Under this arrangement, the supplier is eligible to receive payment prior to the expiry of extended credit period by assigning such invoices to a third-party purchaser bank based on security in the form of an undertaking issued by the Company to the bank. Further, the supplier charges interest to the Company for the extended credit period which has been presented under Finance Cost.

29. Contract Liabilities

Refer Note 1B (Z) for accounting policy on Contract Liability

(₹ in Crore)

	As at 31/03/2023	As at 31/03/2022
Advance from Customers	193	180
	193	**180**
(a) **Reconciliation of contract liabilities for the periods presented:**		
Balance at beginning of the year	**180**	**136**
Amount received during the year against which revenue has not been recognized	170	165
Revenue recognized during the year		
a) Contract liabilities at the beginning of the year	(157)	(121)
b) Performance obligations satisfied in previous years	-	-
Balance at end of the year	**193**	**180**

30. Revenue from Operations

Refer Note 1B (Y) for accounting policy on Revenue recognition
Refer Note 1B (U) for accounting policy on Government grants

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Revenue from Contracts with Customers		
Sale of Products - (a)		
Domestic Sales	56,421	44,274
Export Sales	17,363	21,318
	73,784	**65,592**
Trade Sales - (b)	2,300	1,140
Sale of Services - (c)	319	233
	76,403	**66,965**

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Other Operating Revenues - (a) and (d)	475	688
	76,878	**67,653**
Reconciliation of revenue recognised with contract price:		
Contract Price	**77,241**	**70,478**
Adjustments for:		
Refund Liabilities and discounts	(317)	(779)
Hedging Gain/ (Loss)	(624)	(2,614)
Others - Provisionally priced contracts	103	(120)
Revenue from Contracts with Customers	**76,403**	**66,965**

(a) Sales of Copper products and precious metals are accounted for provisionally, pending finalization of price and quantity. Variations are accounted for in the period of settlement. Final price receivable on sale of above products for which provisional price was not finalized are realigned at year end forward LME/LMBA rate and is being presented as part of other operating revenue. Revenue from subsequent variation in price movement is Gain of ₹ 12 Crore (year ended 31/03/2022, loss of ₹ 24 Crore).

(b) Includes nutrient based subsidy of Phosphorus (P) & Potassium (K) arising from sale of Di-Ammonium phosphate (DAP) ₹ 1,292 Crore (year ended 31/03/2022 ₹ 441 Crore).

(c) Sale of services predominantly include freight and insurance on exports which are identified as separate performance obligation under Ind AS 115.

(d) Includes Government Grant in the nature of sales related export Incentives and other benefits of ₹ 400 Crore (year ended 31/03/2022 ₹ 408 Crore).

(e) The amount of its revenue from external customers analysed by the country, in which customers are located, are given below:

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
India	58,785	45,597
Outside India		
China	667	5,976
Korea	4,244	6,352
Others	12,782	9,320
Total Revenue from customers	**76,478**	**67,245**
Add: Export Incentive and other benefits	400	408
Total Revenue from Operations	**76,878**	**67,653**

(f) Refer Note 47 for related party transactions.

(g) Applying the practical expedient as given in Ind AS 115, the Company has not disclosed the remaining performance obligations related disclosures for contracts where revenue recognized corresponds directly with value to the customer of the entity's performance completed to date.

31. Other Income

Refer Note 1B (AA) for accounting policy on Dividend and Interest Income
Refer Note 1B (U) for accounting policy on Government grants
Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Interest Income, (Refer Note - 51(A)(iii))		
On Non-Current Investments	20	20
On Current Investments	14	16
On Others - (a)	256	108
Dividend Income, (Refer Note - 51(A)(iii))		
On Non-Current Investments - (b)	33	31
Rent Income	7	6
Income from Government Grants (c)	20	20
Gain/ (Loss) on Property, Plant and Equipment and Intangible Assets sold/ discarded (Net)	(31)	(31)
Gain/ (Loss) on Investments Measured at FVTPL (Net)		
On sale of Financial Assets	162	245
On change of Fair Value of Financial Assets	1	18
Other Non-Operating Income - (a)	104	102
	586	**535**

(a) Includes gain on modification of borrowings of ₹ 48 Crore (year ended 31/03/2022 ₹ 53 Crore) resulting from change in benchmark interest rate and timing of expected cash flows on term loans.

(b) Refer Note 47 for related party transactions.

(c) Includes grant related to Export Promotion Capital Goods Scheme. There are no unfulfilled conditions or other contigencies attached to these grants.

32. Cost of Materials Consumed

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Copper Concentrate - (a)	30,062	26,677
Alumina	4,351	3,265
Bauxite	739	668
Caustic Soda	764	456
Calcined Petroleum Coke	3,624	2,081
Copper Anode	1,302	2,741
Copper Cathodes	1,674	3,940
Pitch	1,060	703
Others	2,217	1,448
	45,793	**41,979**

(a) Purchase of copper concentrate is accounted for provisionally pending finalization of contents in the concentrate and price. Variations are accounted for in the period of settlement. Final price payable on purchase of copper concentrate for which provisional price and quantity were not finalized during the year are realigned based on forward LME and LBMA rate. Impact on cost from subsequent variation in price movement for year ended 31/03/2023 was loss of ₹ 405 Crore (year ended 31/03/2022 loss of ₹ 484 Crore).

33. Trade Purchases

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Aluminum Rolled Product	474	256
Fertilizer	1,073	1,530
Others	6	136
	1,553	1,922

34. Changes in Inventories of Finished Goods, Work-in-Progress and Stock-in-Trade

(₹ in Crore)

	Opening Inventories		Closing Inventories		Net Change	
	As at		As at		Year ended	
	01/04/2022	01/04/2021	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Work-in-Progress	8,268	6,428	7,707	8,268	561	(1,840)
Finished Goods	2,080	1,448	2,443	2,080	(363)	(632)
Stock-in-Trade	884	4	20	884	864	(880)
	11,232	7,880	10,170	11,232	1,062	(3,352)
Inventories acquired in business combination	-	-	-	-	-	8
	11,232	7,880	10,170	11,232	1,062	(3,344)

Details of inventories under broad heads are given below:

(₹ in Crore)

	Work-in-Progress		Finished Goods		Stock-in-Trade		Total	
	As at		As at		As at		As at	
	31/03/2023	31/03/2022	31/03/2023	31/03/2022	31/03/2023	31/03/2022	31/03/2023	31/03/2022
Alumina	451	393	91	93	-	-	542	486
Aluminium and Aluminium Products	1,477	1,108	666	461	16	17	2,159	1,586
Copper and Copper Products	3,301	4,287	1,492	1,327	-	-	4,793	5,614
Precious Metals	1,112	1,393	182	186	-	-	1,294	1,579
Others - (a)	1,366	1,087	12	13	4	867	1,382	1,967
	7,707	8,268	2,443	2,080	20	884	10,170	11,232

(a) Others include mainly inventories of own mined coal, anode, soda in process, Di Ammonium Phosphate (DAP), Nitrogen, Phosphorus and Potassium (NPK) and other materials.

35. Employee Benefits Expense

Refer Note 1B (V) for accounting policy on Employee Benefits

Refer Note 1B (W) for accounting policy on Employee Share-based Payments

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Salaries and Wages	1,843	1,689
Post-Employment Benefits, Refer Note 26A		
Defined Benefit Plans	121	123
Defined Contribution Plans	47	48
Employee Share-Based Payments, Refer Note 26B		
Equity settled share-based payment	47	35
Cash settled share-based payment	(1)	5
Employee Welfare Expenses	183	181
	2,240	2,081
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	22	23
	2,218	2,058

(i) The Code on Social Security, 2020 ('Code') relating to employee benefits during employment and post employment benefits received Presidential assent in September 2020. The Code has been published in the Gazette of India. However, the date on which the Code will come into effect has not been notified. The Company will assess the impact of the Code when it comes into effect and will record any related impact in the period the Code becomes effective.

(ii) The Hon'ble Supreme Court of India ("SC") by their order dated February 28, 2019, in the case of Surya Roshani Limited v/s EPFO, set out the principles based on which allowances paid to the employees should be identified for inclusion in basic wages for the purposes of computation of Provident Fund contribution. The Company has given effect of the above judgement effective March 1, 2019. This does not have any material impact on the Financial Statements.

36. Power and Fuel

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Power and Fuel Expenses	11,323	6,782
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	(5)	(1)
	11,318	6,781

37. Finance Cost

Refer Note 1B (T) for accounting policy on Borrowing cost

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Interest Expenses on Financial Liabilities not at FVTPL - (a) and (b)	1,278	1,388
Interest Expenses for Lease arrangements	47	26
Other Borrowing Costs - (c)	23	29
	1,348	1,443
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development (d)	48	26
	1,300	1,417

(a) Interest expenses include Nil (year ended 31/03/2022 ₹ 9 Crore) paid to Income Tax Department.

(b) Includes difference between effective interest rate and contracted interest rate of ₹ 59 Crore (year ended 31/03/2022 ₹ 57 Crore) mainly from amortisation of debt issuance cost.

(c) Mainly includes unwinding of discount on Enterprise Social Commitment and Asset Retirement Obligations: Refer Note - 25 (a).

(d) The Capitalisation rate used to determine the amount of borrowing costs to be capitalised is the weighted average interest rate applicable to general borrowings. Capitalisation rate for year ended 31/03/2023 is 6.61% p.a. (year ended 31/03/2022 - 6.32% p.a.).During the current year, ₹ 48 Crore and Nil (year ended 31/03/2022 ₹ 18 crore and ₹ 8 crore) were transferred to Capital Work-in-Progress and Intangible Assests under development respectively.

38. Depreciation and Amortisation Expenses

Refer Note 1B (D) for accounting policy on Property, Plant and Equipment
Refer Note 1B (E) for accounting policy on Investment properties
Refer Note 1B (F) for accounting policy on Intangible Assets (Other than Goodwill)
Refer Note 1B (H) for accounting policy on Stripping cost
Refer Note 1B (M) for accounting policy on Leases

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Depreciation on Property, Plant and Equipment, Refer Note 2A	1,655	1,576
Depreciation on Right of Use Assets, Refer Note 3A	112	88
Depreciation on Investment Properties, Refer Note 4	1	-
Amortisation of Intangible Assets, Refer Note 6A	106	92
	1,874	**1,756**
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	-	4
	1,874	**1,752**

39. Impairment Loss/ (Reversal) on Non-Current Assets (Net)

Refer Note 1B (J) for accounting policy on Impairment of Non-Current Assets (excluding Goodwill)

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Impairment Loss/ (Reversal) on Property, Plant and Equipment (c)	-	76
Impairment Loss/ (Reversal) on Capital Work in Progress (a) and (d)	65	19
Impairment Loss/ (Reversal) on of Asset Held for Sale (b)	(12)	-
	53	**95**

(a) During the current year, the Company has Impaired certain Plant and Machineries construction of which was suspended due to various environment and safety reasons amounting to ₹ 65 Crore.

(b) During the current year, the Company has written back Impairment loss on certain equipments and accessories that were impaired earlier on determination of its realizable value (Net of cost to sales) amounting to ₹ 12 Crore.

(c) During the previous year, the Company has evaluated operational performance along with current environmental norms of its Di Ammonium Phosphate (DAP) Plant and decided to decommission the same. As a result, the Company has recognized impairment in respect of existing DAP plant amounting to ₹ 76 Crore.

(d) During the previous year, the Company has impaired certain mining assets which was underutilized due to various reasons such as environmental clearances etc. amounting to ₹ 19 Crore .

40. Impairment Loss on Financial Assets (Net)

Refer Note 1B (Q) for accounting policy on Financial Instruments

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Provision for Doubtful Debts, Loans and other financial assets/ (written back) (Net)	11	1
Impairment on Investment in Equity Share, Refer Note 8 (b)(iii)	1	-
Bad Debts Loans and other financial assets/ (written back) (Net)	-	1
	12	**2**

41. Other Expenses

(₹ in Crore)

	Year ended	
	31/03/2023	31/03/2022
Consumption of Stores and Spares	1,158	1,269
Repairs to Buildings	156	154
Repairs to Machinery	1,112	977
Rates and Taxes	44	57
Equipment and Material Handling Expenses	246	340
Lease Expenses - (c)	224	130
Insurance Charges	134	125
Payment to Auditors - (a)	5	5
Research and Development	33	31
Freight and Forwarding Expenses (Net) - (b)	1,064	1,012
Donation - (d)	1	10
Non-Executive Directors' Fees and Commission	6	7
(Gain)/Loss on Foreign Currency Transactions (Net), Refer Note 7 (b)	(117)	(145)
(Gain)/Loss in Change in Fair Value of Derivatives (Net)	507	862
Business Support Expenses	775	559
Miscellaneous Expenses - (e)	2,130	1,599
	7,478	**6,992**
Less: Transferred to Capital Work-in-Progress/ Intangible Assets under development	31	30
	7,447	**6,962**

(a) Details to Payment to Auditors are given below:

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Statutory Auditors:		
Statutory Audit Fees	3	4
Other Services	2	1
Reimbursement of Out-of-Pocket Expenses	-	-
Cost Auditors:		
Cost Audit Fee and Expenses	-	-
	5	5

(b) Freight and forwarding expenses is net of freight subsidy of ₹ 29 Crore (year ended 31/03/2022 ₹ 10 Crore) received on sale of DAP.

(c) Lease expenses on account of Short Term Lease, Variable Lease and Low Value Lease on Low value assets are as follows :

(₹ in Crore)

Particulars	Year ended 31/03/2023	Year ended 31/03/2022
Short Term Leases	163	76
Variable lease	61	54
Total	**224**	**130**

(d) Donation includes Nil (year ended 31/03/2022 of ₹ 10 Crore) paid to AB General Electoral Trust towards political donation.

(e) Miscellaneous expenses include Nil (year ended 31/03/2022 ₹ 0.10 Crore) paid to a firm of solicitors in which one of the Director of the Company is a partner.

(f) Refer Note 47 for related party transactions.

42. Exceptional Income/ (Expenses) (Net)

Refer Note 1B (BB) for accounting policy on Exceptional items

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Exceptional Income	41	-
Exceptional (Expenses)	-	(107)
	41	**(107)**

Details of Exceptional Income/ (Expenses) as follows:

(₹ in Crore)

Particulars	Year ended 31/03/2023	Year ended 31/03/2022
Exceptional Income:		
Reversal of provision made during the previous year towards Cross Subsidy Surcharge (CSS) and Additional Surcharge (ASC) related to FY 2017-18 and FY 2018-19. This reversal was affected pursuant to the undertaking given by MSEDCL (Maharashtra State Electricity Distribution Co. Ltd.) to Maharashtra Electricity Regulatory Commission (MERC) on July 29, 2022, to refund CSS and commencement of ASC refund.	41	-
Total	**41**	**-**
Exceptional Expenses:		
Pursuant to the notification by Ministry of Environment, Forest and Climate Change (MoEFCC), the Company has recognised provision for expected cost of disposal of legacy ash lying in ash dykes/ponds as at December 31, 2021. The above provision is estimated based on the plan for disposal of ash and stabilisation of ash dykes/ponds (subject to approval of Pollution Control Board) considering feasibility of extraction of ash from ash dykes/ponds.	-	**(107)**
Total	**-**	**(107)**

43. Other Comprehensive Income/ (Loss)

The disaggregation of changes to other comprehensive income (OCI) by each class is given below:

(₹ in Crore)

		Year ended 31/03/2023			Year ended 31/03/2022		
		Gross	Tax	Net	Gross	Tax	Net
(i)	**Items that will not be reclassified to Statement of Profit and Loss**						
	Remeasurement of Defined Benefit Obligation (Refer Note - 26C)	(10)	3	(7)	(5)	3	(2)
	Change in Fair Value of Equity Instruments Designated as FVTOCI	(485)	34	(451)	1,108	(234)	874
		(495)	37	(458)	1,103	(231)	872
(ii)	**Items that will be reclassified to Statement of Profit and Loss**						
	Change in Fair Value of Debt Instruments designated as FVTOCI	(13)	4	(9)	(9)	3	(6)
	Effective portion of Cash Flow Hedges	3,269	(1,142)	2,127	(1,867)	653	(1,214)
	Cost of Hedging Reserve	64	(22)	42	(75)	26	(49)
		3,320	(1,160)	2,160	(1,951)	682	(1,269)

Total Other Comprehensive Income/ (Loss)	2,825	(1,123)	1,702	(848)	451	(397)

44. Earnings per Share (EPS)

Refer Note 1B (CC) for accounting policy on Earnings per Share

(₹ in Crore)

	Year ended 31/03/2023	Year ended 31/03/2022
Profit attributable to Equity Shareholders	3,326	5,507
Weighted average numbers of equity shares for calculation of EPS:		
Weighted-average numbers of equity shares for Basic EPS	2,222,884,407	2,224,071,351
Dilutive impact of Employee Stock Option Scheme	2,922,977	2,968,669
Weighted-average numbers of equity shares for Diluted EPS	**2,225,807,384**	**2,227,040,020**
Face Value per Equity Share (₹)	1.00	1.00
Earnings per Share		
Basic (₹)	14.96	24.76
Diluted (₹)	14.94	24.73

Stock options granted to the employees under various ESOP schemes are considered to be potential equity shares. They have been included in the determination of diluted earnings per share to the extent they are dilutive. 833,136 shares (year ended 31/03/2022 538,978 Shares) options granted under Employee Stock option scheme but were not included in the calculation of diluted earnings per share because they are antidilutive for the period. Options can potentially dilute basic earnings per share in the future depending on future share price of the Company.The stock options have not been included in the determination of basic earnings per share. For details relating to stock options, Refer Note 26.

45 (a) Gare Palma IV/4 (GP-4), Gare Palma IV/5 (GP-5) and Kathautia coal mines were acquired by the Company through auction conducted by the Nominated Authority (NA constituted under the Ministry of Coal, Government of India. The Company was required to achieve certain efficiency parameters and reach their Peak Rated Capacity (PRC) during FY 2015-16. Performance security in the form of Performance Bank Guarantees (PBG) of ₹ 318 Crore (for GP-4), ₹ 369 Crore (for GP-5) and ₹ 267 Crore (for Kathautia) were provided by the Company to NA in this regard.

Due to the various delays on the part of Government Authorities, PRC was achieved by the Company for GP-4 and GP-5 during FY 2016-17 and for Kathautia during FY 2017-18. Having satisfied itself about achievement of efficiency parameters/ PRC, NA returned the PBG in respect of GP-4 on June 19, 2017. However, in a volte face action, vide a letter dated 25th April, 2018, NA imposed a penalty equal to 20% of PBG amounting to ₹ 64 Crore for GP-4, ₹ 74 Crore for GP-5 and ₹ 118 Crore for Kathautia (Refer Note - 14(e)). As the PBG for GP-5 is still with NA, it also appropriated an amount equal to the penalty from the PBG of the GP-5 mines. For Kathautia Coal Mine only appropriated amount of ₹ 118 Crore is with NA. In terms of agreement, the Company has not renewed the PBG for remaining amount.

The above actions were contested by the Company. The Hon'ble Chhattisgarh High Court at Bilaspur has already given its judgment in favour of the Company in the matter related to GP-5. As per the judgment, Hon'ble High Court has asked NA to refund the amount appropriated by them and return the PBG to the Company. The NA has filed an appeal before the Hon'ble Supreme Court. The Company's appeal to quash the demand raised by NA in case of GP-4 and Kathautia is yet to be decided and is pending before the Mines Tribunal at Bilaspur and Ranchi respectively.

(b) For the period from 1st July 2021 to 25th November 2021, there was lack of clarity with regard to the deduction of tax at source on procurement of coal as there were concurrent provision for collection as well as deduction of tax at source. There was an existing provision for tax collection at source by the seller u/s 206C(1) whereas the newly introduced section 194Q provided for deduction of tax at source by the buyer. At the same time, subsection 5 of section 194Q specifically excluded the operation of section 194Q in cases where tax collection at source was already applicable. It was, therefore, evident that there was no need for deduction of tax at source by the buyer (in the present case, the Company). However, on 25th November 2021, CBDT came out with a circular stating that tax deduction was applicable in cases where buyer is using coal for his own consumption, tax need to be deducted at source by the buyer. Accordingly, the Company started deducting and depositing tax on such purchases with effect from 1st November 2021. However, the tax for the period from 1st July 2021 to 31st October 2021 was deposited by the Company in October 2022 along with applicable interest.

46. Segment Reporting

The Company has presented segment information in its Consolidated Financial Statements, which are part of the same annual report. Accordingly, in terms of provisions of Accounting Standard on Segment Reporting (Ind AS 108), no disclosure related to the segment are presented in the Standalone Financial Statements.

47. Related party disclosures

A. List of Related Parties where control exists:

	Name of the Related Party	Principal Place of Business
(a)	**Subsidiary Companies:**	
1	Minerals & Minerals Limited	India
2	Renukeshwar Investments & Finance Limited	India
3	Renuka Investments & Finance Limited	India
4	Lucknow Finance Company Limited	India
5	Dahej Harbour and Infrastructure Limited	India
6	Utkal Alumina International Limited	India
7	Utkal Alumina Social Welfare Foundation	India
8	Kosala Livelihood And Social Foundation	India
9	Birla Copper Asoj Private Limited (formerly known as "Ryker Base Private Limited")	India
10	AV Minerals (Netherlands) N.V.	Netherland
11	AV Metals Inc. - (i)	Canada
12	Novelis Inc.	Canada
13	Novelis do Brasil Ltda.	Brazil
14	Brecha Energetica Ltda.	Brazil
15	4260848 Canada Inc.	Canada
16	4260856 Canada Inc.	Canada
17	8018227 Canada Inc.	Canada
18	Novelis (China) Aluminum Products Co., Ltd.	China
19	Novelis (Shanghai) Aluminum Trading Co., Ltd.	China
20	Novelis Ventures LLC - (ii)	United States of America
21	Novelis PAE SAS	France
22	Novelis Aluminium Beteiligungs GmbH	Germany
23	Novelis Deutschland GmbH (formerly known as "Aleris Deutschland Holding GmbH")	Germany

	Name of the Related Party	Principal Place of Business
24	Novelis Sheet Ingot GmbH	Germany
25	Novelis Aluminum Holding Unlimited Company	Ireland
26	Novelis Italia SpA	Italy
27	Novelis de Mexico S.A. de C.V.	Mexico
28	Novelis Korea Limited	South Korea
29	Novelis AG	Switzerland
30	Novelis Switzerland S.A.	Switzerland
31	Novelis MEA Ltd.	UAE
32	Novelis Europe Holdings Limited	United Kingdom
33	Novelis UK Ltd.	United Kingdom
34	Novelis Services Limited	United Kingdom
35	Novelis Corporation	United States of America
36	Novelis South America Holdings LLC	United States of America
37	Novelis Holdings Inc.	United States of America
38	Novelis Services (North America) Inc.	United States of America
39	Novelis Global Employment Organization, Inc.	United States of America
40	Novelis Services (Europe) Inc.	United States of America
41	Novelis Vietnam Company Limited	Vietnam
42	Aleris Asia Pacific International (Barbados) Ltd.	Barbados
43	Novelis Aluminum (Zhenjiang) Co., Ltd. (formerly known as “Aleris Aluminum (Zhenjiang) Co., Ltd.”)	China
44	Aleris (Shanghai) Trading Co., Ltd.	China
45	Aleris Asia Pacific Limited	Hong Kong
46	Aleris Aluminum Japan, Ltd.	Japan
47	Novelis Casthouse Germany GmbH (formerly known as “Aleris Casthouse Germany GmbH”)	Germany
48	Novelis Deutschland Holding GmbH	Germany
49	Novelis Koblenz GmbH (formerly known as “Aleris Rolled Products Germany GmbH”)	Germany
50	Novelis Netherlands B.V. (formerly known as “Aleris Aluminum Netherlands B.V.”)	Netherlands
51	Aleris Switzerland GmbH	Switzerland
52	Aleris Aluminum UK Limited	United Kingdom
53	Aleris Holding Canada ULC	Canada
54	Novelis ALR Aluminum Holdings Corporation (formerly known as “Aleris Corporation”)	United States of America
55	Novelis ALR International, Inc. (formerly known as “Aleris International, Inc.”)	United States of America
56	Novelis ALR Rolled Products, LLC (formerly known as “Aleris Rolled Products,LLC”)	United States of America
57	Novelis ALR Rolled Products, Inc. (formerly known as “Aleris Rolled Products, Inc.”)	United States of America
58	Novelis ALR Aluminum, LLC (formerly known as “Nichols Aluminum LLC”)	United States of America

	Name of the Related Party	Principal Place of Business
59	Novelis ALR Rolled Products Sales Corporation (formerly known as “Aleris Rolled Products Sales Corporation”)	United States of America
60	Novelis ALR Recycling of Ohio, LLC (formerly known as “IMCO Recycling of Ohio, LLC”)	United States of America
61	Novelis ALR Aluminum-Alabama, LLC (formerly known as “Nichols Aluminum-Alabama LLC”)	United States of America
62	Novelis ALR Asset Management Corporation (formerly known as “UWA Acquisition Co.”)	United States of America
63	Novelis (India) Infotech Ltd. - (iii)	India
64	Hindalco Kaubushiki Kaisha - (iv)	Japan
65	White Rock USA Protected Cell 24 - (v)	United States of America
66	Suvas Holdings Limited	India
67	Hindalco-Almex Aerospace Limited	India
68	East Coast Bauxite Mining Company Private Limited	India
(b)	**Trust Controlled by the Company**	
1	Hindalco Jan Seva Trust	India
2	Copper Jan Seva Trust	India
3	Utkal Alumina Jan Seva Trust	India

During the year ended 31/03/2023 and 31/03/2022 :

(i) A.V. Metals Inc. Canada based wholly owned susbsidiary was merged with Novelis Inc. w.e.f. August 31, 2022.

(ii) Novelis Ventures LLC was formed on May 20, 2022

(iii) Novelis (India) Infotech Ltd. was dissolved on September 23, 2022.

(iv) Hindalco Kaubushiki Kaisha (Hindalco K.K.) wholly owned subsidiary was incorporated in the current year.

(v) White Rock USA Protected Cell 24 was formed on March 9, 2022. Novelis is participating in a protected rent-a-captive arrangement with the purpose of maintaining incremental insurance coverage. This Participant Agreement was entered into on March 28, 2022 and effective as of March 9, 2022. This structure is not an incorporated legal entity, but Novelis has control over the specified assets of this protected cell which are the only source of payment for specified liabilities of the protected cell (Deemed separate entity).

B. List of Related Parties with joint control and significant influence:

	Name of the Related Party	Principal Place of Business
(a)	**Joint Ventures (Joint Control):**	
1	MNH Shakti Limited	India
2	Hydromine Global Minerals (GMBH) Limited	British Virgin Islands
(b)	**Associates (Significant Influence):**	
1	Aditya Birla Science & Technology Company Private Limited	India
2	Aditya Birla Renewables Subsidiary Limited	India
3	Aditya Birla Renewables Solar Limited	India
4	Aditya Birla Renewables Utkal Limited	India
5	Deutsche Aluminum Verpachung Recycling GMBH	Germany
6	France Aluminum Recyclage SPA.	France

C.	Key Managerial Personnel	
1	Mr. Satish Pai - Managing Director	Executive Director
2	Mr. Praveen Kumar Maheshwari - Whole time Director & Chief Financial Officer	Executive Director
3	Mr. Kumar Mangalam Birla	Non Executive Director
4	Smt. Rajashree Birla	Non Executive Director
5	Mr. D Bhattacharya (Resigned w.e.f. March 02, 2022)	Non Executive Director
6	Mr. A.K. Agarwala	Non Executive Director
7	Mr. K.N. Bhandari	Non Executive Director
8	Mr. Y.P. Dandiwala	Non Executive Director
9	Mr. Anant Maheshwari	Non Executive Director
10	Ms. Alka Bharucha	Non Executive Director
11	Dr. Vikas Balia	Non Executive Director
12	Mr. Sudhir Mital	Non Executive Director
D.	**Other Related Parties with whom there were transactions during the year:**	
1	Hindalco Employee's Gratuity Fund, Kolkata	Post-Employment Benefit Plan
2	Hindalco Employee's Gratuity Fund, Renukoot	Post-Employment Benefit Plan
3	Hindalco Employee's Provident Fund Institution, Renukoot	Post-Employment Benefit Plan
4	Hindalco Superannuation Scheme, Renukoot	Post-Employment Benefit Plan
5	Hindalco Industries Limited Employees' Provident Fund II	Post-Employment Benefit Plan
6	Hindalco Industries Limited Senior Management Staff Pension Fund II	Post-Employment Benefit Plan
7	Aditya Birla Management Corporation Private Limited @	Other related party in which Director is interested

@ The Company is a member of Aditya Birla Management Corporation Private Limited (ABMCPL), a company limited by guarantee formed for the purpose of its members to mutually avail and share common facilities, expertise and other support charged on cost basis.

E. The following transactions were carried out with the Related parties in the ordinary course of business:

(₹ in Crore)

Nature of Transaction**	Note No.	Year Ended 31/03/2023				Year Ended 31/03/2022			
		Subsidiaries	Associates	Joint Ventures	Others	Subsidiaries	Associates	Joint Ventures	Others
Sale of Goods	**30**	**288**	**2**	**-**	**-**	**87**	**-**	**-**	**-**
Aditya Birla Renewables Subsidiary Limited		-	2	-	-	-	-	-	-
Birla Copper Asoj Private Limited		129	-	-	-	13	-	-	-
Hindalco Almex Aerospace Limited		59	-	-	-	56	-	-	-
Novelis Inc		-	-	-	-	18	-	-	-
Utkal Alumina International Limited		100	-	-	-	-	-	-	-

(₹ in Crore)

Nature of Transaction**	Note No.	Year Ended 31/03/2023				Year Ended 31/03/2022			
		Subsidiaries	Associates	Joint Ventures	Others	Subsidiaries	Associates	Joint Ventures	Others
Services rendered	**30**	**-**	**-**	**-**	**11**	**1**	**-**	**-**	**11**
Aditya Birla Management Corporation Private Limited		-	-	-	11	-	-	-	11
Dahej Harbour and Infrastructure Limited		-	-	-	-	1	-	-	-
Interest received	**31**	**12**	**2**	**-**	**-**	**6**	**2**	**-**	**-**
Aditya Birla Science and Technology Company Private Limited		-	2	-	-	-	2	-	-
Birla Copper Asoj Private Limited		12	-	-	-	5	-	-	-
Suvas Holdings Limited		-	-	-	-	1	-	-	-
Dividend received	**31**	**-**	**-**	**-**	**-**	**-**	**1**	**-**	**-**
Aditya Birla Renewables Subsidiary Limited		-	-	-	-	-	1	-	-
Purchase of Goods		**4,310**	**33**	**-**	**-**	**3,607**	**22**	**-**	**-**
Aditya Birla Renewables Solar Limited		-	20	-	-	-	7	-	-
Aditya Birla Renewables Subsidiary Limited		-	13	-	-	-	15	-	-
Hindalco Almex Aerospace Limited		16	-	-	-	5	-	-	-
Kosala Livelihood and Social Foundation		1	-	-	-	-	-	-	-
Minerals & Minerals Limited		57	-	-	-	46	-	-	-
Novelis PAE SAS		3	-	-	-	-	-	-	-
Suvas Holdings Limited		4	-	-	-	3	-	-	-
Utkal Alumina International Limited		4,229	-	-	-	3,553	-	-	-
Purchase of property and other assets		**2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Novelis PAE SAS		1	-	-	-	-	-	-	-
Utkal Alumina International Limited		1	-	-	-	-	-	-	-
Services received		**104**	**19**	**-**	**782**	**44**	**16**	**-**	**559**
Aditya Birla Science and Technology Company Private Limited		-	19	-	-	-	16	-	-
Aditya Birla Management Corporation Private Limited		-	-	-	775	-	-	-	559
Copper Jan Seva Trust		-	-	-	7	-	-	-	-
Birla Copper Asoj Private Limited		58	-	-	-	7	-	-	-
Dahej Harbour and Infrastructure Limited		37	-	-	-	34	-	-	-
Lucknow Finance Company Limited		1	-	-	-	1	-	-	-
Novelis Global Employment Organization Inc		5	-	-	-	-	-	-	-
Novelis Inc		1	-	-	-	2	-	-	-
Novelis Koblenz GmbH		2	-	-	-	-	-	-	-

(₹ in Crore)

Nature of Transaction**	Note No.	Year Ended 31/03/2023 Subsidiaries	Year Ended 31/03/2023 Associates	Year Ended 31/03/2023 Joint Ventures	Year Ended 31/03/2023 Others	Year Ended 31/03/2022 Subsidiaries	Year Ended 31/03/2022 Associates	Year Ended 31/03/2022 Joint Ventures	Year Ended 31/03/2022 Others
Trust Controlled by the Company		-	-	-	1	-	-	-	1
Hindalco Jan Seva Trust		-	-	-	1	-	-	-	1
Recovery of ESOP Expenses		1	-	-	-	1	-	-	-
Utkal Alumina International Limited		1	-	-	-	1	-	-	-
Investments made	7, 8	5	17	-	-	26	8	-	-
Aditya Birla Renewables Solar Limited		-	17	-	-	-	8	-	-
Hindalco K.K. Japan		2	-	-	-	-	-	-	-
Kosala Livelihood and Social Foundation		3	-	-	-	1	-	-	-
Renuka Investments & Finance Limited		-	-	-	-	25	-	-	-
Deposits, Loans and Advances made	10, 14	1	-	-	-	200	-	-	-
Birla Copper Asoj Private Limited		-	-	-	-	200	-	-	-
Suvas Holdings Limited		1	-	-	-	-	-	-	-
Return of Capital	7, 8	622	-	-	-	557	-	8	-
MNH Shakti Limited		-	-	-	-	-	-	8	-
AV Minerals (Netherlands) N.V.	$	622	-	-	-	557	-	-	-
Deposits, Loans and Advances received back from	10, 14	30	7	-	-	39	5	-	-
Aditya Birla Science and Technology Company Private Limited		-	7	-	-	-	5	-	-
Birla Copper Asoj Private Limited		27	-	-	-	36	-	-	-
Suvas Holdings Limited		3	-	-	-	3	-	-	-
Deposits, Loans and Advances obtained from	10, 14	-	-	-	-	1,000	-	-	-
Utkal Alumina International Limited		-	-	-	-	1,000	-	-	-
Deposits, Loans and Advances given back to	10, 14	-	-	-	-	1,000	-	-	-
Utkal Alumina International Limited		-	-	-	-	1,000	-	-	-
Reimbursement of Expense from		1	-	-	1	-	-	-	-
Aditya Birla Management Corporation Private Limited		-	-	-	1	-	-	-	-
Dahej Harbour and Infrastructure Limited		1	-	-	-	-	-	-	-
Reimbursement of Expense to		-	1	-	-	-	-	-	-
Aditya Birla Science and Technology Company Private Limited		-	1	-	-	-	-	-	-

$ Includes return of capital from AV Minerals (Netherlands) N.V. amounting to ₹ 662 Crore (year ended 31/03/2022: ₹ 557 Crore) Foreign Currency Exchange gain of ₹ 171 Crore (year ended 31/03/2022: ₹ 160 Crore) there on recognised in Note 41, Other Expenses under (Gain)/ Loss on Foreign Currency Transactions (Net) .

@ For transactions with funds covered under Post-Employment Benefit Plan Refer Note 26.

F. The following are the Outstanding balances with the Related parties:

(₹ in Crore)

Nature of Transaction**	Note No.	As at 31/03/2023 Subsidiaries	As at 31/03/2023 Associates	As at 31/03/2023 Joint Ventures	As at 31/03/2023 Others	As at 31/03/2022 Subsidiaries	As at 31/03/2022 Associates	As at 31/03/2022 Joint Ventures	As at 31/03/2022 Others
Receivables	16	49	-	-	-	17	-	-	-
Birla Copper Asoj Private Limited		40	-	-	-	4	-	-	-
Minerals & Minerals Limited		8	-	-	-	13	-	-	-
Utkal Alumina International Limited		1	-	-	-	-	-	-	-
Payables	23	460	4	-	90	435	1	-	70
Aditya Birla Renewables Solar Limited		-	3	-	-	-	-	-	-
Aditya Birla Renewables Subsidiary Limited		-	1	-	-	-	1	-	-
Aditya Birla Management Corporation Private Limited		-	-	-	90	-	-	-	70
Birla Copper Asoj Private Limited		5	-	-	-	4	-	-	-
Dahej Harbour and Infrastructure Limited		3	-	-	-	-	-	-	-
Minerals & Minerals Limited		2	-	-	-	-	-	-	-
Novelis Global Employment Organization Inc		8	-	-	-	-	-	-	-
Novelis Inc		1	-	-	-	9	-	-	-
Novelis Koblenz GmbH		3	-	-	-	-	-	-	-
Novelis PAE SAS		4	-	-	-	-	-	-	-
Utkal Alumina International Limited		434	-	-	-	422	-	-	-
Deposits, loans and advances given	10, 14	142	29	-	88	169	36	-	88
Aditya Birla Science and Technology Company Private Limited		-	29	-	-	-	36	-	-
Aditya Birla Management Corporation Private Limited		-	-	-	88	-	-	-	88
Birla Copper Asoj Private Limited		137	-	-	-	164	-	-	-
Novelis PAE SAS		2	-	-	-	-	-	-	-
Suvas Holdings Limited		3	-	-	-	5	-	-	-
Receivable from Trust		-	-	-	6	-	-	-	-
Copper Jan Seva Trust		-	-	-	6	-	-	-	-
Payable to Trust		-	-	-	-	-	-	-	4
Copper Jan Seva Trust		-	-	-	-	-	-	-	4
Receivable against reimbursement		-	-	-	1	-	-	-	-
Aditya Birla Management Corporation Private Limited		-	-	-	1	-	-	-	-
Guarantees & Collateral Securities given		5	-	-	-	5	-	-	-
Dahej Harbour and Infrastructure Limited		5	-	-	-	5	-	-	-

all outstanding balances are unsecured and are payable in cash.

** Related parties having transactions / Balances less than ₹ 0.50 Crore are not disclosed as the amounts are below rounding off convention.

For details of investment in Subsidiaries, Joint Ventures and Associates (Refer Notes 7 and 8)

G. Compensation of Key Managerial Personnel (KMP) of the Company:

(₹ in Crore)

Nature of Transaction / Relationship	Year Ended 31/03/2023	31/03/2022
Remuneration of Executive Directors	**45**	**53**
Short term employment benefit	43	51
Post-employment benefits	2	2
Remuneration to Non - Executive Directors	**6**	**10**
Director Commission and Sitting Fees		
Mr. Kumar Mangalam Birla	-	-
Smt. Rajashree Birla	3	4
Mr. A.K. Agarwala	-	-
Mr. K.N. Bhandari	1	1
Mr. Y.P. Dandiwala	1	1
Ms. Alka Bharucha	-	-
Dr. Vikas Balia	1	1
Mr. Sudhir Mital	-	-
Mr. Anant Maheshwari	-	-
Mr. D. Bhattacharya - (c)	-	3

(a) Excludes amortisation of fair value of employee share-based payments under Ind AS 102.

(b) As the liabilities for defined benefit plans and leave entitlements are provided on actuarial basis for the Company as a whole, the amounts pertaining to Key Management Personnel are not included.

(c) The Board approved pension of Mr. D. Bhattacharya of ₹ 0.335 Crore per month and other post-employment benefits for his past service when he was the Managing Director of the Company. The present value of the above pension liability determined based on the actuarial valuation is accounted by the Company in the financial statements. Amount charged as expenses in the statement of profit and loss towards such post-employment benefit amounting to ₹ 3 Crore and does not include the impact of acturial (gains)/losses recognised in other comprehensive income.

48. Contingent Liabilities and Commitments

Refer Note 1B (L) for accounting policy on Provisions and contingencies

A. Contingent Liabilities

The Company is party to, and may in the future be involved in, or subject to, disputes, claims and proceedings arising in the ordinary course of our business, including some we assert against others, such as environmental, health and safety, product liability, employee, tax, personal injury and other matters. The Company has established a liability with respect to contingencies for which a loss is probable and estimable. While the ultimate resolution of liability and costs related to these matters cannot be determined with certainty, the Management does not believe any of these pending actions, individually or in the aggregate, will materially impact our operations or materially affect our financial condition or liquidity. The Company's estimates involve significant judgment, and therefore, the estimate will change from time to time and actual losses may differ from the current estimate.

Management reviews the status of, and estimated liability related to, pending claims and civil actions on a quarterly basis. The evaluation model includes all asserted and unasserted claims that can be reasonably identified including claims relating to our responsibility for compliance with environmental, health and safety laws and regulations. The estimated costs in respect of such reported liabilities are not offset by amounts related to insurance or indemnification arrangements unless otherwise noted.

(₹ in Crore)

		As at 31/03/2023	31/03/2022
(a)	**Claims against Company not acknowledged as Debt:**		
	Following demands are disputed by the Company and are not provided for:		
(i)	The tax authorities issued an arbitrary Demand Notice to the company for payment of interest on Entry Tax. Company has challenged the said notice by filing a Writ Tax -218/2023 in Allahabad High Court. The High Court by its Order gave protection against any coercive action till next date of listing. The challenge is to the power of levy of interest as well as legitimacy of such levy in the face of the facts as well as applicable law.	278	-
(ii)	Customs duty implication on goods importing during transition into GST regime. The matter is pending at Customs, Excise and Service Tax Appellate Tribunal (CESTAT).	16	-
(iii)	Demand for Stamp Duty by Collector (Stamp), Kanpur, Uttar Pradesh (U.P.) on merger of Copper Business of Indo-Gulf Corporation with the Company.The matter is pending before the Hon'ble High Court of Allahabad. The Company believes that there is no substantive/computation provision for levy/calculation of stamp duty within the provisions of Uttar Pradesh Stamp Act on scheme of arrangement under the Companies Act, 1956, approved by the Court. Moreover, the properties in question are located in the State of Gujarat and, thus, the Collector (Stamp), Kanpur, has no territorial jurisdiction to make such a demand. Further, the Company has already paid the stamp duty for the same in 2003-04 which has been accepted as per the provisions of the Bombay Stamp Act, 1958.	20	20
(iv)	Demand towards drawal of energy during peak hours by Uttar Pradesh Power Corporation Limited (UPPCL)/ Purvanchal Vidyut Vitran Nigam Limited (PVVNL). The dispute relates to the agreement entered with UPPCL for the period 2009-14. Demand was raised by UPPCL for drawl of banked energy during peak hours. The Hon'ble Supreme Court has stayed the demand and the matter is pending with Appellate Tribunal for Electricity (APTEL).	81	81
(v)	Retrospective revision of Water Rates by UP Jal Vidyut Nigam Limited. Writ petition pending with Lucknow Bench of Allahabad High Court. The demand for arrears stayed.	4	4
(vi)	Demand for Entry Tax relating to valuation dispute. Appeals have been filed with Additional CCT, Sambalpur.	28	28
(vii)	Interest demand on Entry tax for the year 2009-2017. Hon'ble High Court of Odisha has earlier granted stay on the demand, which is now disposed with direction to pay. The Company is in process of filling appeal against the order.	27	27
(viii)	Demand from State and Central Sales Tax authorities for various years at different levels of appeal.	19	26
(ix)	Disallowances of Cenvat Credit on inputs & Capital goods & short payment of excise on additional consideration received from recipient of deemed exporter. Matters are pending with CESTAT.	10	9
(x)	Disallowances of Service Tax credit on Input services at various locations. These matters are pending with CESTAT authorities.	107	104
(xi)	Demand for recovery of cenvat credit availed on service tax paid on Goods Transport Agency (outward charges) . The matter is pending with Commissioner (Appeals), Vadodara & Commissioner, Bharuch.	9	9
(xii)	Green Cess Provision Under Electricity Act Year-2012-13 to Year 2017-18. The matter is pending at Hon'ble Supreme Court.	15	14
(xiii)	Penalty For Unauthorised Disposal Of Anode Butts. The matter is pending with Odisha High Court.	14	14
(xiv)	Demand of reverse charge liability on statutory fees payable to the Government authorities. Matters are pending with various authorities.	18	-
(xv)	Demand on tax credits on transition to GST Regime .	2	-
(xvi)	Other Contingent Liabilities in respect of Excise, Customs, Sales Tax etc. each being for less than ₹ 1 Crore. The demands are in dispute at various legal forums .	5	8
		653	**344**

It is not practicable for the Company to estimate the timings of cash outflows, if any, in respect of the above matters, pending resolution of the respective proceedings.

(₹ in Crore)

		As at 31/03/2023	As at 31/03/2022
(b)	**Other money for which Company is contingently liable**		
(i)	Customs Duty on Raw Materials imported under Advance License, against which export obligation is to be fulfilled.	14	24
B.	**Commitments**		
(a)	Estimated amount of contracts remaining to be executed on capital account and not provided for (net of advances)	2,450	1,073
(b)	Other Commitment for purchase of goods and Services (Net of Advance)	2,490	3,100

49. Capital Management

The Company's objective to manage its capital is to ensure continuity of business while at the same time provide reasonable returns to its various stakeholders, but keep associated costs under control. In order to achieve this, requirement of capital is reviewed periodically with reference to operating and business plans that take into account capital expenditure and strategic investments. Apart from internal accrual, sourcing of capital is done through judicious combination of equity and borrowing, both short term and long term. Total debt (total borrowings + lease liabilities) to equity ratio is used to monitor capital. No changes were made to the objectives, policies or processes for managing capital during the years ended March 31, 2023 and March 31, 2022.

	As at 31/03/2023	As at 31/03/2022
Debt Equity Ratio (In Times)	0.22	0.36

As at March 31, 2023 and March 31, 2022, the Company was in compliance with all of its debt covenants for borrowings. The Company is required to maintain the Debt Service Coverage Ratio of 1.25 times. For the the year ended 31/03/2023 the Debt Service Coverage Ratio of the Company is 1.08 times. The Company has repaid its NCDs amounting to ₹ 6,000 Crore in FY 23 . Without considering this repayment, the Company's Debt Service Coverage Ratio will be 5.43 times. This does not have any impact on the Financial Statements of the Company.

50. Offsetting Financial Liabilities and Financial Assets

Refer Note 1B (Q) for accounting policy on Financial Instruments

Financial instruments subject to offsetting , enforceable master netting arrangement and similar arrangements.

(₹ in Crore)

As at 31/03/2023	Effects on Balance sheet			Related amounts not offset		
	Gross amount	Gross amount set off in the balance sheet	Net amount presented in the balance sheet	Amounts subject to master netting arrangements	Financial Instrument collateral	Net Amount
Financial Assets						
Derivatives	754	(118)	636	-	-	636
Financial Liabilities						
Derivatives	312	(118)	194	-	(362)	(168)

(₹ in Crore)

As at 31/03/2022	Effects on Balance sheet			Related amounts not offset		
	Gross amount	Gross amount set off in the balance sheet	Net amount presented in the balance sheet	Amounts subject to master netting arrangements	Financial Instrument collateral	Net Amount
Financial Assets						
Derivatives	705	(24)	681	-	-	681
Financial Liabilities						
Derivatives	3,787	(24)	3,763	-	(345)	3,418

51. Financial Instruments

Refer Note 1B (Q) for accounting policy on Financial Instruments

(a) Fair Value Measurement

(i) The following table shows the carrying amounts of Financial Assets and Financial Liabilities by category:

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Amortised Cost	FVTOCI	FVTPL	Amortised Cost	FVTOCI	FVTPL
Financial Assets							
Investments in Associate							
Unquoted Instruments	8	-	185	-	-	154	-
Investments in Equity Instruments							
Quoted Equity Instruments*	9A	-	7,686	-	-	8,195	-
Unquoted Equity Instruments*	9A	-	25	-	-	15	-
Investments in Debt Instruments							
Mutual Funds	9A, 9B	-	-	5,530	-	-	4,335
Bonds and Debentures	9A, 9B	-	-	130	-	-	152
Government Securities	9A, 9B	-	303	-	-	375	-
Commercial Paper	9B	-	-	97	-	-	-
Loans	10	179	-	-	217	-	-
Trade receivables	16	2,219	-	391	1,935	-	736
Cash and Cash Equivalents							
Cash and Bank	17	472	-	-	2,795	-	-
Liquid Mutual Funds	17	-	-	-	-	-	610
Bank Balances other than cash & cash equivalents	18	1,317	-	-	3,015	-	-
Derivatives	11	-	-	636	-	-	681
Other financial assets	12	1,962	-	-	1,388	-	-
		6,149	**8,199**	**6,784**	**9,350**	**8,739**	**6,514**

(₹ in Crore)

	Note No	As at 31/03/2023		As at 31/03/2022	
		Amortised Cost	FVTPL	Amortised Cost	FVTPL
Financial Liabilities					
Borrowings					
Borrowings, Non-Current	22A	11,559	-	11,668	-
Non convertible debentures (NCDs)	22A, 22B	699	-	5,999	-
Borrowings, Current	22B	50	-	1,412	-
Lease Liabilities	3B	763	-	342	-
Supplier's Credit	28	1,035	4,600	-	2,456
Trade Payables	23	5,986	3,757	5,942	5,073
Derivatives	11	-	194	-	3,763
Other financial Liabilities	24	808	-	1,013	-
		20,900	**8,551**	**26,376**	**11,292**

* The Company had acquired certain equity instruments for purpose of holding for a longer duration and not for the purpose of selling in near term for short term profit. Such instruments have been categorized as FVTOCI.

(ii) The following table shows the fair values of Financial Assets and Financial Liabilities measured at amortised cost:

(₹ in Crore)

	Note No	As at 31/03/2023		As at 31/03/2022	
		Carrying value	Fair Value	Carrying value	Fair Value
Financial Assets					
Loans, Non Current	10	174	172	45	43
Other Financial Asset, Non Current	12	1,438	1,428	232	227
		1,612	**1,600**	**277**	**270**

(₹ in Crore)

	Note No	31/03/2023		31/03/2022	
		Carrying value	Fair Value	Carrying value	Fair Value
Financial Liabilities					
Borrowings					
Non convertible debentures (NCDs)	22A, 22B	699	696	5,999	6,025
Long term Borrowings #	22A	11,609	11,708	11,676	11,778
Other Financial Liabilities, Non - Current	24	61	61	13	13
		12,369	**12,465**	**17,688**	**17,816**

Carrying amount includes current portion of long term borrowing shown under short term borrowing (Refer Note 22B).

Fair Value of borrowings does not include interest accrued but not due.

Fair values for current financial assets and financial liabilities have not been disclosed because their carrying amount are a reasonable approximation of their fair values.

(iii) Classification of finance income and finance cost by instrument category

(₹ in Crore)

	Note No	Year ended 31/03/2023			Year ended 31/03/2022		
		Amortised Cost	FVTOCI	FVTPL	Amortised Cost	FVTOCI	FVTPL
Income							
Interest Income	31	255	24	11	116	19	9
Dividend Income	31	-	33	-	-	31	-
		255	**57**	**11**	**116**	**50**	**9**
Expense							
Interest Expense (a)	37	1,272	-	-	1,356	-	-
		1,272	**-**	**-**	**1,356**	**-**	**-**

(₹ in Crore)

Details of amount not included in the table above	As at 31/03/2023	As at 31/03/2022
(a) Interest on Income Tax and other finance cost	76	87

For amortised cost and FVTOCI instruments, interest expense is recognised at effective interest rate.

(iv) Derecognition of Investments in Equity Instruments designated at FVTOCI

(₹ in Crore)

	Year ended 31/03/2023		Year ended 31/03/2022	
	Fair value on the date of derecognition	Cumulative gain or (loss) on disposal	Fair value on the date of derecognition	Cumulative gain or (loss) on disposal
Investment in Equity Instrument- Quoted				
National Aluminium Company Limited	-	-	116	68
	-	**-**	**116**	**68**

(b) Fair Value Hierarchy

The following table shows the details of financial assets and financial liabilities including their levels in the fair value hierarchy:

(i) Financial assets and financial liabilities measured at fair value - recurring fair value measurements:

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial Assets							
Investments in Associates							
Unquoted Instruments	8	-	-	185	-	-	154
		-	**-**	**185**	**-**	**-**	**154**

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Investments in Equity Instruments							
Quoted Equity Instruments	9A	7,686	-	-	8,195	-	-
Unquoted Equity Instruments	9A	-	-	25	-	-	15
		7,686	**-**	**25**	**8,195**	**-**	**15**
Investments in Debt Instruments							
Mutual Funds	9A, 9B	5,530	-	-	4,333	2	-
Bonds and Debentures	9A, 9B	-	100	30	-	-	152
Government Securities	9A, 9B	202	53	48	235	140	-
Commercial Paper	9B	-	-	97	-	-	-
		5,732	**153**	**175**	**4,568**	**142**	**152**
Trade Receivables	16	-	391	-	-	736	-
Cash and Cash Equivalents							
Liquid Mutual Funds	17	-	-	-	610	-	-
Derivatives	11	-	636	-	-	681	-
		13,418	**1,180**	**385**	**13,373**	**1,559**	**321**
Financial Liabilities							
Trade Payables	23	-	3,757	-	-	5,073	-
Derivatives	11	-	194	-	-	3,763	-
Supplier's credit	28	-	4,600	-	-	2,456	-
		-	**8,551**	**-**	**-**	**11,292**	**-**

(ii) **Fair value disclosure of Financial Assets and Financial Liabilities measured at amortised cost:**

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial Liabilities							
Borrowings							
Non convertible debentures (NCDs)	22A, 22B	-	696	-	-	6,025	-
Long term Borrowings	22A	-	11,708	-	-	11,778	-
Other Financial Liabilities, Non - Current	24	-	61	-	-	13	-
		-	**12,465**	**-**	**-**	**17,816**	**-**

(₹ in Crore)

	Note No	As at 31/03/2023			As at 31/03/2022		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial Assets							
Loans, Non-Current	10	-	-	172	-	-	43
Other Financial Asset, Non- Current	12	-	-	1,428	-	-	227
		-	**-**	**1,600**	**-**	**-**	**270**

Level 1 Hierarchy includes financial instruments valued using quoted market prices. Listed equity instruments and traded debt instruments which are traded in the stock exchanges are valued using the closing price at the reporting date. Mutual funds are valued using the closing NAV.

Level 2 Hierarchy includes financial instruments that are not traded in active market. This includes over the counter (OTC) derivatives, close ended mutual funds and debt instruments including quoted valued using observable market data such as yield etc. of similar instruments traded in active market. All derivatives are reported at discounted values hence are included in level 2. Borrowings have been fair valued using credit adjusted interest rate prevailing on the reporting date. Trade Receivables and Payables that are realigned based on forward LME/LBMA price movements have been included in Level 2 hierarchy.

Level 3 If one or more significant inputs is not based on observable market data, the instrument is included in level 3. This is the case for unlisted equity instruments and certain debt instruments including quoted which are not actively traded valued using assumptions from market participants.

(iii) **Disclosure of changes in level 3 items for the period ended 31/03/2023 and 31/03/2022 respectively**

(₹ in Crore)

	Unquoted Associates	Unquoted Equity Instruments	Unquoted Debt Instruments	Total
As at 01/04/2021	**128**	**20**	**87**	**235**
Acquisitions	8	-	-	8
Sale	-	-	(10)	(10)
Gain/(losses) recognised in Profit or loss	-	-	9	9
Gain/(losses) recognised in OCI	18	(5)	-	13
Transfer from Level 1 and 2	-	-	66	66
Transfer to Level 1 and 2	-	-	-	-
As at 31/03/2022	**154**	**15**	**152**	**321**
Acquisitions	17	-	96	113
Sale	-	-	(17)	(17)
Gain/(losses) recognised in Profit or loss	-	-	(3)	(3)
Gain/(losses) recognised in OCI	14	10	-	24
Transfer from Level 1 and 2	-	-	48	48
Transfer to Level 1 and 2	-	-	(101)	(101)
As at 31/03/2023	**185**	**25**	**175**	**385**
Unrealised Gain/(loss) recognised in the statement of profit and loss relating to assets and liabilities held at the end of reporting period:				
As at 31/03/2023	-	-	4	4
As at 31/03/2022	-	-	9	9

Transfers from level 1 and 2 to level 3 and out of level 3 for unquoted debt instruments is based on unavailability/availability of market observable inputs as on the reporting date. The Company's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period.

(iv) Sensitivity analysis of Level-3 Instruments:

(₹ in Crore)

Increase/(Decrease) in Fair Value	Unquoted Associates		Unquoted Equity Instruments		Unquoted Debt Instruments	
	Impact on Statement of Profit and Loss Post Tax	Impact on OCI Post Tax	Impact on Statement of Profit and Loss Post Tax	Impact on OCI Post Tax	Impact on Statement of Profit and Loss Post Tax	Impact on OCI Post Tax
Increase in Yield by 0.5%						
As at 31/03/2023	-	-	-	-	(1)	(1)
As at 31/03/2022	-	-	-	-	(2)	-
Increase in Earnings Multiple by 10%						
As at 31/03/2023	-	5	-	2	-	-
As at 31/03/2022	-	7	-	1	-	-
Increase in Weighted average cost of capital 0.5%						
As at 31/03/2023	-	(3)	-	-	-	-
As at 31/03/2022	-	-	-	-	-	-

Sensitivity with decrease in yield, Weighted average cost of capital and Price Book Multiplier by 0.5% and 10% will have equal and opposite impact in financial statement.

(v) Valuation Process

Some of the Company's assets and liabilities are measured at fair value for financial reporting purposes. The Management of the Company has set up a team in the finance department which performs the valuation of financial assets and liabilities.

In estimating the fair value of an asset or a liability, the Company uses market-observable data to the extent it is available. Where Level 1 inputs are not available, the Company engages third party qualified valuers to perform the valuation. The team works closely with the qualified external valuers to establish the appropriate valuation techniques and inputs to the model. The team reports findings to the Management of the Company to explain the cause of fluctuations in the fair value of the assets and liabilities.

(vi) Valuation techniques used for valuation of instruments categorised as level 3

For valuation of investments in equity shares and associates which are unquoted, peer comparison has been performed wherever available. Valuation has been primarily done by considering the net worth of the Company and price to book multiple to arrive at the fair value. In cases where income approach was feasible valuation has been arrived using the earnings capitalisation method or discounted cash flow method. For inputs that are not observable for these instruments, certain assumptions are made based on available information. The most significant of these assumptions are the discount rate and credit spreads used in the valuation process.

For valuation of investments in debt securities categorised as level 3, market polls which represent indicative yields are used as assumptions by market participants when pricing the asset.

There were no significant inter-relationships between unobservable inputs that materially affect fair values.

52. Financial Risk Management

Refer Note 1B (Q) for accounting policy on Financial Instruments

The Company's activities exposes it to various risks such as market risk, liquidity risk and credit risk. This section explains the risks, which the Company is exposed to and how it manages those risks.

(a) Market Risk

(i) Market Risk : Commodity Price Risk

Hindalco's India Operations consist of two businesses – Copper Business and Aluminium Business. The Copper Business works under a "Custom Smelting" model wherein the focus is to improve the processing margin. The timing mis-match risk between the input and output price, which is linked to the same international pricing benchmark, is eliminated through use of derivatives. This off-set hedge model (through use of derivatives) is used to manage the timing mis-match risk for both Commodity (Copper and Precious Metals) and Currency Risk (primarily, USD/INR). The Copper Business also has a portion of View Based exposure for both Commodity and Currency, beyond the above timing mis-match risk. Lower Copper Prices, Stronger USD/INR exchange rate and Higher "Other Input" Prices (eg Coal, furnace oil, natural gas etc) are the major price risks that adversely impact the business. Here, the Company may use derivative instruments or non-derivative instrument, wherever available, to manage these pricing risks. A variety of factors, including the risk appetite of the business and price view, are considered while taking Hedging Decisions. Such View based hedges are usually done for the next 1-12 quarters.

The Aluminium Business is a vertically integrated business model wherein the input and output pricing risks are independent of each other, i.e. – are on different pricing benchmarks, if any. Here, the Company may use derivative instruments, wherever available, to manage its pricing risks for both input and output products. Lower Aluminium Prices, weaker USD/INR exchange rate and Higher Input Prices (e.g. Alumina, furnace oil, coal, coal tar pitch) are the major price risks that adversely impact the Business. Hedging decisions are based on a variety of factors, including risk appetite of the business and price View. Such Hedge decisions are usually done for the next 1-12 quarters.

Embedded Derivatives

Copper concentrate is purchased on future pricing model based on month's average LME (in case of copper) / LBMA (in case of gold and silver). Since, the value of the concentrate changes with response to change in commodity pricing indices, embedded derivatives (ED) is identified and segregated in the contract. The ED so segregated, is treated like commodity derivative and qualify for hedge accounting. These derivatives are put into a Fair Value hedge relationship with respect to inventory.

(ii) The table below summarises gain/(loss) impact of increase/decrease in the commodity price on the Company's equity and profit for the year:

(₹ in Crore)

Commodity Risk	Price Index	Increase in Price	Year ended 31/03/2023		Year ended 31/03/2022	
			Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax	Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax
Aluminium	LME	10%	(3)	(129)	-	(767)
Copper	LME	10%	(691)	-	(850)	-
Gold	LBMA/ MCX	10%	(159)	-	(136)	-
Silver	LBMA	10%	-	-	(10)	-
Furnace Oil	AG Platts	10%	-	10	-	-

Decrease in prices by 10% will have equal and opposite impact in financial statements. Sensitivity analysis has been computed by stress testing the market price of the underlying price index on the outstanding derivative position as on the reporting date by assuming all other factors constant.

(iii) **Market Risk : Foreign Currency Risk**

Exchange rate movements, particularly the United States Dollar (USD) and Euro (EUR) against Indian Rupee (INR), have an impact on our operating results. In addition to the foreign exchange inflow from exports, the commodity prices in the domestic market are derived based on the landed cost of imports in India where LME prices and USD/INR exchange rate are the main factors. In case of conversion business, the objective is to match the exchange rate of outflows and related inflows through derivative financial instruments. With respect to Aluminium business where costs are predominantly in INR, the strengthening of INR against USD adversely affects the profitability of the business and benefits when INR depreciates against USD. The Company enters into various foreign exchange contracts to protect profitability. The Company also enters into various foreign exchange contracts to mitigate the risk arising out of foreign currency exchange rate movement in foreign currency contracts executed with foreign suppliers to procure capital items for its project activities.

During the year ended, the Company's foreign currency exposure arising from exports and import transactions resulted in the FOB value of exports amounting to ₹ 17,319 Crore (31/03/2022 ₹ 21,416 Crore) and the CIF value of imports amounting to ₹ 37,993 Crore (31/03/2022 ₹ 36,087 Crore).

(iv) **The Company's net exposure to foreign currency risk at the end of the reporting period expressed in ₹ is given below:**

(₹ in Crore)

Unhedged Foreign Currency Payable / (Receivable)	As at	
Currency Pair	**31/03/2023**	**31/03/2022**
USD	43	17
EUR	5	3
GBP	-	-
NOK	1	1
CHF	1	1
	50	**22**

The above disclosure is after adjusting foreign currency assets of ₹ 255 Crores (March 31, 2022 ₹ 489 Crores) and foreign currency liabilities ₹ 988 (March 31, 2022 ₹ 1,436 Crores) against derivative contracts (forward, future and option contracts).

Assets and liabilities that are naturally hedged against future transactions are excluded for the purpose of above disclosure. As on March 31, 2023 the Company has USD, EUR and GBP foreign currency payables of ₹ 11,563 Crore (March 31, 2022 ₹ 10,110 Crore) which will be offseted by an equal amount of foreign currency receivables in the next financial year.

(v) **The table below summarises gain/(loss) impact of increase/decrease in the exchange rates on the Company's equity and profit for the year:**

(₹ in Crore)

Currency Risk	Increase in Rate/Price	Year ended 31/03/2023		Year ended 31/03/2022	
		Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax	Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax
USD/INR	10%	(126)	(1,271)	(15)	(1,158)
EUR/INR	10%	(1)	-	-	-
EUR/USD	10%	-	-	8	-
GBP/INR	10%	-	-	-	-
NOK/INR	10%	-	-	-	-
CHF/INR	10%	-	-	-	-

Decrease in prices by 10% will have equal and opposite impact in financial statements.

Sensitivity analysis has been computed by stress testing the market price of the underlying currency index on the outstanding derivative position and unhedged exposure as on the reporting date by assuming all other factors constant.

(vi) **Market Risk: Equity Securities Price Risk**

The Company's exposure to equity securities price risk arises from movement in market price of related securities classified either as FVTOCI or FVTPL. The Company manages the price risk through diversified portfolio.

The table below summarises gain/(loss) impact on of increase/decrease in the equity share price on the Company's equity and profit for the year:

(₹ in Crore)

Other Price Risk	Price Index	Increase Rate/Price	Year ended 31/03/2023		Year ended 31/03/2022	
			Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax	Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax
Investment in Equity Securities	NSE	10%	-	679	-	724

Decrease in prices by 10% will have equal and opposite impact in financial statements.

Sensitivity analysis has been computed by stress testing the market price of the underlying price index on the investment portfolio as on the reporting date by assuming all other factors constant.

(vii) **Market Risk: Interest Rate Risk**

The Company is exposed to interest rate risk on financial liabilities such as borrowings, both short-term and long-term. It maintains a balance of fixed and floating interest rate borrowings and the proportion is determined by current market interest rates, projected debt servicing capability and view on future interest rates. Such interest rate risk is actively evaluated and interest rate swap is taken whenever considered necessary.

The Company is also exposed to interest rate risk on its financial assets that include fixed deposits, bonds, debentures, commercial papers, other mutual funds and liquid investments comprising mainly mutual funds (which are part of cash and cash equivalents). Since, majority of these are generally for short durations, the Company believes it has limited interest rate risk.

(viii) **The table below summarises gain/(loss) impact of increase/decrease in the interest rates on the Company's equity and profit for the year:**

(₹ in Crore)

Interest Rate Risk	Increase in Rate	Year ended 31/03/2023		Year ended 31/03/2022	
		Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax	Gain/ (Loss) in Statement of Profit and Loss Post Tax	Gain/ (Loss) in Other Components of Equity Post Tax
Interest rate on floating rate borrowings	100 bps	(77)	-	(60)	-

Decrease in rates by 100 bps will have equal and opposite impact in financial statements. Sensitivity analysis has been computed by stress testing the interest rates applicable (i.e. USD 6M SOFR, SBI 3M MCLR, PNB 1M MCLR, Repo Rate and 3M T-bill etc.) on the amount of borrowings during the year by assuming all other factors constant.

Derivatives

The Company does have any interest rate hedges outstanding as on the reporting date, accordingly IBOR related impact on hedge accounting including discounting of other derivatives is not expected to be material.

(b) Liquidity Risk

The Company determines its liquidity requirements in the short, medium and long term. This is done by drawing up cash forecast for short and medium term requirements and strategic financing plans for long term needs.

The Company manages its liquidity risk in a manner so as to meet its normal financial obligations without any significant delay or stress. Such risk is managed through ensuring operational cash flow while at the same time maintaining adequate cash and cash equivalents position. The management has arranged for diversified funding sources and adopted a policy of managing assets with liquidity in mind and monitoring future cash flows and liquidity on a regular basis. Surplus funds not immediately required are invested in certain financial assets (including mutual funds) which provide flexibility to liquidate at short notice and are included in current investments and cash equivalents. Besides, it generally has certain undrawn credit facilities which can be accessed as and when required, which are reviewed periodically.

The Company has developed appropriate internal control systems and contingency plans for managing liquidity risk. This incorporates an assessment of expected cash flows and availability of alternative sources for additional funding, if required.

(i) **Financing Arrangement**

The Company had access to the following undrawn borrowing facilities at the end of the reporting period:

(₹ in Crore)

	As at	
	31/03/2023	31/03/2022
Bank Overdraft and other facilities	1,642	1,642

Undrawn limit has been calculated based on the available drawing power and sanctioned amount at each reporting date.

(ii) **Maturity Analysis**

The Company's financial liabilities into relevant maturity groupings based on their contractual maturities for all non-derivative financial liabilities and net settled derivative financial instruments. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

(₹ in Crore)

Contractual maturities of financial liabilities as at 31/03/2023	Note No	Less than 1 Year	Between 1 and 2 Years	Between 2 and 5 Years	Over 5 years	Total	Carrying Value
Non Derivatives							
Borrowings (a)							
Principal Payments	22A, 22B, 24	750	986	4,571	6,050	12,357	12,308
Interest Payments		954	912	2,077	819	4,762	-
Lease liabilities (b)	3B	152	137	318	766	1,373	763
Supplier's Credit	28	5,704	5,704	5,635			
Trade payables	23	9,743	-	-	-	9,743	9,743
Other financial liabilities	24	747	44	16	1	808	888
		18,050	**2,079**	**6,982**	**7,636**	**34,747**	**29,337**
Derivatives (net settled)	11						
Commodity forwards/swaps/options		162	-	-	-	162	165
Currency forwards/options		39	7	1	-	47	29
		201	**7**	**1**	**-**	**209**	**194**

(₹ in Crore)

Contractual maturities of financial liabilities as at 31/03/2022	Note No	Less than 1 Year	Between 1 and 2 Years	Between 2 and 5 Years	Over 5 years	Total	Carrying Value
Non Derivatives							
Borrowings (a)							
Principal Payments	22A, 22B, 24	7,412	83	3,991	7,651	19,137	19,079
Interest Payments		897	757	2,048	1,126	4,828	-
Lease liabilities (b)	3B	82	54	130	542	808	342
Supplier's Credit	28	2,459	2,459	2,456			
Trade payables	23	11,015	-	-	-	11,015	11,015
Other financial liabilities	24	1,000	13	-	-	1,013	1,013
		22,865	**907**	**6,169**	**9,319**	**39,260**	**33,905**
Derivatives (net settled)	11						
Commodity forwards/swaps/options		3,368	387	10	-	3,765	3,732
Currency forwards/options		31	-	-	-	31	31
		3,399	**387**	**10**	**-**	**3,796**	**3,763**

(a) Includes Principal and interest payments, short term borrowings, current portion of debt and excludes unamortised fees.

(b) Total cash outflow for leases for the year ended 31/03/2023 is ₹ 399 Crore (31/03/2022: ₹ 224 Crore), includes ROU Lease payment, Short term lease and Low value lease, refer note 22A(c) and 41(c).

(C) Credit Risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligation.

Credit risk arises from cash and cash equivalents, contractual cash flows of debt investments, favourable derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to customers including outstanding receivables.

Credit risk is managed on an entity level basis. The Company has adopted a policy of dealing only with creditworthy counterparties and obtaining sufficient collateral, where appropriate, as a means of mitigating risk of financial loss from defaults. The Company invests only in those instruments issued by high rated banks/ institutions and government agencies. The Company assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. The Company's investments in debt instruments and certain loans are considered to have low credit risk. The credit ratings of the investments are monitored for credit deterioration.

For some trade receivables, the Company obtains security in the form of guarantees, deed of undertaking or letters of credit which can be called upon if the counterparty is in default under the terms of the agreement.

The Company periodically monitors the recoverability and credit risks of its other financials assets including security deposits and other receivables. The Company evaluates 12 months expected credit losses for all the financial assets for which credit risk has not increased. In case credit risk has increased significantly, the Company considers life time expected credit losses for the purpose of impairment provisioning.

The Company has used a practical expedient by computing the expected credit loss allowance for trade receivables based on a provision matrix. The provision matrix takes into account historical credit loss experience and adjusted for forward-looking information. The expected credit loss allowance is based on the ageing of the days for which the receivables are due and the expected loss rates as given in the provision matrix. The provision matrix at the end of the reporting period is as follows:

(i) **Summary of trade receivables and provision with ageing as at 31-Mar-23**

(₹ in Crore)

Particulars	Not due	Past due: 1 to 30 days	31 to 60 days	61 to 120 days	121 to 180 days	Over 180 days	Total
Gross carrying amount - Domestic	1,910	195	35	39	24	159	2,362
Gross carrying amount - Export	258	34	3	-	-	1	296
Expected loss rate	0.05%	0.00%	0.00%	0.00%	0.00%	8.13%	**0.53%**
Expected credit loss provision	1	-	-	-	-	13	14
Loss allowance - Credit impaired - Export	-	-	-	-	-	1	1
Loss allowance - Credit impaired - Domestic	-	-	-	-	-	33	33
Total Provision	1	-	-	-	-	47	48
Carrying amount of trade receivables (net of impairment)	**2,167**	**229**	**38**	**39**	**24**	**113**	**2,610**

(ii) **Summary of trade receivables and provision with ageing as at 31-Mar-22**

(₹ in Crore)

Particulars	Not due	Past due: 1 to 30 days	31 to 60 days	61 to 120 days	121 to 180 days	Over 180 days	Total
Gross carrying amount - Domestic	1,938	133	37	18	6	49	2,181
Gross carrying amount - Export	501	23	1	1	-	1	527
Expected loss rate	0.00%	0.00%	0.00%	0.00%	0.00%	6%	**0.11%**
Expected credit loss provision	-	-	-	-	-	3	3
Loss allowance - Credit impaired - Export	-	-	-	-	-	1	1
Loss allowance - Credit impaired - Domestic	-	-	-	-	-	33	33
Total Provision	-	-	-	-	-	37	37
Carrying amount of trade receivables (net of impairment)	**2,439**	**156**	**38**	**19**	**6**	**13**	**2,671**

(iii) **Reconciliation of Provision**

(₹ in Crore)

Loss allowance as at 31/03/2021	32
changes in loss allowance	5
Loss allowance as at 31/03/2022	37
changes in loss allowance	11
Loss allowance as at 31/03/2023	48

Of the trade receivables balance as at 31/03/2023, ₹ 473 Crore (as at 31/03/2022, ₹ 368 Crore) is due from a single customer being the Company's largest customer. There are no other customers who represent more than 10% of the total balance of trade receivables.

Financial assets at FVTPL and at FVTOCI: The Company is also exposed to credit risks in relation to financial assets that are measured at FVTPL or at FVTOCI. The maximum exposure at the end of the reporting period is the carrying amount of these assets.

53. The Company has recognised its interest in the Joint Operations disclosed below in these standalone financial statements. Further, the trusts disclosed below have been considered as an extension of the Company and therefore included in these standalone financial statements.

Name of the Entity	Relationship	% of Holding	Country of Incorporation
Mahan Coal Limited	Joint Control Operation *	50%	India
Tubed Coal Mines Limited	Joint Control Operation *	60%	India
Trident Trust	Trust controlled by the Company	#	India
Hindalco Employee Welfare Trust	Trust controlled by the Company	#	India

Treasury Shares are held in Trusts whose sole beneficiary is Hindalco Industries Limited, Refer Note 20 for further details.

* The proportionate share of total assets and total comprehensive income in the above joint operations are included in the standalone financial statements.

54. Business Combinations

Refer Note 1B (FF) for accounting policy on Business Combinations

During the year ended 31/03/2023, the Company does not have any business acquisition transaction to report. During year ended 31/03/2022, the Company had acquired Kuppam unit of SAPA Extrusions India Private Limited.

On 01/02/2022, the Company has completed the acquisition of the Extrusion business of SAPA Extrusion India Private Limited, manufacturer of high end extrusion products, pursuant to a Business Transfer Agreement dated 17/12/2021. The acquisition increases the Group's footprint in high end extrusion products by expanding the portfolio of services provided to its customers.

The amount of purchase consideration, the net assets acquired and resultant Goodwill on acquisition are given below. The Goodwill associated with the acquisition of Kuppam unit has been allocated to the Aluminium Downstream segment.

(₹ in Crore)

Consideration transferred	265
Less: Net identifiable assets acquired	(261)
Goodwill	**4**

55. Title deeds of the Immovable Properties pending for transfer as at 31/03/2023 are as are as follows:

(₹ in Crore)

S. No.	Relevant line item in the Balance sheet	Description of item of property	Gross carrying value	Title deeds held in the name of	Whether title deed holder is a promoter, director or relative of promoter/director or employee of promoter/ director	Property held since which date	Reason for not being held in the name of the Company
1	Property, plant and equipment	Freehold Land at Birla Copper	0	Indogulf Fertilizer & Chemicals Corporation Limited	No	Since FY 2002-03	The title deeds of which are held in the name of Indogulf Fertilizer & Chemicals Corporation Limited (erstwhile Company) which have subsequently been amalgamated with the Company
2	Investment Property	Freehold Land at Birla Copper	0				
3	Investment Property	Building at Ahura Centre, Mumbai	7				
4	Property, plant and equipment	Freehold Land at Muri unit and Kolkata Branch	0	Indian Aluminium Company Limited	No	Since FY 2004-05	The title deeds of which are held in the name of Indian Aluminium Company Limited (erstwhile Company) which have subsequently been amalgamated with the Company
5	Property, plant and equipment	Various Buildings at Delhi, Bangalore, Kolkata, Darjeeling, Bhubaneshwar and Coimbatore	5				
6	Right of use Assets	Land at Kolkata Branch	0				
7	Property, plant and equipment	Freehold Land at Kuppam	1	SAPA Extrusion India Private Limited	No	Since FY 2021-22	The title deeds are held in the name of the SAPA Extrusion India Private Limited (erstwhile Company) which have subsequently been acquired by the Company. The Company is in process of registering the title deed of this land in its name.
8	Property, plant and equipment	Freehold Land at Mahan	4	Various Individual Landowners	No	Since FY 2013-14	Certain original land-related documents held in the name of original landowners were submitted to the bank that had financed the Mahan project. These original documents are required to be submitted to the land department in order to get the title deed registered in the name of the Company . The Company is awaiting receipt of these original land-related documents from the bank to initiate the process of transfer of the title of the land in favour of the Company.
9	Property, plant and equipment	Freehold Land at Kathotia Mines	27	Various Individual Landowners	No	Since FY 2018-19	Approval of the District collector is awaited which is a prerequisite as per the Chota Nagpur Tenancy Act, 1908 to transfer the title deed in the name of the company. The company is in the process of obtaining these approvals.

Title deeds of the Immovable Properties pending for transfer as at 31/03/2022 are as are as follows:

(₹ in Crore)

S. No.	Relevant line item in the Balance sheet	Description of item of property	Gross carrying value	Title deeds held in the name of	Whether title deed holder is a promoter, director or relative of promoter/director or employee of promoter/ director	Property held since which date	Reason for not being held in the name of the Company
1	Property, plant and equipment	Freehold Land at Birla Copper	0	Indogulf Fertilizer & Chemicals Corporation Limited	No	Since FY 2002-03	The title deeds of which are held in the name of Indogulf Fertilizer & Chemicals Corporation Limited (erstwhile Company) which have subsequently been amalgamated with the Company
2	Investment Property	Freehold Land at Birla Copper	0				
3	Investment Property	Building at Ahura Centre, Mumbai	7				
4	Property, plant and equipment	Freehold Land at Hirakud unit, Muri unit and Kolkata Branch	0	Indian Aluminium Company Limited	No	Since FY 2004-05	The title deeds of which are held in the name of Indian Aluminium Company Limited (erstwhile Company) which have subsequently been amalgamated with the Company
5	Property, plant and equipment	Various Buildings at Mumbai, Delhi, Bangalore, Kolkata, Darjeeling, Bhubaneswar and Coimbatore	10				
6	Right of use Assets	Land at Hirakud unit and Kolkata Branch	0				
7	Property, plant and equipment	Freehold Land at Kuppam	1	SAPA Extrusion India Private Limited	No	Since FY 2021-22	The title deeds are held in the name of the SAPA Extrusion India Private Limited (erstwhile Company) which have subsequently been acquired by the Company. The Company is in process of registering the title deed of this land in its name.
8	Property, plant and equipment	Freehold Land at Mahan	4	Various Individual Landowners	No	Since FY 2013-14	Certain original land-related documents held in the name of original landowners were submitted to the bank that had financed the Mahan project. These original documents are required to be submitted to the land department in order to get the title deed registered in the name of the Company . The Company is awaiting receipt of these original land-related documents from the bank to initiate the process of transfer of the title of the land in favour of the Company.
9	Property, plant and equipment	Freehold Land at Kathotia Mines	27	Various Individual Landowners	No	Since FY 2018-19	Approval of the District collector is awaited which is a prerequisite as per the Chota Nagpur Tenancy Act, 1908 to transfer the title deed in the name of the company. The company is in the process of obtaining these approvals.

56. Relationship with struck off companies

Disclosure related to relationship of the Company with a company which is Struck off under Section 248 of the Companies Act, 2013 or Section 530 of Companies Act, 1956 as at 31/03/2023 and 31/03/2022 are as follows:

S. No.	Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31/03/2023	Balance outstanding as at 31/03/2022	Relationship with the Struck off company, if any, to be disclosed
Receivables					
1	Daga Nylomet Private Limited	Sale of Goods and Services	1.00	1.00	Not a related party
2	Copral Insulated Conductors Private Limited	Sale of Goods and Services	-	-	Not a related party
3	Krs And Sons Construction Private Limited	Sale of Goods and Services	-	-	Not a related party
4	Maheshwary Metal & Alloys Private Limited	Sale of Goods and Services	-	-	Not a related party
5	Nathanz Chemicals Private Limited	Sale of Goods and Services	-	-	Not a related party
6	Nicco Eastern Private Limited	Sale of Goods and Services	-	-	Not a related party
7	Payal Synthetics Private Limited	Sale of Goods and Services	-	-	Not a related party
8	Tecon Surface Coating & Engineering Private Limited	Sale of Goods and Services	-	-	Not a related party
Payables					
1	Agngreen Pest Control Services Private Limited	Purchase of Goods and Services	-	-	Not a related party
2	Anand Motors	Purchase of Goods and Services	-	-	Not a related party
3	Arc India Limited	Purchase of Goods and Services	-	-	Not a related party
4	Associated Enterprises	Purchase of Goods and Services	-	-	Not a related party
5	Bharat Timber Industries	Purchase of Goods and Services	-	-	Not a related party
6	D Wren Industries Private Limited	Purchase of Goods and Services	-	-	Not a related party
7	K.P.Industries	Purchase of Goods and Services	-	-	Not a related party
8	Knop Trading Company Private Limited	Purchase of Goods and Services	-	-	Not a related party
9	Multitech Engineers Private Limited	Purchase of Goods and Services	-	-	Not a related party
10	Nuwave Technology Private Limited	Purchase of Goods and Services	-	-	Not a related party
11	Paramount Engineering Company	Purchase of Goods and Services	-	-	Not a related party
12	Pyrotech Electronics Private Limited	Purchase of Goods and Services	-	-	Not a related party
13	R V Briggs And Co Private Limited	Purchase of Goods and Services	-	-	Not a related party
14	Singhal Bricks Private Limited	Purchase of Goods and Services	-	-	Not a related party
15	Sitaram Mall	Purchase of Goods and Services	-	-	Not a related party
16	Vikadis Consulting Engineering Private Limited	Purchase of Goods and Services	-	-	Not a related party
17	Xtend Apt Solutions Private Limited	Purchase of Goods and Services	-	-	Not a related party
18	Zion Construction	Purchase of Goods and Services	-	-	Not a related party
19	Boc India Limited	Purchase of Goods and Services	-	-	Not a related party
20	B P Construction Company	Deposit Refundable	-	-	Not a related party
21	Vijay Construction	Deposit Refundable	-	-	Not a related party

Details of other struck off entities holding equity shares in the Company is as below:

		No. of shares heldas at 31/03/2023	Paid-up as at 31/03/2023 (₹)	Paid-up as at 31/03/2022 (₹)
1	Siddha Papers Private Limited	5	5	5
2	Vaishak Shares Limited	1	1	1
3	Alike Trading Private Limited	50	50	50
4	Fayda Portfolio Private Limited	100	100	100
5	Kothari Intergroup Limited	1	1	1
6	Arunoday Holdings Private Limited	6551	6,551	4,387
7	Dreams Broking Private Limited	5	5	5
8	Tushar Commercial Company Limited	2000	2,000	2,000
9	Agents India Limited	120	120	120
10	Ambica Multifibres Limited	10714	10,714	10,714
11	Tangmarg Investment And Trading Private Limited	1525	1,525	2,370
12	Victor Properties Private Limited	2286	2,286	1,286
13	Central Investment Private Limited	5820	5,820	5,820
14	Shri Vishnu Commodities Private Limited	140	140	140
15	Nacon Software Services Private Limited	1500	1,500	1,500
16	Murli Tie- Up Private Limited	46	46	46
17	Architectural Glass Private Limited	60	60	60

57. Financials Ratio Analysis:

S. No.	Particulars	As at 31/03/2023	As at 31/03/2022	Change in %
(a)	**Current Ratio (Times)** (Current Assets/Current Liabilities excluding Current Maturities of Long term Borrowings)	1.79	1.75	2.32%
(b)	**Debt-Equity Ratio (Times)** (i) (Borrowings + Lease Liabilities)/ Total Equity	0.22	0.36	-37.37%
(c)	**Debt Service Coverage Ratio (Times)** (i) (Profit before Depreciation, Amortisation, Impairment Loss on Non-Current Assets, Finance Cost and Tax)/ (Finance Cost (net of capitalization) + Scheduled Principal Repayment (Excluding Prepayment))	1.08	7.83	-86.19%
(d)	**Return on Equity Ratio (%) (ii)** Profit after tax/ Average shareholder equity	6%	11%	-44.12%
(e)	**Inventory turnover ratio (Times)** Revenue from Operations/Average Inventory	3.74	3.66	2.04%
(f)	**Trade Receivables turnover ratio (Times)** Revenue from Operations /Average Trade Receivable	29.11	31.67	-8.09%
(g)	**Trade payables turnover ratio (Times)** Purchases of Raw Material and traded purchases/ Average Trade Payable related to Raw Material and traded purchases	5.99	5.60	6.92%
(h)	**Net capital turnover ratio (Times)** Revenue from Operations/ Working Capital excluding Current Maturities of Long term Borrowings	4.98	4.08	22.26%
(i)	**Net profit ratio (%)** (ii) Profit after tax/ Revenue from Operations	4%	8%	-46.86%
(j)	**Return on Capital employed (%)** (ii) Earnings before interest and taxes/ Capital Employed (Tangible Net worth + Total Debt + Deferred Tax liability)	8%	13%	-37.02%
(k)	**Return on investment (%)** (ii) Earnings before interest and tax/ Average total assets	6%	11%	-40.32%

Clarification for changes

(i) During the current year, the company has repaid the debentures of ₹ 6,000 Crore. Further, the Company has issued new debentures amounting to ₹ 700 Crore. Ratio improved majorly due to the same.

(ii) Decrease in this ratio is mainly on account of lower net profit available in the current year.

58. Additional Regulatory Information

(a) As per Section 135 of the Companies Act, 2013, a Company, meeting the applicability threshold, needs to spend at least 2% of its average net profit for the immediately preceding three financial years on Corporate Social Responsibility (CSR) activities. A CSR committee has been formed by the Company as per the Act. The funds were primarily allocated to a corpus and utilized through the year on these activities which are specified in Schedule VII of the Companies Act, 2013:

(i) Gross amount required to be spent by the company during the year is ₹ 69 Crore (Year ended 31/03/2022 ₹ 24 Crore).

(ii) Amount approved by the Board to be spent during the year is ₹ 45 Crore (Year ended 31/03/2022 is ₹ 38 Crore).

(iii) Amount spent during the year

(₹ in Crore)

Particulars	Year Ended 31/03/2023	Year Ended 31/03/2022
a) Construction/ acquisition of any asset^	-	-
b) On purposes other than (a) above	36	38
Total	**36**	**38**

^ Assets are not in the books of the Company

(iv) Details of excess amount spent under Section 135(5) of the Companies Act, 2013

(₹ in Crore)

Particulars	Year Ended 31/03/2023	Year Ended 31/03/2022
Opening Balance excess spent	**24**	**12**
Amount required to be spent during the year	69	24
Amount spent during the year	36	38
Unspent CSR amount in Current year **	10	-
CSR expenses claimed/ Debited in Statement of profit and loss in Current year	70	26
Closing Balance excess spent	**-**	**24**

(v) Details of ongoing projects under Section 135(6) of the Companies Act, 2013

(₹ in Crore)

Particulars	Year Ended 31/03/2023		Year Ended 31/03/2022	
	With Company's Bank A/c	In Separate CSR Unspent A/c	With Company's Bank A/c	In Separate CSR Unspent A/c
Opening Balance	-	-	-	-
Amount required to be spent during the year **	-	10	-	-
Amount spent during the year	-	-	-	-
Closing Balance	**-**	**10**	**-**	**-**

**Unspent CSR amount of ₹ 9.50 Crore, pursuant to ongoing project undertaken by the Company has been deposited to Unspent CSR account maintained in a scheduled bank on 28/04/2023. This amount is planned to be spent by end of FY 26 as permitted under Companies (CSR Policy) Rules, 2014.

(vi) The areas for CSR activities are eradication of hunger and malnutrition, promoting education, art and culture, healthcare, destitute care and rehabilitation, environment sustainability, disaster relief, COVID-19 relief and rural development projects.

(vii) The contribution to a trust controlled by the Company (Hindalco Jan Seva Trust) in relation to CSR expenditure is ₹ 1 Crore (year ended 31/03/2022 ₹ 1 Crore).

(viii) There is provision made with respect to a liability incurred by entering into a contractual obligation during the current year ₹ 1 Crore (year ended 31/03/2022 Nil).

(b) Details of loans given, investment made and guarantee given covered under section 186(4) of the Companies Act, 2013:

(i) Details of investments made have been given as part of Note '7' Investments in Subsidiary, Note '8' Investments in Associates and Joint Ventures and Note '9' Other Investments.

(ii) Loans and Financial Guarantees given below:

(₹ in Crore)

Name of the Company	Relationship	Nature of Transaction	Purpose / Utilisation	As at 31/03/2023	As at 31/03/2022
Details of Loans					
Aditya Birla Science and Technology Company Private Limited	Associate	Loan	Working capital Use	29	36
Suvas Holding Limited	Subsidiary	Loan	Working capital Use	3	5
Birla Copper Asoj Private Limited (formerly known as Ryker Base Private Limited)	Subsidiary	Loan	Prepayment of Loan and Working capital Use	137	164
Details of Guarantee					
Dahej Harbour and Infrastructure Limited	Subsidiary	Performance Guarantee	To the Commissioner of Customs	5	5

Transactions during the year are disclosed in Note 47 - Related Party Transactions.

(iii) Disclosure relating to amount outstanding at year end and maximum outstanding during the year of loans and advances, in nature of loan, required under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, are given below:

(₹ in Crore)

Name of the Company	As at 31/03/2023	Maximum outstanding during FY 2022-23	As at 31/03/2022	Maximum outstanding during FY 2021-22
Associate:				
Aditya Birla Science and Technology Company Private Limited	29	36	36	41
Subsidiaries:				
Suvas Holding Limited	3	5	5	8
Birla Copper Asoj Private Limited (formerly known as Ryker Base Private Limited)	137	164	164	200

(c) Other additional disclosures required under Schedule III as per Companies Act 2013 are as follows:

(i) No proceedings have been initiated on or are pending against the Company for holding benami property under the Benami Transactions (Prohibition) Act, 1988 (45 of 1988) and Rules made thereunder.

(ii) Hindalco Industries limited have not been declared wilful defaulter by any bank or financial institution or government or any government authority.

(iii) Hindalco Industries Limited has complied with the number of layers prescribed under the Companies Act, 2013.

(iv) There is no undisclosed income under the Income Tax Act, 1961 for the year ending 31/03/2023 and 31/03/2022 which needs to be recorded in the books of account.

(v) Hindalco Industries Limited has not traded or invested in crypto currency or virtual currency during the current or previous year.

(vi) The borrowings obtained by the company from banks and financial institutions have been applied for the purposes for which such loans were was taken.

(vii) There are no charges or satisfaction which are yet to be registered with the Registrar of Companies beyond the statutory period.

(viii) **Utilisation of borrowed funds and share premium.**

(I) The Company has not advanced or loaned or invested funds to any other person(s) or entity(ies), including foreign entities (Intermediaries) with the understanding that the Intermediary shall:

a. directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the group (Ultimate Beneficiaries) or

b. provide any guarantee, security or the like to or on behalf of the ultimate beneficiaries

(II) The Company has not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

a. directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

b. provide any guarantee, security or the like on behalf of the ultimate beneficiaries

(ix) The Company has not entered into any scheme of arrangement which has an accounting impact on current or previous financial year.

(x) The Company has borrowings from banks on the basis of security of current assets. The quarterly returns or statements of current assets filed by the Company with banks are in agreement with the books of accounts except incase of quarter ended 31/03/2023 where the Company has filed provisional statement with the bank and the final statement will be submitted to the bank after finalization of audited financial statements.

59. During the financial year ended March 31, 2023, the Company has reclassified following comparatives. These reclassifications are primarily to conform to the current years classification, which do not have material impact on the Standalone Financial Statements.

(₹ in Crore)

Note No.	Note Description	Previously Reported Amount	Revised Amount	Change	Purpose
Balance Sheet					
25	Provisions (Current Liabilities)	1,006	731	(275)	For Better Presentation
26	Employee Benefit Obligations (Current Liabilities)	-	275	275	For Better Presentation
25	Provisions (Non-Current Liabilities)	474	332	(142)	For Better Presentation
26	Employee Benefit Obligations (Non-Current Liabilities)	-	142	142	For Better Presentation
2A	Property, Plant and Equipment	31,759	30,926	(833)	For Better Presentation
3A	Right of Use Assets	-	833	833	For Better Presentation

As per our report annexed

For Price Waterhouse & Co Chartered Accountants LLP
Firm Registration No. 304026E/E-300009

For and on behalf of the Board of **Hindalco Industries Limited**

Sarah George
Partner
Membership No. 045255

Praveen Kumar Maheshwari
Whole-time Director and
Chief Financial Officer
DIN-00174361

Satish Pai
Managing Director
DIN-06646758

Place: Mumbai
Date: May 24, 2023

Geetika Anand
Company Secretary

K N Bhandari
Director
DIN-00026078

Assurance Statement

Ernst & Young Associates LLP
5th Floor, Block B-2
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Goregaon (E), Mumbai - 400063, India

Tel: +91 22 6192 0000
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Independent Assurance Statement

The Management and Board of Directors

Hindalco Industries Limited,

Birla Centurion, 7th Floor,

Mumbai - 400030, Maharashtra, India.

Scope

We have been engaged by Hindalco Industries Limited to perform a 'Type 1 Moderate' level of assurance, as defined by AccountAbility Assurance Standard (AA1000 AS v3) and Limited Assurance, as defined by International Standards on Assurance Engagements (ISAE 3000), hereafter referred to as the engagement, for Hindalco Industries Limited's Integrated Annual Report FY 2022-23, prepared as per The International Integrated Reporting Council (IIRC framework) (the "Subject Matter") for the period from 1st April 2022 to 31st March 2023.

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by Hindalco Industries Limited

In preparing the integrated report, Hindalco Industries Limited applied, The International Integrated Reporting Council (IIRC framework), and Global Reporting Initiative (GRI) Standards.

Hindalco Industries Limited's Responsibilities

Hindalco Industries Limited management is responsible for selecting the Criteria, and for presenting the Integrated Report FY 2022-23 in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records, and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's Responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ('ISAE 3000'), and third edition of AccountAbility's AA1000 Assurance Standard (AA1000 AS v3). The terms of reference for this engagement as agreed with Hindalco Industries Limited on 15th November 2022. Those standards require that we plan and perform our engagement to obtain limited assurance about whether, in all material respects, the Subject Matter is presented in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a provide a basis for our limited assurance conclusions.

Our Independence and Quality Control

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement

EY also applies International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Description of procedures performed
Our procedures included:

- Conducted interviews with select personnel at manufacturing units and corporate teams to understand the process for collecting, collating, and reporting the subject matter as per Global Reporting Initiative (GRI) Standards;
- Checked that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the Criteria;
- Undertook analytical review procedures to support the reasonableness of the data, Verification of data, on a selective test basis, for the following sites and indicators, through consultations with the site team and sustainability team;

Business Operations	Location
Renukoot Aluminium	Sonebhadra, Uttar Pradesh
Birla Copper Division	Dahej, Gujarat
Gurdari Mines, Kunjam Mines, Amtipani Mines	Netarhat Plateau, Jharkhand

S. No.	Indicators	GRI Reference
1.	Process to determine material topics	3-1
2.	List of material topics	3-2
3.	Materials used by weight or volume	301-1
4.	Recycled input materials used	301-2
5.	Energy consumption	302-1
6.	Water Withdrawal	303-3
7.	Water Discharge	303-4
8.	Water Consumption	303-5
9.	Direct (Scope 1) GHG emissions	305-1
10.	Energy indirect (Scope 2) GHG emissions	305-2
11.	Emissions of ozone-depleting substances (ODS)	305-6
12.	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	305-7
13.	Waste generated	306-3
14.	Waste diverted from disposal	306-4
15.	Waste directed to disposal	306-5
16.	New employee hires and employee turnover	401-1
17.	Worker training on occupational health and safety	403-5
18.	Work-related injuries	403-9
19.	Training and Education	404-1
20.	Diversity of governance bodies and employees	405-1
21.	Operations with local community engagement, impact assessments, and development programs	413-1

- Execution of an audit trail of claims and data streams, on a selective test basis, to determine the level of accuracy in collection, transcription and aggregation processes followed;
- Review of the Company's plans, policies, and practices, pertaining to their social, environment and sustainable development, so as to be able to make comments on the fairness of sustainability

reporting.

- Review of the Company's approach towards materiality assessment disclosed in the Report to identify relevant issues
- Review of select qualitative statements in various sections of the Integrated Report FY 2022-23

We also performed such other procedures as we considered necessary in the circumstances

The assurance scope excludes:

- Data and information outside the defined reporting period (1st April 2022 to 31st March 2023)
- Data and information on economic and financial performance of the Company
- Data, statements and claims already available in the public domain through Annual Report, Integrated Report, or other sources available in the public domain
- The Company's statements that describe the expression of opinion, belief, inference, aspiration, expectation, aim, or future intention provided by the Company
- The Company's compliance with regulations, acts, guidelines with respect to various regulatory agencies and other legal matters

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that need to be made to the Integrated Annual Report FY 2022-23 for the period from 1st April 2022 to 31st March 2023, in order for it to be in accordance with the Criteria.

On the basis of our review scope and methodology to obtain 'Type 1, Moderate' level of assurance (as per AA1000 AS) our conclusions are as follows:

- **Inclusivity:** The company has described its stakeholder engagement approach and activities in the report. We are not aware of any matter that would lead us to conclude that the company has not applied the principle of inclusivity in engaging with the key stakeholder groups identified in the report.
- **Materiality:** The company has identified key issues material to its ability to create value and has described the process for materiality analysis in the Report. Nothing has come to our attention that causes us to believe that material issues so identified have been excluded from the Report by the Company.
- **Responsiveness:** We are not aware of any matter than would lead us to believe that the Company has not applied the responsiveness principle in its engagement with stakeholders identified in the Report on material aspects covering its sustainability performance.
- **Impact:** As per the information provided to us, we are not aware of any matter that would lead us to conclude that the criteria related to the impact principle has not been applied for the key stakeholders.

Restricted use

This report is intended solely for the information and use of Hindalco Industries Limited and is not intended to be and should not be used by anyone other than Hindalco Industries Limited.

Chaitanya Kalia
20/07/2023
Mumbai, India

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