

21 February 2024

Production growth of 3% from focused investment in the health of our business; underlying EBITDA of \$23.9 billion and full year ordinary dividend of 435 US cents per share

- Underlying EBITDA of \$23.9 billion. Net cash generated from operating activities of \$15.2 billion.
- Profit after tax attributable to owners of Rio Tinto (referred to as "net earnings" throughout this release) of \$10.1 billion, after \$0.7 billion of net impairment charges, mainly relating to our Australian alumina refineries.
- Underlying earnings of \$11.8 billion, leading to a full year ordinary dividend of \$7.1 billion, a 60% payout.

At year end	2023	2022	Change
Net cash generated from operating activities (US\$ millions)	15,160	16,134	(6)%
Purchases of property, plant and equipment and intangible assets (US\$ millions)	7,086	6,750	5%
Free cash flow ¹ (US\$ millions)	7,657	9,010	(15)%
Consolidated sales revenue (US\$ millions)	54,041	55,554	(3)%
Underlying EBITDA ¹ (US\$ millions)	23,892	26,272	(9)%
Profit after tax attributable to owners of Rio Tinto (net earnings) ² (US\$ millions)	10,058	12,392	(19)%
Underlying earnings per share (EPS) ^{1,2} (US cents)	725.0	824.7	(12)%
Ordinary dividend per share (US cents)	435.0	492.0	(12)%
Underlying return on capital employed (ROCE) ^{1,2}	20%	25%	
Net debt ¹ (US\$ millions)	4,231	4,188	1%

Rio Tinto Chief Executive Jakob Stausholm said: "The tragic loss of our four Diavik colleagues and two airline crew members in a plane crash last month is a devastating reminder of why safety is and must always be our top priority. We continue to work closely with the authorities to support their efforts to understand the full facts of what happened. This tragedy strengthens our resolve to never be complacent about safety, so that we continue to learn and improve.

"We are making clear progress as we shape Rio Tinto into a stronger and even more reliable company. By focusing on our four objectives, we are building a portfolio that is fit for the future - including our Oyu Tolgoi underground copper mine in Mongolia and the Simandou iron ore project in Guinea. We have taken significant steps over the past month towards our target to halve our global Scope 1 & 2 carbon emissions this decade with agreements to contract future renewable wind and solar power for our Gladstone operations.

"In 2023, we lifted our overall copper equivalent production by over 3% and delivered resilient financial results, with underlying EBITDA of \$23.9 billion, free cash flow of \$7.7 billion and underlying earnings of \$11.8 billion, after taxes and government royalties of \$8.8 billion. Our balance sheet strength enables us to continue to invest with discipline while also paying an ordinary dividend of \$7.1 billion, a 60% payout.

"We will continue paying attractive dividends and investing in the long-term strength of our business as we grow in the materials needed for a decarbonising world."

¹ This financial performance indicator is a non-IFRS (as defined below) measure which is reconciled to directly comparable IFRS financial measures (non-IFRS measures). It is used internally by management to assess the performance of the business and is therefore considered relevant to readers of this document. It is presented here to give more clarity around the underlying business performance of the Group's operations. For more information on our use of non-IFRS financial measures in this report, see the section entitled "Alternative performance measures" (APMs) and the detailed reconciliations on pages 40 to 49. Our financial results are prepared in accordance with IFRS — see page 35 for further information. Other footnotes are set out in full on page 25.

² Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

Resilient financial results, steady improvement in operational performance

Safety is our top priority. While we had zero fatalities at our managed operations in 2023, tragically four colleagues and two airline crew members died in a plane crash while travelling to our Diavik diamond mine in Canada in January 2024.

Our team is committed to learning how we continuously improve safety. This remains imperative throughout 2024.

By focusing on our four objectives, and prioritising the health of our assets, our ore body knowledge and our people, we have improved our operational performance and delivered resilient financial results. We have maintained a strong financial position, which allows us to invest for the future to deliver profitable growth, while also continuing to pay attractive returns.

As part of our focus on Best Operator, we continue to roll out the Safe Production System across our business. This is a multi-year process, which is already delivering real improvements in our Pilbara iron ore operations, realising a 5 million tonne production uplift in 2023. We expect to deliver another 5 million tonne uplift in 2024.

In line with our Excel in Development objective, we advanced a number of projects, including making significant progress at the Simandou iron ore project in Guinea, in collaboration with our joint venture partners. We achieved first sustainable production at the Oyu Tolgoi copper-gold mine in Mongolia, which remains on track to ramp up to 500 thousand tonnes³ of copper per year from 2028 to 2036. In our aluminium business, we are investing in a significant AP60 expansion and gradually closing our Arvida smelter, in operation since 1926. We also acquired a 50% equity stake in Matalco from Giampaolo Group for \$738 million to become a leader in recycled aluminium supply in North America. We are making real progress in shaping our portfolio for the future, with new technology developments and one of the most exciting exploration pipelines for many years.

The low-carbon transition continues to be at the heart of our strategy, aligned with our objective of achieving impeccable ESG credentials. In 2023, our Scope 1 and 2 emissions were 32.6Mt CO₂e (32.7Mt⁴ in 2022), 6% below our (restated and adjusted) 2018 baseline of 34.5Mt CO₂e⁴.

We continue to progress our six large carbon abatement programs, focusing on repowering our Pacific Aluminium operations, renewable energy, aluminium anodes, alumina process heat, minerals processing and diesel transition. In 2023, we made significant progress with our decarbonisation commitments, with two sites fully transitioning to renewable diesel (Boron is complete and we have announced that Kennecott will transition in 2024). We also focused on progressing our other promising new technologies including BlueSmelting™, Elysis™ and Nuton™. Key to achieving our 2030 Scope 1 and 2 decarbonisation target is the repowering of our Gladstone operations in Queensland: our substantial efforts in 2023 have resulted in us signing two major renewable Power Purchase Agreements in early 2024, one for solar and one for wind.

A significant development with respect to potentially reducing Scope 3 emissions, was the [announcement](#) in February 2024 of a new partnership with BHP and BlueScope to jointly investigate the development of Australia's first ironmaking Electric Smelting Furnace (ESF, also known as Electric Melter) pilot plant. This will consolidate the work each party has completed to date, leveraging both BHP's and Rio Tinto's deep knowledge of Pilbara iron ores with BlueScope's unique operating experience in ESF technology. We also continued to advance our pioneering Biolron™ technology, which has the potential to support low CO₂ steelmaking and significantly reduce our Scope 3 emissions. For further detail, please refer to our [2023 Climate Change Report](#) released today.

Inclusion and diversity are imperative for the sustainable success of the business. We increased our gender diversity to 24.3% (from 22.9% in 2022). The increases were distributed across all levels of the organisation with female senior leaders increasing to 30.1% (from 28.3% in 2022).

Other footnotes are set out in full on page 25.

Guidance

- Our share of capital investment (non-IFRS measure, refer to APMs on page 46) is unchanged from the 2023 Investor Seminar. In 2024, 2025 and 2026 it is expected to be up to \$10.0 billion per year, including up to \$3.0 billion in growth per year, depending on opportunities. Each year also includes sustaining capital of around \$4.0 billion and \$2.0 to \$3.0 billion of replacement capital. Sustaining capital includes around \$1.5 billion over the next three years on decarbonisation projects (\$5 to \$6 billion in total up to 2030). This remains subject to Traditional Owner and other stakeholder engagement, regulatory approvals and technology developments. All capital guidance is subject to ongoing inflationary pressures and exchange rates.
- In 2024, we expect our ongoing exploration and evaluation expense (excluding Simandou) to be around \$1.0 billion. We have been capitalising all qualifying Simandou costs from the fourth quarter of 2023: our guidance assumes this continues.
- In the coming years, we expect to spend (on a cash basis) around \$1 billion per year on closure activities (\$0.8 billion in 2023) as we advance our closure activities at Argyle, Energy Resources of Australia (ERA), the Gove alumina refinery and legacy sites. Spend will vary from year to year as we execute individual programs of work and optimise investment across the portfolio. In 2024, spending may be somewhat above this level as we consider one-off investment options to reduce our exposure over the longer term.
- Effective tax rate on underlying earnings is expected to be around 30% in 2024.

Unit costs	2023 Actuals	2024 Guidance
Pilbara iron ore unit cash costs, free on board (FOB) basis - US\$ per wet metric tonne	21.5	21.75-23.50
Australian dollar exchange rate	0.66	0.66
Copper C1 unit costs (includes Kennecott, Oyu Tolgoi and Escondida) - US cents per lb	195	140-160

- 2024 guidance for Pilbara unit cash costs reflects the increased work effort in the mines and persistent labour and parts inflation in Western Australia.
- Our Copper C1 unit costs are expected to decrease in 2024, primarily driven by higher volumes at Oyu Tolgoi as the underground continues to ramp up and at Kennecott, where refined copper volumes are expected to increase following the planned smelter rebuild in 2023.

Production (Rio Tinto share, unless otherwise stated)	2023 Actuals	2024 Guidance
Pilbara iron ore (shipments, 100% basis) (Mt)	331.8	323 to 338
Bauxite (Mt)	54.6	53 to 56
Alumina (Mt)	7.5	7.6 to 7.9
Aluminium (Mt)	3.3	3.2 to 3.4
Mined copper (consolidated basis) (kt) ⁵	620	660 to 720
Refined copper (kt)	175	230 to 260
Titanium dioxide slag (Mt)	1.1	0.9 to 1.1
Iron Ore Company of Canada iron ore pellets and concentrate (Mt)	9.7	9.8 to 11.5
Boric oxide equivalent (Mt)	0.5	~0.5

Production guidance is consistent with our Fourth Quarter Operations Review, released on 16 January 2024.

- Iron ore shipments and bauxite production guidance remain subject to weather impacts. Pilbara shipments include SP10 products, which are expected to remain elevated until replacement projects are delivered. Levels are dependent on the timing of approvals for planned mining areas, including heritage clearances.

Footnotes set out in full on page 25.

Financial performance

Income Statement

Underlying EBITDA

To provide additional insight into the performance of our business, we report underlying EBITDA and underlying earnings. Underlying EBITDA and underlying earnings are non-IFRS measures. For definitions and a detailed reconciliation of underlying EBITDA and underlying earnings to the nearest IFRS measures, see pages [40](#) to [44](#), respectively.

The principal factors explaining the movements in underlying EBITDA are set out in this table.

	US\$bn
2022 underlying EBITDA	26.3
Prices	(1.5)
Exchange rates	0.6
Volumes and mix	0.4
General inflation	(0.4)
Energy	0.4
Operating cash unit costs	(1.4)
Higher exploration and evaluation expenditure (net of profit from disposal of interests in undeveloped projects)	(0.3)
Non-cash costs/other	(0.2)
Change in underlying EBITDA	(2.4)
2023 underlying EBITDA	23.9

Resilient financial results, primarily impacted by commodity price movements

In general, we saw lower prices for our commodities, as supply improved, outpacing modest demand growth.

Movements in commodity prices resulted in a \$1.5 billion decline in underlying EBITDA overall compared with 2022. This was primarily from lower pricing for our Aluminium business, driven by London Metal Exchange (LME) prices, lower premiums and lower alumina pricing. Higher realised pricing in our Iron Ore business was offset by lower pricing for copper, diamonds and industrial minerals. We have included a table of prices and exchange rates on page [50](#).

The monthly average Platts index for 62% iron fines converted to a Free on Board (FOB) basis was 0.5% higher, on average, compared with 2022.

The average LME price for copper was 3% lower, the average LME aluminium price was 17% lower while the gold price was 8% higher compared with 2022.

The Midwest premium duty paid for aluminium in the US averaged \$512 per tonne, 22% lower than in 2022.

Benefit from weaker local currencies in 2023

Compared with 2022, on average, the US dollar strengthened by 4% against the Australian dollar and by 4% against the Canadian dollar. Currency movements increased underlying EBITDA by \$0.6 billion relative to 2022.

Improvement in sales volumes but weaker mix

Higher sales volumes across the portfolio increased underlying EBITDA by \$0.7 billion compared to 2022. This was mostly attributable to a 3% increase in Pilbara iron ore shipments, with the Gudai-Darri mine reaching full capacity, partly offset by lower portside sales volumes (down 4%). Higher copper sales were driven by the ramp-up of the Oyu Tolgoi underground mine. This was partly offset

by lower margins achieved due to our product mix (-\$0.3 billion) mainly associated with a reduced proportion of Aluminium VAP sales and following high quality diamond sales in 2022.

Impact of inflation offset by lower energy prices

We saw a \$0.4 billion benefit to underlying EBITDA on the easing of energy prices compared to 2022, mainly related to lower diesel prices at our Pilbara iron ore operations, lower energy prices at our alumina refineries and aluminium smelters, along with lower fuel prices in our Marine business. General price inflation across our global operations resulted in a net \$0.4 billion reduction in underlying EBITDA, which includes a \$0.2 billion year-on-year benefit from the impact of inflation on closure provisions.

Unit cost pressures persist due to temporary operational factors and weaker markets: some easing of market-linked raw material prices in second half

We remain focused on cost control, in particular maintaining discipline on fixed costs, which are expected to be broadly flat in 2024. While inflation has eased, we continued to see lag effects in its impact on our third party costs, such as contractor rates, consumables and some raw materials; we expect this to stabilise in 2024.

In the second half of 2023, we started to see some easing of market-linked prices for key raw materials such as caustic, coke and pitch: these benefited underlying EBITDA by \$0.2 billion.

Temporary operational issues reduced underlying EBITDA by \$0.6 billion. We saw a 20% rise in Copper C1 unit costs, primarily driven by lower refined volumes at Kennecott following the planned rebuild of the smelter and refinery. In Minerals, fixed unit cash costs increased at Iron Ore Company of Canada (IOC), driven by lower production following the wildfires in Northern Quebec in June as well as extended plant downtime and conveyor belt failures in the third quarter.

Other cost pressures and weaker market demand lowered underlying EBITDA by \$1.0 billion. In Minerals, we experienced market weakness for many of our products, in particular for TiO₂ feedstock, which gave rise to lower volumes and resulting higher unit costs. In the Pilbara, a higher mine work index and investment in mine maintenance and system health were in part offset by cost efficiencies on delivering increased volumes. In Aluminium, we invested in improving the integrity across our integrated operations.

Overall, we continue to experience tightness in our key labour markets, in Western Australia, Quebec and Utah, which raised costs above general inflation. We also entered into a new collective bargaining agreement at IOC and applied the new labour law in Mongolia.

We have also increased our investment in decarbonisation, research & development, technology, along with communities and social investment to deliver on our four objectives.

Increasing our global exploration and evaluation activity

Our ongoing exploration and evaluation expenditure in 2023 was \$0.9 billion, compared with guidance of \$1.0 billion and \$0.7 billion in 2022. The increase was mainly attributable to increased activity at the Rincon lithium project in Argentina and across the other product group projects. We also expensed costs associated with the Simandou iron ore project in Guinea (included in underlying EBITDA on a 100% basis): these increased from \$0.2 billion to \$0.5 billion, with qualifying Simandou costs being capitalised from the fourth quarter of 2023. These expenditures were partly offset by a \$0.2 billion gain on disposal of 55% of our interest in the La Granja copper project in Peru to First Quantum Minerals in 2023, leading to a net charge to the Income Statement of \$1.2 billion (2022: \$0.9 billion).

Net earnings

The principal factors explaining the movements in underlying earnings and net earnings are set out below.

	US\$bn
2022 net earnings	12.4
Changes in underlying EBITDA (see above)	(2.4)
Increase in depreciation and amortisation (pre-tax) in underlying earnings	(0.1)
Decrease in interest and finance items (pre-tax) in underlying earnings	0.2
Increase in tax on underlying earnings	(0.2)
Decrease in underlying earnings attributable to outside interests	0.8
Total changes in underlying earnings	(1.6)
Changes in items excluded from underlying earnings (see below)	(0.7)
2023 net earnings	10.1

Financial figures are rounded to the nearest million, hence small differences may result in the totals. Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

Increase in tax on underlying earnings

The effective tax rate on underlying earnings in 2023 was 30% compared with 26% in 2022. Consequently the tax on underlying earnings increased by \$0.2 billion despite a decrease in underlying EBITDA. The rate in 2023 was in line with guidance, whereas the 2022 rate was lower due to the recognition of additional deferred tax assets in respect of Oyu Tolgoi and adjustments in respect of prior periods.

Decrease in underlying earnings attributable to outside interests

We completed the acquisition of Turquoise Hill Resources' non-controlling interests in December 2022, which resulted in a reduction of Oyu Tolgoi's earnings being attributable to outside interests and therefore a higher share of income being attributable to Rio Tinto. The ramp-up of exploration and evaluation spend at Simandou resulted in greater charges attributable to outside interests given our 45.05% effective interest in the project.

Items excluded from underlying earnings

The differences between underlying earnings and net earnings are set out in this table (all numbers are after tax and exclude amounts attributable to non-controlling interests).

Year ended 31 December	2023 US\$bn	2022 US\$bn
Underlying earnings	11.8	13.4
Items excluded from underlying earnings		
Net impairment charges	(0.7)	(0.1)
Change in closure estimates (non-operating and fully impaired sites)	(1.1)	(0.2)
Foreign exchange and derivative gains on net debt and intragroup balances and derivatives not qualifying for hedge accounting	(0.3)	(0.1)
Deferred tax arising on internal sale of assets in Canadian operations	0.4	—
Gains recognised by Kitimat relating to LNG Canada's project	—	0.1
Loss on disposal of interest in subsidiary	—	(0.1)
Gain on sale of Cortez royalty	—	0.3
Write-off of Federal deferred tax assets in the United States	—	(0.9)
Total items excluded from underlying earnings	(1.7)	(1.0)
Net earnings	10.1	12.4

Financial figures are rounded to the nearest million, hence small differences may result in the totals. Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

On pages [43](#) to [44](#) there is a detailed reconciliation from net earnings to underlying earnings, including pre-tax amounts and additional explanatory notes. The differences between profit after tax and underlying EBITDA are set out in the table on page [40](#).

We recognised net impairment charges of \$0.7 billion (after tax), mainly related to our alumina refineries in Queensland, taken in the first half of 2023. This was triggered by the challenging market conditions facing these assets, together with our improved understanding of the capital requirements for decarbonisation and the recently legislated cost escalation for carbon emissions. For a detailed explanation of the impairment process, refer to note 4 to the Financial Statements in the *2023 Annual Report*. The signing of key agreements with the Government of Guinea and other joint venture partners for co-development of the infrastructure for the Simandou iron ore project gave rise to an impairment reversal trigger, for amounts which had been fully impaired in 2015. Previously capitalised exploration and evaluation costs associated with the mine and retained items of property, plant and equipment totalling \$0.2 billion (after tax and outside interests) have therefore been reversed.

We excluded \$1.1 billion of closure cost charges from underlying earnings, of which \$850 million related to the closure update announced by Energy Resources of Australia (ERA) on 12 December 2023. This was considered material and was therefore aggregated with other closure study updates in the second half of 2023 which were similar in nature. These other updates were at legacy sites and at the Yarwun alumina refinery, which was expensed due to the impairment earlier in the year.

We recognised an exchange and derivative loss of \$0.3 billion (2022: loss of \$0.1 billion). The exchange losses are largely offset by currency translation gains recognised in equity. The quantum of US dollar debt is largely unaffected and we will repay it from US dollar sales receipts.

Our Canadian aluminium business completed an internal sale of assets. This resulted in the utilisation of previously unrecognised capital losses and an uplift in the tax depreciable value of assets on which a deferred tax asset of \$0.4 billion has been recognised.

Net earnings and underlying earnings refer to amounts attributable to the owners of Rio Tinto. The net profit attributable to the owners of Rio Tinto in 2023 was \$10.1 billion (2022: \$12.4 billion). We recorded a profit after tax in 2023 of \$10.0 billion (2022: \$13.0 billion) of which a loss of \$0.1 billion was attributable to non-controlling interests (2022 profit: \$0.7 billion).

Underlying EBITDA and underlying earnings by product group

Year ended 31 December	Underlying EBITDA			Underlying earnings		
	2023 US\$bn	2022 US\$bn	Change %	2023 US\$bn	2022 US\$bn	Change %
Iron Ore	20.0	18.6	7 %	11.9	11.2	6 %
Aluminium	2.3	3.7	(38)%	0.5	1.5	(64)%
Copper	1.9	2.6	(26)%	0.1	0.7	(81)%
Minerals	1.4	2.4	(42)%	0.3	0.9	(63)%
Reportable segment total	25.6	27.3	(6)%	12.9	14.3	(10)%
Simandou iron ore project	(0.5)	(0.2)	185 %	(0.2)	(0.1)	10 %
Other operations	—	—	— %	(0.3)	(0.3)	(28)%
Central pension costs, share-based payments, insurance and derivatives	0.2	0.4	(55)%	—	0.4	(87)%
Restructuring, project and one-off costs	(0.2)	(0.2)	10 %	(0.1)	(0.1)	32 %
Other central costs	(1.0)	(0.8)	29 %	(0.9)	(0.7)	29 %
Central exploration and evaluation	(0.1)	(0.3)	(60)%	(0.1)	(0.2)	(71)%
Net interest				0.3	0.1	130 %
Total	23.9	26.3	(9)%	11.8	13.4	(12)%

Financial figures are rounded to the nearest million, hence small differences may result in the totals and period-on-period change.

Underlying EBITDA and underlying earnings are non-IFRS measures used by management to assess the performance of the business and provide additional information which investors may find useful. For more information on our use of non-IFRS financial measures in this report, see the section entitled "Alternative performance measures" (APMs) and the detailed reconciliations on pages 40 to 49.

Simandou iron ore project

Costs attributable to the Simandou project in Guinea increased from \$0.2 billion to \$0.5 billion (100% basis at underlying EBITDA level) on ramp-up of project activity in 2023. We commenced capitalising qualifying spend on Simandou from the fourth quarter of 2023, with \$0.3 billion included in capital expenditure (100% basis).

Central and other costs

Pre-tax central pension costs, share-based payments, insurance and derivatives were a \$0.2 billion credit compared with a \$0.4 billion credit in 2022, reflecting movement on derivatives in the two years.

On a pre-tax basis, restructuring, project and one-off central costs were mainly associated with corporate projects and were comparable to 2022.

Other central costs of \$1.0 billion were 29% higher than 2022, reflecting increased investment in decarbonisation, research & development and technology. Our core central costs increased in line with inflation.

On an underlying earnings basis, net interest was a credit of \$0.3 billion (2022: credit of \$0.1 billion), reflecting Rio Tinto's increased interest in Oyu Tolgoi and the related financing items following the acquisition of Turquoise Hill minorities in 2022.

Continuing to invest in greenfield exploration

We have a strong portfolio of greenfield exploration projects in early exploration and studies stages, with activity in 18 countries across eight commodities. This is reflected in our pre-tax central spend of \$0.3 billion. The bulk of this expenditure in 2023 focused on copper in Australia, Chile, Colombia, Namibia, the United States and Zambia; diamonds in Canada; nickel in Brazil, Canada and Peru; heavy mineral sands in South Africa; and potash in Canada. We recently partnered with Codelco on the Nuevo Cobre copper project in the prospective Atacama region in Chile and with Charger Metals on the Lake Johnston lithium project in the Yilgarn, Western Australia. This spend is offset by the gain recognised on disposal of 55% of our interest in the La Granja copper project (\$0.2 billion, pre-tax).

Cash flow

	2023	2022
Year ended 31 December	US\$bn	US\$bn
Net cash generated from operating activities	15.2	16.1
Purchases of property, plant and equipment and intangible assets	(7.1)	(6.8)
Lease principal payments	(0.4)	(0.4)
Free cash flow¹	7.7	9.0
Dividends paid to equity shareholders	(6.5)	(11.7)
Acquisitions	(0.8)	(0.9)
Purchase of the minority interest in Turquoise Hill Resources Ltd	—	(3.0)
Disposals	—	0.1
Cash receipt from sale of Cortez royalty	—	0.5
Other	(0.4)	0.2
Movement in net debt/cash¹	—	(5.8)

Financial figures are rounded to the nearest million, hence small differences may result in the totals.

Footnotes are set out in full on page 25.

- \$15.2 billion in net cash generated from operating activities, 6% lower than 2022, primarily driven by price movements for our major commodities and a \$0.9 billion rise in working capital, partly offset by lower taxes paid. The cash outflow from the working capital increase was driven by healthy stocks in the Pilbara, still elevated in-process inventory at Kennecott following the extended smelter rebuild and higher working capital at Iron & Titanium, reflective of weaker market conditions. Receivables also reflected a 20% higher iron ore price at 2023 year end (vs 2022) that will be monetised in 2024. Operating cash flow was also impacted by lower dividends, primarily from Escondida (\$0.6 billion in 2023; \$0.9 billion in 2022).
- Taking into account the timing of payments in Australia, taxes paid of \$4.6 billion in 2023 were at a similar level to 2022, which included around \$1.5 billion of payments related to prior years.
- Our capital expenditure of \$7.1 billion was comprised of \$1.0 billion of growth (\$0.9 billion on a Rio Tinto share basis), \$1.6 billion of replacement, \$4.3 billion of sustaining and \$0.2 billion of decarbonisation capital (in addition to \$0.2 billion of decarbonisation spend in operating costs). We expect to spend around \$4.0 billion each year on sustaining capital; spend in 2023 included the smelter and refinery rebuild at Kennecott (\$0.3 billion) and targeted investment in asset health in Iron Ore and Aluminium. We funded our capital expenditure from operating activities and generally expect to continue funding our capital program from internal sources.
- \$6.5 billion of dividends paid in 2023, being the 2022 final ordinary and the 2023 interim ordinary dividends.
- \$0.8 billion of acquisitions related to the Matalco recycling joint venture and the Nuevo Cobre exploration joint venture with Codelco.
- The above movements, together with \$0.4 billion of other movements, resulted in net debt¹ remaining stable year-on-year at \$4.2 billion at 31 December 2023.

Balance sheet

Net debt¹ of \$4.2 billion was unchanged at 31 December 2023 compared to the prior year end.

Our net gearing ratio¹ (net debt/(cash) to total capital) was 7% at 31 December 2023 (31 December 2022: 7%). See page [49](#).

Our total financing liabilities excluding net debt derivatives at 31 December 2023 (see page [48](#)) were \$14.4 billion (31 December 2022: \$12.3 billion) and the weighted average maturity was around 12 years. At 31 December 2023, approximately 68% of these liabilities were at floating interest rates (75% excluding leases). The maximum amount within non-current borrowings maturing in any one calendar year is \$1.65 billion, which matures in 2033.

On 7 March 2023, we [priced](#) \$650 million of 10-year fixed rate SEC-registered debt securities and \$1.1 billion of 30-year fixed rate SEC-registered debt securities. The 10-year notes will pay a coupon of 5.000 per cent and will mature 9 March 2033 and the 30-year notes will pay a coupon of 5.125 per cent and will mature 9 March 2053.

We had \$10.5 billion in cash and cash equivalents plus other short-term cash investments at 31 December 2023 (31 December 2022: \$8.8 billion).

Provision for closure costs

At 31 December 2023, provisions for close-down and restoration costs and environmental clean-up obligations were \$17.2 billion (31 December 2022: \$15.8 billion). The increase was largely due to revised closure estimates following new studies at certain operations and legacy sites, including ERA, together with the amortisation of discount (\$1.0 billion), which includes the effect of elevated inflation for the year. This was partly offset by a revision of the closure discount rate to 2.0% (from 1.5%), reflecting expectations of higher yields from long-dated bonds, which resulted in a \$1.1 billion decrease in the provision. \$0.8 billion of the provision was also utilised through spend in 2023.

Our shareholder returns policy

The Board is committed to maintaining an appropriate balance between cash returns to shareholders and investment in the business, with the intention of maximising long-term shareholder value.

At the end of each financial period, the Board determines an appropriate total level of ordinary dividend per share. This takes into account the results for the financial year, the outlook for our major commodities, the Board's view of the long-term growth prospects of the business and the company's objective of maintaining a strong balance sheet. The intention is that the balance between the interim and final dividend be weighted to the final dividend.

The Board expects total cash returns to shareholders over the longer term to be in a range of 40% to 60% of underlying earnings in aggregate through the cycle. Acknowledging the cyclical nature of the industry, it is the Board's intention to supplement the ordinary dividend with additional returns to shareholders in periods of strong earnings and cash generation.

60% payout ratio on the ordinary dividend delivers an eight-year track record

	2023 US\$bn	2022 US\$bn
Ordinary dividend		
Interim ¹	2.9	4.3
Final ¹	4.2	3.7
Full-year ordinary dividend	7.1	8.0
Payout ratio on ordinary dividend	60%	60%

¹ Based on weighted average number of shares and declared dividends per share for the respective periods and excluding foreign exchange impacts on payment.

We determine dividends in US dollars. We declare and pay Rio Tinto plc dividends in pounds sterling and Rio Tinto Limited dividends in Australian dollars. The 2023 final dividend has been converted at exchange rates applicable on 20 February 2024 (the latest practicable date before the dividend was declared). American Depositary Receipt (ADR) holders receive dividends at the declared rate in US dollars.

Ordinary dividend per share declared	2023	2022
Rio Tinto Group		
Interim (US cents)	177.00	267.00
Final (US cents)	258.00	225.00
Full-year (US cents)	435.00	492.00
Rio Tinto plc		
Interim (UK pence)	137.67	221.63
Final (UK pence)	203.77	185.35
Full-year (UK pence)	341.44	406.98
Rio Tinto Limited		
Interim (Australian cents)	260.89	383.70
Final (Australian cents)	392.78	326.49
Full-year (Australian cents)	653.67	710.19

The 2023 final ordinary dividend to be paid to our Rio Tinto Limited shareholders will be fully franked. The Board expects Rio Tinto Limited to be in a position to pay fully franked dividends for the foreseeable future.

On 18 April 2024, we will pay the 2023 final ordinary dividend to holders of ordinary shares and holders of ADRs on the register at the close of business on 8 March 2024 (record date). The ex-dividend date is 7 March 2024.

Rio Tinto plc shareholders may choose to receive their dividend in Australian dollars or New Zealand dollars, and Rio Tinto Limited shareholders may choose to receive theirs in pounds sterling or New Zealand dollars. Currency conversions will be based on the pound sterling, Australian dollar and New

Zealand dollar exchange rates five business days before the dividend payment date. Rio Tinto plc and Rio Tinto Limited shareholders must register their currency elections by 26 March 2024.

We will operate our Dividend Reinvestment Plans for the 2023 final dividend (visit riotinto.com for details). Rio Tinto plc and Rio Tinto Limited shareholders' election notice for the Dividend Reinvestment Plans must be received by 26 March 2024. Purchases under the Dividend Reinvestment Plan are made on or as soon as practicable after the dividend payment date and at prevailing market prices. There is no discount available.

Capital projects

Project (Rio Tinto 100% owned unless otherwise stated)	Total capital cost (100% unless otherwise stated)	Capital remaining to be spent from 1 Jan 2024	Status/Milestones
Ongoing			
Iron ore			
Investment in the Western Range iron ore project, a joint venture between Rio Tinto (54%) and China Baowu Steel Group Co. Ltd (46%) in the Pilbara to sustain production of the Pilbara Blend™ from Rio Tinto's existing Paraburdoo hub. First production is anticipated in 2025.	\$1.3bn (Rio Tinto share) ⁶	\$0.8bn (Rio Tinto share)	Approved in September 2022, the mine will have a capacity of 25 million tonnes per year. The project includes construction of a primary crusher and an 18 kilometre conveyor connection to the Paraburdoo processing plant. Construction is currently on schedule with civil work well advanced, while we continue to progress primary crusher works, bulk earthworks and mine pre-strip.
Investment in the Simandou iron ore project in Guinea in partnership with CIOH, a Chinalco-led consortium (the Simfer joint venture) and co-development of the rail and port infrastructure with Winning Consortium Simandou ⁷ (WCS), Baowu and the Republic of Guinea (the partners). Overall, the co-developed infrastructure represents more than 600 kilometres of new multi-user (including passenger and general freight services) rail together with port facilities to be co-developed by the partners to allow the export of up to 120 million tonnes per year of iron ore mined by Simfer's and WCS's respective mining concessions. ⁸	\$6.2bn ⁹ (estimated Rio Tinto share)	\$5.7bn (estimated Rio Tinto share)	Announced in December 2023, the Simfer joint venture ¹⁰ will develop, own and operate a 60 million tonne per year ¹¹ mine in blocks 3 & 4. First production at the mine is expected in 2025, ramping up over 30 months to an annualised capacity of 60 million tonnes per year (27 million tonnes Rio Tinto share). WCS will construct the project's ~536 kilometre dual track main line as well as the WCS barge port, while Simfer will construct the ~70 kilometre spur line, connecting its mining concession to the main rail line. Pending completion and commissioning of its 60 million tonne per year transshipment vessel port, Simfer will be able to export its ore using WCS's barge port. The Rio Tinto Board has approved the project, subject to the remaining conditions being met, including joint venture partner approvals and regulatory approvals ¹² from China and Guinea.
Aluminium			
Investment to expand the low-carbon AP60 aluminium smelter at the Complexe Jonquière in Quebec. The investment includes up to \$113 million of financial support from the Quebec government.	\$1.1bn	\$1.0bn	Approved in June 2023, the investment will add 96 AP60 pots, representing 160,000 tonnes of primary aluminium per year, replacing the Arvida smelter which is set to gradually close from 2024. We continued early works for the expansion of the AP60 smelter. Commissioning is expected in the first half of 2026, with the smelter fully ramped up by the end of that year. Once completed, it is expected to be in the first quartile of the industry operating cost curve.
Copper			
Phase two of the south wall pushback to extend mine life at Kennecott in Utah by a further six years.	\$1.8bn	\$1.2bn	Approved in December 2019, the investment will further extend strip waste rock mining and support additional infrastructure development. This will allow mining to continue into a new area of the orebody between 2026 and 2032. In March 2023, a further \$0.3 billion was approved to primarily mitigate the risk of failure in an area of geotechnical instability known as Revere, necessary to both protect open pit value and enable underground development.

Project (Rio Tinto 100% owned unless otherwise stated)	Total capital cost (100% unless otherwise stated)	Capital remaining to be spent from 1 Jan 2024	Status/Milestones
Investment in the Kennecott underground development of the North Rim Skarn (NRS) area.	\$0.5bn	\$0.5bn	Approved in June 2023, production from NRS ¹³ will commence in the first quarter of 2025 (previously 2024) and is expected to ramp up over two years, to deliver around 250,000 tonnes of additional mined copper over the next 10 years ¹⁴ alongside open cut operations.
Development of the Oyu Tolgoi underground copper-gold mine in Mongolia (Rio Tinto 66%), which is expected to produce (from the open pit and underground) an average of ~500,000 tonnes ³ of copper per year from 2028 to 2036.	\$7.06bn	\$1.0bn	We delivered first sustainable underground production from Panel 0 in March 2023. The commissioning of infrastructure for ramp-up to full capacity remains on target: we expect shafts 3 and 4 and the conveyor to surface in the second half of 2024, while the concentrator conversion is expected to be progressively completed from the fourth quarter of 2024 through to the second quarter of 2025. Construction of primary crusher 2 commenced in December 2023 and is due to be complete by the end of 2025.

Future options

	Status
Iron Ore: Pilbara brownfields	
Over the medium term, our Pilbara system capacity remains between 345 and 360 million tonnes per year. Meeting this range, and the planned product mix, will require the approval and delivery of the next tranche of replacement mines over the next five years.	In addition to Western Range (Greater Paraburdoo), which is under construction, we continue to progress studies for Hope Downs 1 (Hope Downs 2 and Bedded Hilltop), Brockman 4 (Brockman Syncline 1), Greater Nammuldi and West Angelas. We continue to work closely with local communities, Traditional Owners and governments to progress approvals for these new mining projects.
Iron Ore: Rhodes Ridge	
In October 2022, Rio Tinto (50%) and Wright Prospecting Pty Ltd (50%) agreed to modernise the joint venture covering the Rhodes Ridge project in the Eastern Pilbara, providing a pathway for development utilising Rio Tinto's rail, port and power infrastructure.	A resource-drilling program is currently underway to support future project studies. In December 2023, we announced approval of a \$77 million pre-feasibility study (PFS). This follows completion of an Order of Magnitude study that considered development of an operation with initial capacity of up to 40 million tonnes per year, subject to relevant approvals. Completion of the PFS is expected by the end of 2025 and will be followed by a feasibility study, with first ore expected by the end of the decade. Longer term, the resource could support a world-class mining hub with a potential capacity of more than 100 million tonnes of high-quality iron ore a year.
Lithium: Jadar	
Development of the greenfield Jadar lithium-borates project in Serbia will include an underground mine with associated infrastructure and equipment, including electric haul trucks, as well as a beneficiation chemical processing plant.	The Board committed funding in July 2021, subject to receiving all relevant approvals, permits and licences. We are focused on consultation with all stakeholders to explore all options following the Government of Serbia's cancellation of the Spatial Plan in January 2022.
Lithium: Rincon	
We completed the acquisition of the Rincon Lithium project in Salta province, Argentina in March 2022. Development of a 3,000 tonne per year battery-grade lithium carbonate starter plant is ongoing with first saleable production expected at the end of 2024. Studies are continuing on the full-scale plant, which will have benefits of economies of scale, with the capital intensity, based on current stage of studies, forecast to be in line with regional lithium industry benchmarks.	In July 2022, we approved \$140 million of investment and \$54 million for early works to support a full-scale operation. To date, the majority of costs have been expensed through exploration and evaluation expenditure. In July 2023, we approved a further \$195 million to complete the starter plant: the increase was driven by the project now being fully defined (previously conceptual), scope adjustments to design (including column performance improvements and changes to waste and spent brine disposal facilities), rising capital costs across the lithium industry, particularly for processing equipment and from broad cost escalation in Argentina.
Mineral Sands: Zulti South	
Development of the Zulti South project at Richards Bay Minerals (RBM) in South Africa (Rio Tinto 74%).	Approved in April 2019 to underpin RBM's supply of zircon and ilmenite over the life of the mine. The project remains on full suspension.
Copper: Resolution	
The Resolution Copper project is a proposed underground copper mine in the Copper Triangle, in Arizona, US (Rio Tinto 55%). It has the potential to supply up to 25% of US copper demand.	The United States Forest Service (USFS) continued work to progress the Final Environmental Impact Statement and complete actions necessary for the land exchange. We continued to advance partnership discussions with several federally-recognised Native American Tribes who are part of the formal consultation process. We are also monitoring the Apache Stronghold versus USFS case held in the US Ninth Circuit Court of Appeals. While there is significant local support for the project, we respect the views of groups who oppose it and will continue our efforts to address and mitigate these concerns.

Copper: Winu

In late 2017, we discovered copper-gold mineralisation at the Winu project in the Paterson Province in Western Australia. In 2021, we reported our first Indicated Mineral Resource. The pathway remains subject to regulatory and other required approvals.

In parallel, we continue to explore options aimed at enhancing project value, including further optimisation of the current pathway and alternative development models and partnerships.

In 2023, Project Planning Agreements were executed with the Nyangumarta and Martu groups, the Traditional Owners of the land on which the proposed Winu mine and airstrip will be located. Study activities, drilling and fieldwork progressed sufficiently to commence Winu's formal Western Australian Environmental Protection Authority approval process. The environmental approval deliverables and Project Agreement negotiations with both Traditional Owner groups remain the priority.

Copper: La Granja

In August 2023, we completed a transaction to form a joint venture with First Quantum Minerals that will work to unlock the development of the La Granja project in Peru, one of the largest undeveloped copper deposits in the world, with potential to be a large, long-life operation.

First Quantum Minerals acquired a 55% stake in the project for \$105 million and will invest up to a further \$546 million into the joint venture to sole fund capital and operational costs to take the project through a feasibility study and toward development. All subsequent expenditures will be applied on a pro-rata basis in line with shared ownership.

Aluminium: ELYSIS

ELYSIS, our joint venture with Alcoa, supported by Apple, the Government of Canada and the Government of Quebec, is developing a breakthrough inert anode technology that eliminates all direct greenhouse gases from the aluminium smelting process.

ELYSIS has started commissioning activities following completion of the construction of the first commercial-scale prototype cells. ELYSIS expects to start the first 450kA cell in 2024.

Review of operations

Iron Ore

Year ended 31 December	2023	2022	Change
Pilbara production (million tonnes — 100%)	331.5	324.1	2 %
Pilbara shipments (million tonnes — 100%)	331.8	321.6	3 %
Salt production (million tonnes — Rio Tinto share) ¹	6.0	5.8	4 %
Segmental revenue (US\$ millions)	32,249	30,906	4 %
Average realised price (US\$ per dry metric tonne, FOB basis)	108.4	106.1	2 %
Underlying EBITDA (US\$ millions)	19,974	18,612	7 %
Pilbara underlying FOB EBITDA margin ²	69%	68%	
Underlying earnings (US\$ millions) ³	11,882	11,213	6 %
Net cash generated from operating activities (US\$ millions)	14,045	14,005	— %
Capital expenditure (US\$ millions) ⁴	(2,588)	(2,940)	(12)%
Free cash flow (US\$ millions)	11,374	11,033	3 %
Underlying return on capital employed ^{3, 5}	64%	61%	

Production figures are sometimes more precise than the rounded numbers shown, hence small differences may result in the year on year change.

1. Dampier Salt is reported within Iron Ore, reflecting management responsibility. Iron Ore Company of Canada continues to be reported within Minerals. The Simandou iron ore project in Guinea reports to the Chief Technical Officer and is reported outside the Reportable segments.
2. The Pilbara underlying free on board (FOB) EBITDA margin is defined as Pilbara underlying EBITDA divided by Pilbara segmental revenue, excluding freight revenue.
3. Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
4. Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment; capitalised evaluation costs; and purchases less sales of other intangible assets.
5. Underlying return on capital employed (ROCE) is defined as underlying earnings excluding net interest divided by average capital employed.

Financial performance

Underlying EBITDA of \$20.0 billion was 7% higher than 2022, with a 2% improvement in realised prices (\$0.8 billion) and higher volumes, following the ramp-up of Gudai-Darri.

Unit costs of \$21.5 per tonne were \$0.2 per tonne lower than 2022. Cost escalation from inflation was offset by a weaker Australian dollar and gains on derivative contracts. Higher iron ore volumes offset a higher mine work index and mine maintenance costs.

Our Pilbara operations delivered an underlying FOB EBITDA margin of 69%, compared with 68% in 2022, largely due to the iron ore price.

We price the majority of our iron ore sales (79%) by reference to the average index price for the month of shipment. In 2023, we priced approximately 10% of sales with reference to the prior quarter's average index lagged by one month with the remainder sold either on current quarter average, on the spot market or other mechanisms. We made approximately 74% of sales including freight and 26% on an FOB basis.

We achieved an average iron ore price of \$99.7 per wet metric tonne on an FOB basis (2022: \$97.6 per wet metric tonne) across our product suite. This equates to \$108.4 per dry metric tonne, assuming 8% moisture (2022: \$106.1 per dry metric tonne), which compares with the monthly average Platts index for 62% iron fines converted to an FOB basis of \$110.3 per dry metric tonne (2022: \$109.8 per dry metric tonne). The 2% lower realised price compared to the Platts index was mainly due to the lower average grades of our portfolio compared to the 62% index.

Segmental revenue for our Pilbara operations included freight revenue of \$2.1 billion (2022: \$2.2 billion).

Net cash generated from operating activities of \$14.0 billion was on a par with 2022. Benefits from higher realised prices and higher volumes offset a build in working capital to ensure healthy stocks across the system and an increased receivables balance due to strong iron ore prices at year end. Free cash flow of \$11.4 billion was \$0.3 billion higher than 2022, mostly driven by a \$0.4 billion reduction in capital expenditure to \$2.6 billion due to lower spend on replacement capital.

Review of operations

Pilbara operations produced 331.5 million tonnes (100% basis) of iron ore, 2% higher than 2022. Shipments, on a 100% basis, were 3% higher (+10 million tonnes) than in 2022, making 2023 the second highest shipment year on record. Improved system performance supported by a 5 million tonne uplift from implementation of the Safe Production System, and ramp-up of Gudai-Darri to its 43 million tonne nameplate capacity, offset mine depletion. SP10 volumes accounted for 47.5 million tonnes of 2023 shipments (or 14%).

We continue to see strong demand for our portside product in China, with sales totalling 23.3 million tonnes in 2023 (2022: 24.3 million tonnes). At the end of 2023, inventory levels were 6.4 million tonnes, including 3.9 million tonnes of Pilbara product. In 2023, approximately 86% of our portside sales were either screened or blended in Chinese ports.

In January 2024, Dampier Salt Limited entered into a sales agreement for the Lake MacLeod salt and gypsum operation in Carnarvon, Western Australia with privately-owned salt company Leichhardt Industrials Group for \$251 million (A\$375 million). Completion of the sale is subject to certain commercial and regulatory conditions being satisfied. The transaction is subject to capital gains tax.

Aluminium

Year ended 31 December	2023	2022	Change
Bauxite production ('000 tonnes — Rio Tinto share)	54,619	54,618	0 %
Alumina production ('000 tonnes — Rio Tinto share)	7,537	7,544	0 %
Aluminium production ('000 tonnes — Rio Tinto share)	3,272	3,009	9 %
Segmental revenue (US\$ millions)	12,285	14,109	(13)%
Average realised aluminium price (US\$ per tonne)	2,738	3,330	(18)%
Underlying EBITDA (US\$ millions)	2,282	3,672	(38)%
Underlying EBITDA margin (integrated operations)	21%	29%	
Underlying earnings (US\$ millions) ¹	538	1,504	(64)%
Net cash generated from operating activities (US\$ millions)	1,980	3,055	(35)%
Capital expenditure — excluding EAUs (US\$ millions) ²	(1,331)	(1,377)	(3)%
Free cash flow (US\$ millions)	619	1,652	(63)%
Underlying return on capital employed ^{1, 3}	3%	10%	

Footnotes are set out in full on page 25.

1. Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
2. Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment; capitalised evaluation costs; and purchases less sales of other intangible assets. It excludes equity accounted units (EAUs).
3. Underlying return on capital employed (ROCE) is defined as underlying earnings excluding net interest divided by average capital employed.

Financial performance

Although global primary aluminium demand rose by ~1% in 2023, falling costs and an increase in global supply led to a 17% reduction in the LME price and lower market and product premiums. Market-related costs for key materials such as caustic, coke and pitch moderated with some of this benefitting underlying EBITDA in the second half. Operating costs particularly in our mines and refineries increased year on year with a focus on improved operational stability and asset health. Overall there was significant margin compression for our Aluminium business with a 38% decrease in underlying EBITDA to \$2.3 billion. Underlying EBITDA margin fell eight percentage points to 21%.

We achieved an average realised aluminium price of \$2,738 per tonne, 18% lower than 2022.

Average realised aluminium prices comprise the LME price, a market premium and a value-added product (VAP) premium. The cash LME price averaged \$2,250 per tonne, 17% lower than 2022, while in our key US market, the Midwest premium duty paid, which is 57% of our total volumes (2022: 57%), decreased by 22% to \$512 per tonne (2022: \$655 per tonne). Our VAP sales represented 46% of the primary metal we sold (2022: 50%) and generated product premiums averaging \$354 per tonne of VAP sold (2022: \$431 per tonne).

Our conversion of underlying EBITDA to cash remained relatively strong, with net cash generated from operating activities of \$2.0 billion. Free cash flow of \$0.6 billion reflected investment in the business of \$1.3 billion.

Review of operations

Bauxite production of 54.6 million tonnes was unchanged from 2022. Operations saw a continued improvement in the fourth quarter, following the challenges of higher-than-average rainfall at Weipa in the first quarter and equipment downtime at both Weipa and Gove in the first half.

We shipped 37.3 million tonnes of bauxite to third parties, 2% lower than 2022. Segmental revenue for bauxite was also unchanged at \$2.4 billion. This includes freight revenue of \$0.5 billion (2022: \$0.6 billion).

Alumina production of 7.5 million tonnes was unchanged from 2022, with the Yarwun and Queensland Alumina Limited (QAL) refineries showing improved operational stability.

For the 2023 calendar year, as the result of QAL's activation of a step-in process following sanction measures enacted by the Australian Government in 2022, we continued to take on 100% of capacity for as long as the step-in continues. We have used Rusal's 20% share of capacity under the tolling arrangement with QAL. This additional output is excluded from our production results as QAL remains 80% owned by Rio Tinto and 20% owned by Rusal. On 1 February 2024, the Federal Court of Australia rendered its decision in the litigation initiated by Rusal against Rio Tinto and QAL, dismissing Rusal's case. Rio Tinto and QAL are working to understand the impacts of the decision.

Aluminium production of 3.3 million tonnes was 9% higher than 2022, after we returned to full capacity at the Kitimat smelter and completed cell recovery efforts at Boyne during the third quarter. All other smelters continued to demonstrate stable performance.

Copper

Year ended 31 December	2023	2022	Change
Mined copper production ('000 tonnes — consolidated basis)	620	607	2 %
Refined copper production ('000 tonnes — Rio Tinto share)	175	209	(16)%
Segmental revenue (US\$ millions)	6,678	6,699	— %
Average realised copper price (US cents per pound) ¹	390	403	(3)%
Underlying EBITDA (US\$ millions)	1,904	2,565	(26)%
Underlying EBITDA margin (product group operations)	42%	49%	
Underlying earnings (US\$ millions)	133	687	(81)%
Net cash generated from operating activities (US\$ millions) ²	545	1,523	(64)%
Capital expenditure — excluding EAUs ³ (US\$ millions)	(1,976)	(1,622)	22 %
Free cash flow (US\$ millions)	(1,438)	(116)	
Underlying return on capital employed (product group operations) ⁴	3%	6%	

Footnotes are set out in full on page 25. 2022 has been restated following the transfer of the Simandou iron ore project to outside the Reporting segments, as it now reports to the Chief Technical Officer, and to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

1. Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which positively impacted revenues by \$2 million (2022: \$175 million negative).
2. Net cash generated from operating activities excludes the operating cash flows of equity accounted units (EAUs) but includes dividends from EAUs (Escondida).
3. Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment, capitalised evaluation costs and purchases less sales of other intangible assets. It excludes EAUs.
4. Underlying return on capital employed (ROCE) is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed.

Financial performance

We delivered first sustainable production from the underground mine at Oyu Tolgoi, where we doubled our interest to 66% following the acquisition of Turquoise Hill Resources at the end of 2022. However, lower refined copper volumes and higher unit costs, primarily driven by the planned smelter and refinery rebuild at Kennecott, in addition to higher energy prices and an increase in exploration and evaluation expenditure, led to underlying EBITDA being down 26% to \$1.9 billion. Underlying EBITDA margin remained relatively strong at 42%.

Our copper unit costs, at 195 cents per pound, increased by 32 cents, or 20%, as a result of the lower shipment volumes of refined copper following the planned rebuild at Kennecott and higher input costs.

We generated \$0.5 billion in net cash from operating activities, a 64% decrease on 2022, from the same drivers as underlying EBITDA, together with \$0.3 billion lower dividends from Escondida.

Negative free cash flow of \$1.4 billion reflected the above movements and significant investment of \$2.0 billion in sustaining capital and our growth projects. This mainly related to the ongoing development of the Oyu Tolgoi underground, the projects at Kennecott and evaluation costs at Resolution and Winu.

Review of operations

Mined copper production, at 620 thousand tonnes, was 2% higher than 2022, reflecting first sustainable production from Oyu Tolgoi underground in the first quarter. This offset challenges at Kennecott following a conveyor failure in March, with the concentrator not returning to full capacity until the third quarter. Our share of mined copper production from Escondida was flat at 300 thousand tonnes.

Refined copper production decreased by 16% to 175 thousand tonnes as we undertook the largest rebuild of the smelter and refinery in Kennecott's history across the second and third quarters. The

smelter rebuild was successfully completed in the fourth quarter of 2023 and the ramp-up is progressing.

Oyu Tolgoi underground project

During 2023, Rio Tinto, Oyu Tolgoi and the Government of Mongolia continued to work together towards the implementation of Mongolian Parliamentary Resolution 103.

We continue to see strong performance from the underground mine, with a total of 86 drawbells opened from Panel 0, including 67 drawbells in 2023.

By the end of 2023, shafts 3 and 4 sinking had reached 923 metres and 1,013 metres below ground level, respectively. Final depths required for shafts 3 and 4 are 1,130 and 1,176 metres, respectively. Both shafts are expected to be commissioned in the second half of 2024.

Construction of the conveyor to surface works continued to plan and was 88% complete at the end of 2023. Commissioning remains on track for the second half of 2024.

Construction of primary crusher 2 commenced in December 2023 and is due to be complete by the end of 2025.

Construction works for the concentrator conversion remains on schedule. Commissioning is expected to be progressively completed from the fourth quarter of 2024 through to the second quarter of 2025. Technical studies for mine design and schedule optimisation for Panels 1 and 2 were completed during the second quarter¹⁵. The operation remains on track to ramp up to deliver average mined copper production of ~500 thousand tonnes per year (100% basis) between 2028 and 2036³.

Minerals

Year ended 31 December	2023	2022	Change
Iron ore pellets and concentrates production ¹ (million tonnes — Rio Tinto share)	9.7	10.3	(6)%
Titanium dioxide slag production ('000 tonnes — Rio Tinto share)	1,111	1,200	(7)%
Borates production ('000 tonnes — Rio Tinto share)	495	532	(7)%
Diamonds production ('000 carats — Rio Tinto share)	3,340	4,651	(28)%
Segmental revenue (US\$ millions)	5,934	6,754	(12)%
Underlying EBITDA (US\$ millions)	1,414	2,419	(42)%
Underlying EBITDA margin (product group operations)	30%	40%	
Underlying earnings (US\$ millions) ²	312	854	(63)%
Net cash generated from operating activities (US\$ millions)	548	1,522	(64)%
Capital expenditure (US\$ millions) ³	(746)	(679)	10 %
Free cash flow (US\$ millions)	(229)	814	(128)%
Underlying return on capital employed (product group operations) ^{2, 4}	13%	22%	

Footnotes are set out in full on page 25.

1. Iron Ore Company of Canada (IOC) continues to be reported within Minerals.
2. Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
3. Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment; capitalised evaluation costs; and purchases less sales of other intangible assets.
4. Underlying return on capital employed (ROCE) is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed.

Financial performance

Underlying EBITDA of \$1.4 billion was 42% lower than 2022, primarily due to lower prices and higher costs. We experienced market weakness for many of our products, in particular for TiO₂ feedstock, where underlying demand for pigment was subdued on weak real estate activity in the Americas, Europe and China. This gave rise to lower sales volumes and, in combination with the two furnace failures at our RTIT Quebec operations, resulted in higher unit costs.

Net cash generated from operating activities of \$0.5 billion was 64% lower than 2022, while negative free cash flow of \$0.2 billion reflected the lower underlying EBITDA, higher working capital due to market conditions and a modest rise in capital expenditure.

Review of operations

Production of iron ore pellets and concentrate at IOC of 9.7 million tonnes was 6% lower than 2022 with challenges due to the wildfires in Northern Quebec in the second quarter, as well as extended plant downtime and conveyor belt failures in the third quarter.

TiO₂ slag production of 1,111 thousand tonnes was 7% lower than 2022. Two furnaces at our RTIT Quebec Operations remain offline following process safety incidents in June and July. In the fourth quarter, we decommissioned an additional furnace, which is due for reconstruction in 2024. As a result, we entered 2024 with six out of nine furnaces operating at our RTIT Quebec Operations and three out of four online at Richards Bay Minerals (RBM).

Borates production was 7% lower than 2022, as we adjusted for decreased customer demand, despite improved equipment reliability.

Our share of carats recovered was 28% lower than 2022, due to depleting one of three underground pipes and reaching the end of life for open pit mining.

Price and exchange rate sensitivities

The following sensitivities give the estimated effect on underlying EBITDA, assuming that each price or exchange rate moved in isolation. The relationship between currencies and commodity prices is a complex one; movements in exchange rates can affect movements in commodity prices and vice versa. The exchange rate sensitivities quoted here include the effect on operating costs of movements in exchange rates, but do not include the effect of the revaluation of foreign currency working capital. They should be used with care.

	Average published price/exchange rate for 2023	US\$ million impact on full-year 2023 underlying EBITDA of a 10% change in prices/exchange rates
Aluminium (LME) - US\$ per tonne	2,250	1,016
Copper (LME) - US cents per pound	386	507
Gold - US\$ per troy ounce	1,941	62
Iron ore realised price (FOB basis) - US\$ per dry metric tonne	108.4	2,695
Australian dollar against the US dollar	0.66	658
Canadian dollar against the US dollar	0.74	358
Oil (Brent) - US per barrel	84	185

Footnotes

1. This financial performance indicator is a non-IFRS (as defined below) measure which is reconciled to directly comparable IFRS financial measures (non-IFRS measures). It is used internally by management to assess the performance of the business and is therefore considered relevant to readers of this document. It is presented here to give more clarity around the underlying business performance of the Group's operations. For more information on our use of non-IFRS financial measures in this report, see the section entitled "Alternative performance measures" (APM) and the detailed reconciliations on pages 40 to 49. Our financial results are prepared in accordance with IFRS.
2. Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
3. The 500 thousand tonne per year copper production target (stated as recoverable metal) for the Oyu Tolgoi underground and open pit mines for the years 2028 to 2036 was previously reported in a release to the Australian Securities Exchange (ASX) dated 11 July 2023 "Investor site visit to Oyu Tolgoi copper mine, Mongolia". All material assumptions underpinning that production target continue to apply and have not materially changed.
4. In 2023, we improved our carbon emissions reporting and now use the market-based method as our primary measure. We also adjusted our 2018 baseline and 2022 emissions to account for acquisitions and divestments. Further detail on these changes in reporting is available in our Scope 1, 2 and 3 Emissions Calculation Methodology Addendum.
5. Mined copper guidance: subsequent to Rio Tinto's acquisition of Turquoise Hill Resources, which completed on 16 December 2022, mined copper guidance includes Oyu Tolgoi on a 100% consolidated basis. It continues to reflect our 30% share of Escondida.
6. Rio Tinto share of the Western Range capital cost includes 100% of funding costs for Paraburdoo plant upgrades.
7. WCS is currently a consortium of Singaporean company, Winning International Group (50%), Weiqiao Aluminium (part of the China Hongqiao Group) (50%) and United Mining Supply Group (nominal shareholding). WCS is the holder of Simandou North Blocks 1 & 2 (with the Government of Guinea holding a 15% interest in the mining vehicle and WCS holding 85%) and associated infrastructure. Baowu Resources has entered into an agreement to acquire a 49% share of WCS mine and infrastructure projects through a Baowu-led consortium, subject to conditions including regulatory approvals. In the case of the mine, Baowu has an option to increase to 51% during operations.
8. WCS holds the mining concession for Blocks 1 and 2, while Simfer SA holds the mining concession for blocks 3 and 4. Simfer and WCS will independently develop their mines.
9. Estimated numbers, subject to approval by the Simfer board and government authorities. Spend incurred on the project in 2023 was \$0.9 billion of which \$539 million was charged to the Income Statement and \$330 million was capitalised (\$266 million on a cash basis). All qualifying costs are being capitalised from the fourth quarter of 2023.
10. Simfer Jersey Limited is a joint venture between the Rio Tinto Group (53%) and Chalco Iron Ore Holdings Ltd (CIOH) (47%), a Chinalco-led joint venture of leading Chinese SOEs (Chinalco (75%), Baowu (20%), China Rail Construction Corporation (2.5%) and China Harbour Engineering Company (2.5%)). Simfer S.A. is the holder of the mining concession covering Simandou Blocks 3 & 4, and is owned by the Guinean State (15%) and Simfer Jersey Limited (85%). Simfer Infracore Guinée S.A.U. will deliver Simfer's scope of the co-developed rail and port infrastructure, and is, on the date of this notice, a wholly-owned subsidiary of Simfer Jersey Limited, but will be co-owned by the Guinean State (15%) after closing of the co-development arrangements.
11. The estimated annualised capacity of approximately 60 million dry tonnes per annum iron ore for the Simandou life of mine schedule was previously reported in a release to the Australian Securities Exchange (ASX) dated 6 December 2023 titled "Investor Seminar 2023". Rio Tinto confirms that all material assumptions underpinning that production target continue to apply and have not materially changed.
12. Co-development of the rail and port infrastructure remains subject to a number of conditions, including regulatory approvals in Guinea and China, the entry into a number of legal agreements, ratification of the investment framework for co-development by the Republic of Guinea, and agreement between Simfer, WCS and the Republic of Guinea regarding the budget for the rail and port infrastructure.
13. The NRS Mineral Resources and Ore Reserves, together with the Lower Commercial Skarn (LCS) Mineral Resources and Ore Reserves, form the Underground Skarns Mineral Resources and Ore Reserves.
14. The 250 thousand tonne copper production target for the Kennecott underground mines over the years 2023 to 2033 was previously reported in a release to the Australian Securities Exchange (ASX) dated 20 June 2023 "Rio Tinto invests to strengthen copper supply in US". All material assumptions underpinning that production target continue to apply and have not materially changed.
15. Mine design and plans will be reviewed by regulatory bodies as part of the OTFS23 process.

Selected financial information for the year ended 31 December 2023

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Group income statement

Year ended 31 December	2023 US\$m	2022 US\$m restated ^(a)
Consolidated operations		
Consolidated sales revenue	54,041	55,554
Net operating costs (excluding items disclosed separately)	(37,052)	(34,770)
Net impairment (charges)/reversals	(936)	150
Loss on disposal of interest in subsidiary	—	(105)
Exploration and evaluation expenditure (net of profit from disposal of interests in undeveloped projects)	(1,230)	(896)
Operating profit	14,823	19,933
Share of profit after tax of equity accounted units	675	777
Impairment of investments in equity accounted units	—	(202)
Profit before finance items and taxation	15,498	20,508
Finance items		
Net exchange (losses)/gains on external net debt and intragroup balances	(251)	253
Losses on derivatives not qualifying for hedge accounting	(54)	(424)
Finance income	536	179
Finance costs	(967)	(335)
Amortisation of discount on provisions	(977)	(1,519)
	(1,713)	(1,846)
Profit before taxation	13,785	18,662
Taxation	(3,832)	(5,614)
Profit after tax for the year	9,953	13,048
– attributable to owners of Rio Tinto (net earnings)	10,058	12,392
– attributable to non-controlling interests	(105)	656
Basic earnings per share	620.3c	765.0c
Diluted earnings per share	616.5c	760.4c

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

Group statement of comprehensive income

	2023 US\$m	2022 US\$m restated ^(a)
Profit after tax for the year	9,953	13,048
Other comprehensive income/(loss)		
Items that will not be reclassified to the income statement:		
Re-measurement (losses)/gains on pension and post-retirement healthcare plans	(461)	578
Changes in the fair value of equity investments held at fair value through other comprehensive income (FVOCI)	(24)	—
Tax relating to these components of other comprehensive income	152	(123)
Share of other comprehensive (losses)/income of equity accounted units, net of tax	(3)	5
	(336)	460
Items that have been/may be subsequently reclassified to the income statement:		
Currency translation adjustment ^(b)	644	(2,399)
Currency translation on subsidiary disposed of, transferred to the income statement	—	105
Fair value movements:		
– Cash flow hedge gains/(losses)	30	(167)
– Cash flow hedge (gains)/losses transferred to the income statement	(39)	106
Net change in costs of hedging reserve	5	4
Tax relating to these components of other comprehensive loss	1	21
Share of other comprehensive income/(losses) of equity accounted units, net of tax	14	(27)
	655	(2,357)
Total other comprehensive income/(loss) for the year, net of tax	319	(1,897)
Total comprehensive income for the year	10,272	11,151
– attributable to owners of Rio Tinto	10,335	10,649
– attributable to non-controlling interests	(63)	502

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

(b) Excludes a currency translation gain of US\$47 million (2022: charge of US\$240 million) arising on Rio Tinto Limited's share capital for the period ended 31 December 2023, which is recognised in the Group statement of changes in equity on page [33](#).

Group cash flow statement

	2023 US\$m	2022 US\$m
Cash flows from consolidated operations^(a)	20,251	23,158
Dividends from equity accounted units	610	879
Cash flows from operations	20,861	24,037
Net interest paid	(612)	(573)
Dividends paid to holders of non-controlling interests in subsidiaries	(462)	(421)
Tax paid	(4,627)	(6,909)
Net cash generated from operating activities	15,160	16,134
Cash flows from investing activities		
Purchases of property, plant and equipment and intangible assets	(7,086)	(6,750)
Sales of property, plant and equipment and intangible assets	9	—
Acquisitions of subsidiaries, joint ventures and associates	(834)	(850)
Disposals of subsidiaries, joint ventures, joint operations and associates	—	80
Purchases of financial assets	(39)	(55)
Sales of financial assets ^{(b)(c)}	1,220	892
Net funding of equity accounted units	(144)	(75)
Other investing cash flows ^(d)	(88)	51
Net cash used in investing activities	(6,962)	(6,707)
Cash flows before financing activities	8,198	9,427
Cash flows from financing activities		
Equity dividends paid to owners of Rio Tinto	(6,470)	(11,727)
Proceeds from additional borrowings ^(e)	1,833	321
Repayment of borrowings and associated derivatives ^(e)	(310)	(790)
Lease principal payments	(426)	(374)
Proceeds from issue of equity to non-controlling interests	127	86
Purchase of non-controlling interest ^(f)	(33)	(2,961)
Other financing cash flows	2	(28)
Net cash used in financing activities	(5,277)	(15,473)
Effects of exchange rates on cash and cash equivalents	(23)	15
Net increase/(decrease) in cash and cash equivalents	2,898	(6,031)
Opening cash and cash equivalents less overdrafts	6,774	12,805
Closing cash and cash equivalents less overdrafts	9,672	6,774
	2023	2022
(a) Cash flows from consolidated operations	US\$m	US\$m
Profit after tax for the year (comparative restated) ^(g)	9,953	13,048
Adjustments for:		
– Taxation (comparative restated) ^(g)	3,832	5,614
– Finance items	1,713	1,846
– Share of profit after tax of equity accounted units	(675)	(777)
– Loss on disposal of interest in subsidiary	—	105
– Impairment charges of investments in equity accounted units after tax	—	202
– Net impairment charges/(reversals)	936	(150)
– Depreciation and amortisation	5,334	5,010
– Provisions (including exchange differences on provisions)	1,470	1,006
Utilisation of other provisions	(104)	(176)
Utilisation of provisions for close-down and restoration	(777)	(609)
Utilisation of provisions for post-retirement benefits and other employment costs	(277)	(254)
Change in inventories	(422)	(1,185)
Change in receivables and other assets	(418)	20
Change in trade and other payables	(86)	700
Other items ^(h)	(228)	(1,242)
	20,251	23,158

Group cash flow statement (continued)

- (b) In 2023, we received net proceeds of US\$1,157 million (2022: US\$352 million) from our sales and purchases of investments within a separately managed portfolio of fixed income instruments. Purchases and sales of these securities are reported on a net cash flow basis within "Sales of financial assets" or "Purchases of financial assets" depending on the overall net position at each reporting date.
- (c) In 2022, Sale of financial assets includes US\$525 million of cash received from the sale of the gross production royalty at the Cortez Complex in Nevada, USA.
- (d) In 2022, Other investing cash flows includes inflows relating to payments from a trust fund controlled by the Government of Australia to Energy Resources Australia (ERA) for closure activity that has been completed. At 31 December 2023 the total amount held in the trust fund was US\$349 million (31 December 2022: US\$329 million).
- (e) On 7 March 2023, we issued US\$650 million 10-year fixed rate, and US\$1.1 billion of 30-year fixed rate, SEC-registered bonds. The 10-year notes, which mature on 9 March 2033, have a coupon of 5% and the 30-year notes, which mature on 9 March 2053 have a coupon of 5.125%. The funds were received net of issuance fees and discount. There were no debt securities issued during the year ended 31 December 2022.
- (f) On 16 December 2022, we acquired the remaining 49% share of Turquoise Hill Resources for expected consideration of US\$3.2 billion inclusive of transaction fees. At 31 December 2022, US\$2,961 had been paid, including US\$33 million of transaction costs. In 2023, further transaction costs of US\$33 million were paid, the balance to dissenting shareholders remains unpaid.
- (g) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
- (h) Other items includes the recognition of realised losses of US\$57 million on currency forwards not designated as hedges (2022: realised losses US\$459 million). In 2022, other items also included the deduction of the US\$432 million relating to the gain recognised on sale of the Cortez royalty shown in "Sale of financial assets".

Group balance sheet

	2023 US\$m	2022 US\$m Restated ^(a)
Non-current assets		
Goodwill	797	826
Intangible assets	4,389	3,645
Property, plant and equipment	66,468	64,734
Investments in equity accounted units	4,407	3,298
Inventories	214	203
Deferred tax assets	3,624	2,796
Receivables and other assets	1,659	1,893
Other financial assets	481	406
	82,039	77,801
Current assets		
Inventories	6,659	6,213
Receivables and other assets	3,945	3,478
Tax recoverable	115	347
Other financial assets	1,118	2,160
Cash and cash equivalents	9,673	6,775
	21,510	18,973
Total assets	103,549	96,774
Current liabilities		
Borrowings	(824)	(923)
Leases	(345)	(292)
Other financial liabilities	(273)	(69)
Trade and other payables	(8,238)	(8,047)
Tax payable	(542)	(223)
Close-down and restoration provisions	(1,523)	(1,142)
Provisions for post-retirement benefits and other employment costs	(361)	(353)
Other provisions	(637)	(554)
	(12,743)	(11,603)
Non-current liabilities		
Borrowings	(12,177)	(10,148)
Leases	(1,006)	(908)
Other financial liabilities	(513)	(904)
Trade and other payables	(596)	(604)
Tax payable	(31)	(36)
Deferred tax liabilities	(2,584)	(3,164)
Close-down and restoration provisions	(15,627)	(14,617)
Provisions for post-retirement benefits and other employment costs	(1,197)	(1,305)
Other provisions	(734)	(744)
	(34,465)	(32,430)
Total liabilities	(47,208)	(44,033)
Net assets	56,341	52,741
Capital and reserves		
Share capital ^(b)		
– Rio Tinto plc	207	207
– Rio Tinto Limited	3,377	3,330
Share premium account	4,324	4,322
Other reserves	8,328	7,755
Retained earnings	38,350	35,020
Equity attributable to owners of Rio Tinto	54,586	50,634
Attributable to non-controlling interests	1,755	2,107
Total equity	56,341	52,741

Group balance sheet (continued)

- (a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
- (b) At 31 December 2023, Rio Tinto plc had 1,251.3 million ordinary shares in issue and held by the public, and Rio Tinto Limited had 371.2 million shares in issue and held by the public. There were no cross holdings of shares between Rio Tinto Limited and Rio Tinto plc in either periods presented. As required to be disclosed under the ASX Listing Rules, the net tangible assets per share amounted to US\$30.45 (31 December 2022: US\$28.48).

Group statement of changes in equity

	Attributable to owners of Rio Tinto						Non-controlling interests US\$m	Total equity US\$m
	Share capital US\$m	Share premium account US\$m	Other reserves US\$m	Retained earnings US\$m	Total US\$m			
Year ended 31 December 2023								
Opening balance as previously reported	3,537	4,322	7,805	34,511	50,175	2,099	52,274	
Adjustment for transition to new accounting pronouncements ^(a)	—	—	(50)	509	459	8	467	
Restated opening balance	3,537	4,322	7,755	35,020	50,634	2,107	52,741	
Total comprehensive income for the year ^(b)	—	—	585	9,750	10,335	(63)	10,272	
Currency translation arising on Rio Tinto Limited's share capital	47	—	—	—	47	—	47	
Dividends ^(e)	—	—	—	(6,466)	(6,466)	(462)	(6,928)	
Newly consolidated operation	—	—	—	—	—	33	33	
Own shares purchased from Rio Tinto shareholders to satisfy share awards to employees ^(c)	—	—	(78)	(17)	(95)	—	(95)	
Change in equity interest held by Rio Tinto	—	—	—	(13)	(13)	13	—	
Treasury shares reissued and other movements	—	2	—	—	2	—	2	
Equity issued to holders of non-controlling interests	—	—	—	—	—	127	127	
Employee share awards charged to the income statement	—	—	66	76	142	—	142	
Closing balance	3,584	4,324	8,328	38,350	54,586	1,755	56,341	

	Attributable to owners of Rio Tinto						Non-controlling interests US\$m	Total equity US\$m
	Share capital US\$m	Share premium account US\$m	Other reserves US\$m	Retained earnings US\$m	Total US\$m			
Year ended 31 December 2022								
Opening balance as previously reported ^(d)	3,777	4,320	9,998	33,320	51,415	5,158	56,573	
Adjustment for transition to new accounting pronouncements ^(a)	—	—	(22)	537	515	8	523	
Restated opening balance	3,777	4,320	9,976	33,857	51,930	5,166	57,096	
Total comprehensive income for the year ^(b)	—	—	(2,193)	12,842	10,649	502	11,151	
Currency translation arising on Rio Tinto Limited's share capital	(240)	—	—	—	(240)	—	(240)	
Dividends ^(e)	—	—	—	(11,716)	(11,716)	(421)	(12,137)	
Own shares purchased from Rio Tinto shareholders to satisfy share awards to employees ^(c)	—	—	(84)	(16)	(100)	—	(100)	
Change in equity interest held by Rio Tinto	—	—	—	701	701	(3,907)	(3,206)	
Treasury shares reissued and other movements	—	2	—	—	2	—	2	
Equity issued to holders of non-controlling interests	—	—	—	(711)	(711)	797	86	
Employee share awards charged to the income statement	—	—	56	63	119	—	119	
Transfers and other movements	—	—	—	—	—	(30)	(30)	
Closing balance (restated)	3,537	4,322	7,755	35,020	50,634	2,107	52,741	

Group statement of changes in equity (continued)

- (a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
- (b) Refer to the Group statement of comprehensive income for further details. Adjustments to other reserves include currency translation attributable to owners of Rio Tinto, other than that arising on Rio Tinto Limited's share capital.
- (c) Net of contributions received from employees for share awards.
- (d) In 2022, the opening balance includes a US\$17 million adjustment for the prospective adoption of Amendments to IAS 37 "Provisions, Contingent Liabilities and Contingent Assets", as reported in the prior year financial statements.
- (e) Dividends per share announced or paid during the period are summarised below:

Year ended 31 December	2023 US\$	2022 US\$
Dividends per share: Ordinary - paid during the year	402.0c	684.0c
Dividends per share: Special - paid during the year	—	62.0c
Ordinary dividends per share: announced with the results for the year	258.0c	225.0c

Status of financial information

The full year financial information contained in this announcement, which does not constitute statutory accounts as defined in Section 434 of the Companies Act 2006, has been derived from the statutory accounts for the year ended 31 December 2023. These statutory accounts have been audited, were approved by the Board on 21 February 2024, and will be filed with the Registrar of Companies in the United Kingdom and the Australian Securities and Investments Commission in due course. Statutory accounts for the year ended 31 December 2022 have been filed with the Registrar of Companies.

Unless stated otherwise, financial information for the years ended 31 December 2023 and 31 December 2022 has been extracted from the full financial statements for that year prepared under the historical cost convention, as modified by the revaluation of certain derivative contracts, the impact of fair value hedge accounting on the hedged items and the accounting for post-retirement assets and obligations.

The Auditors' reports on the full financial statements for the years ended 31 December 2023 and 31 December 2022 were both unqualified and, in relation to Rio Tinto plc, did not contain a statement under section 498 (2) (regarding adequacy of accounting records and returns), or under section 498 (3) (regarding provision of necessary information and explanations) of the United Kingdom Companies Act 2006, and in relation to Rio Tinto Limited, contained a statement that the financial report is in accordance with the Corporations Act 2001 as amended by the ASIC Order dated 16 July 2021.

Rio Tinto financial information by business unit

	Rio Tinto interest %	Segmental revenue ^(c) for the year ended 31 December		Underlying EBITDA ^(c) for the year ended 31 December		Depreciation and amortisation for the year ended 31 December		Underlying earnings ^(c) for the year ended 31 December	
		2023 US\$m	2022 US\$m	2023 US\$m	2022 US\$m	2023 US\$m	2022 US\$m	2023 US\$m	2022 US\$m
		Adjusted ^(a)		Adjusted ^(a)		Adjusted ^(a)		Restated ^{(a)(b)}	
Iron Ore									
Pilbara	(d)	30,867	29,313	19,828	18,474	2,128	2,011	11,945	11,106
Dampier Salt	68.4	422	352	120	56	21	19	49	19
Evaluation projects/other	(e)	2,701	2,711	57	33	—	—	(89)	53
Intra-segment	(e)	(1,741)	(1,470)	(31)	49	—	—	(23)	35
Total Iron Ore Segment		32,249	30,906	19,974	18,612	2,149	2,030	11,882	11,213
Aluminium									
Bauxite		2,390	2,396	662	618	373	361	141	101
Alumina		2,882	3,215	136	289	170	200	(56)	18
North American Aluminium ^(m)		6,581	7,561	1,480	2,426	710	704	566	1,266
Pacific Aluminium		2,613	3,102	169	497	165	135	18	261
Intra-segment and other		(2,953)	(3,138)	(11)	12	—	—	(15)	(8)
Integrated operations		11,513	13,136	2,436	3,842	1,418	1,400	654	1,638
Other product group items		772	973	9	25	—	—	5	15
Product group operations		12,285	14,109	2,445	3,867	1,418	1,400	659	1,653
Evaluation projects/other		—	—	(163)	(195)	—	—	(121)	(149)
Total Aluminium Segment		12,285	14,109	2,282	3,672	1,418	1,400	538	1,504
Copper									
Kennecott	100.0	1,430	1,923	178	857	500	624	(328)	12
Escondida	30.0	2,756	2,628	1,619	1,641	355	330	684	798
Oyu Tolgoi	(f)	1,625	1,424	639	449	476	194	161	130
Product group operations		5,811	5,975	2,436	2,947	1,331	1,148	517	940
Evaluation projects/other ^(a)		867	724	(532)	(382)	5	5	(384)	(253)
Total Copper Segment		6,678	6,699	1,904	2,565	1,336	1,153	133	687
Minerals									
Iron Ore Company of Canada	58.7	2,500	2,818	942	1,381	214	207	293	475
Rio Tinto Iron & Titanium	(g)	2,172	2,366	582	799	222	224	221	374
Rio Tinto Borates	100.0	802	742	212	155	58	54	125	80
Diamonds	(h)	444	816	44	330	35	45	26	151
Product group operations		5,918	6,742	1,780	2,665	529	530	665	1,080
Evaluation projects/other		16	12	(366)	(246)	1	1	(353)	(226)
Total Minerals Segment		5,934	6,754	1,414	2,419	530	531	312	854
Reportable segments total									
Simandou iron ore project	(i)	—	—	(539)	(189)	—	—	(160)	(145)
Other operations	(j)	142	192	(39)	(16)	290	272	(250)	(347)
Inter-segment transactions		(231)	(256)	8	24	—	—	4	26
Central pension costs, share-based payments, insurance and derivatives		—	—	168	377	—	—	48	374
Restructuring, project and one-off costs		—	—	(190)	(173)	—	—	(112)	(85)
Central costs		—	—	(990)	(766)	95	94	(898)	(651)
Central exploration and evaluation		—	—	(100)	(253)	—	—	(60)	(209)
Net interest		—	—	—	—	—	—	318	138
Underlying EBITDA/earnings		57,146	58,468	25,574	27,268	5,433	5,114	12,865	14,258
Items excluded from underlying EBITDA/earnings		—	—	(1,257)	269	—	—	(1,697)	(967)
Reconciliation to Group income statement									
Share of equity accounted unit sales and intra-subsi- diary/equity accounted unit sales		(3,016)	(2,850)	—	—	—	—	—	—
Impairment charges		—	—	(936)	(52)	—	—	—	—
Depreciation and amortisation in subsidiaries excluding capitalised depreciation		—	—	(4,976)	(4,871)	—	—	—	—
Depreciation and amortisation in equity accounted units		—	—	(484)	(470)	(484)	(470)	—	—
Taxation and finance items in equity accounted units		—	—	(741)	(640)	—	—	—	—
Finance items		—	—	(1,713)	(1,846)	—	—	—	—
Consolidated sales revenue/profit before taxation/depreciation and amortisation/net earnings		54,041	55,554	13,785	18,662	5,334	5,010	10,058	12,392

Rio Tinto financial information by business unit (continued)

	Rio Tinto interest %	Capital expenditure ^{(c)(k)} for the year ended 31 December		Operating assets ^(l) as at 31 December	
		2023 US\$m	2022 US\$m	2023 US\$m	2022 US\$m
			Adjusted ^(a)		Restated ^{(a)(b)}
Iron Ore					
Pilbara	(d)	2,563	2,906	17,959	17,785
Dampier Salt	68.4	25	34	146	153
Evaluation projects/other	(e)	—	—	780	835
Intra-segment	(e)	—	—	(243)	(220)
Total Iron Ore Segment		2,588	2,940	18,642	18,553
Aluminium					
Bauxite		159	161	2,649	2,458
Alumina		325	356	1,315	2,400
North American Aluminium ^(m)		748	752	10,582	9,343
Pacific Aluminium		99	108	340	159
Intra-segment and other		—	—	997	629
Total Aluminium Segment		1,331	1,377	15,883	14,989
Copper					
Kennecott	100.0	735	563	2,606	2,027
Escondida	30.0	—	—	2,844	2,792
Oyu Tolgoi	(f)	1,230	1,056	15,334	13,479
Product group operations		1,965	1,619	20,784	18,298
Evaluation projects/other ^(a)		11	3	262	165
Total Copper Segment		1,976	1,622	21,046	18,463
Minerals					
Iron Ore Company of Canada	58.7	364	366	1,347	1,147
Rio Tinto Iron & Titanium	(g)	240	217	3,386	3,351
Rio Tinto Borates	100.0	49	34	502	496
Diamonds	(h)	66	48	29	(84)
Product group operations		719	665	5,264	4,910
Evaluation projects/other		27	14	873	874
Total Minerals Segment		746	679	6,137	5,784
Reportable segments total					
Simandou iron ore project	(i)	266	—	738	(22)
Other operations	(j)	57	53	(2,634)	(1,850)
Inter-segment transactions				20	12
Other items		113	79	(1,015)	(1,107)
Total		7,077	6,750	58,817	54,822
Add back: Proceeds from disposal of property, plant and equipment		9	—		
Total purchases of property, plant & equipment and intangibles as per cash flow statement		7,086	6,750		
Add: Net (debt)/cash				(4,231)	(4,188)
Equity attributable to owners of Rio Tinto				54,586	50,634

Notes to financial information by business unit

Business units are classified according to the Group's management structure. Our management structure is based on product groups together with global support functions whose leaders make up the Executive Committee. The Executive Committee members each report directly to our Chief Executive who is the chief operating decision maker and is responsible for allocating resources and assessing performance of the operating segments. Finance costs and net debt are managed on a Group-wide basis and are therefore excluded from the segmental results.

The disclosures in this note include certain non-IFRS financial measures (non-IFRS measures). For more information on the non-IFRS measures used by the Group, including definitions and calculations, refer to section entitled alternative performance measures (pages [40](#) to [49](#)).

- (a) The financial information by business unit has been adjusted to reflect a change in management responsibility for the Simandou iron ore project from Copper to the Chief Technical Officer. As a result, we have moved Simandou outside of reportable segments and accordingly adjusted prior period comparatives.
- (b) Underlying earnings for the year ended 31 December 2022 and 2021 and operating assets as at 31 December 2022 and 2021 have been restated for the impact of narrow-scope amendments to IAS 12. Details of these amendments are disclosed in note 2 to the Financial Statements of our 2023 Annual Report.
- (c) Segmental revenue and Capital expenditure are defined within Alternative performance measures section on page [40](#) and page [46](#), respectively. Underlying EBITDA is defined and calculated within the Alternative performance measures section on pages [40](#) to [41](#). Underlying Earnings is defined and calculated within the Alternative performance measures section on pages [43](#) and [44](#).
- (d) Pilbara represents the Group's 100% holding in Hamersley, 50% holding in Hope Downs Joint Venture, 54% holding in Western Range Joint Venture and 65% holding in Robe River Iron Associates. The Group's net beneficial interest in Robe River Iron Associates is 53%, as 30% is held through a 60% owned subsidiary and 35% is held through a 100% owned subsidiary.
- (e) Segmental revenue, Underlying EBITDA, Underlying earnings and Operating assets within Evaluation projects/other include activities relating to the shipment and blending of Pilbara and Iron Ore Company of Canada (IOC) iron ore inventories held portside in China and sold to domestic customers. Transactions between Pilbara and our portside trading business are eliminated through the Iron Ore "intra-segment" line and transactions between IOC and the portside trading business are eliminated through "inter-segment transactions".
- (f) Until 16 December 2022, our interest in Oyu Tolgoi was held indirectly through our 50.8% investment in Turquoise Hill Resources Ltd (TRQ), where TRQ's principal asset was its 66% investment in Oyu Tolgoi LLC, which owned the Oyu Tolgoi copper-gold mine. Following the purchase of TRQ we now directly hold a 66% investment in Oyu Tolgoi LLC.
- (g) Includes our interests in Rio Tinto Iron and Titanium Quebec Operations (100%), QIT Madagascar Minerals (QMM, 80%) and Richards Bay Minerals (attributable interest of 74%).
- (h) Includes our interests in Argyle (100%) residual operations which relate to the sale of remaining inventory and Diavik.
- (i) Rio Tinto Simfer UK Limited (which is wholly owned by the Group) holds a 53% interest in Simfer Jersey Limited (Simfer Jersey), a company incorporated in Jersey. Simfer Jersey, in turn, has an 85% interest in Simfer S.A., the company that operates the Simandou mining project in Guinea. As at 31 December 2023, Simfer Jersey also owns 100% of Simfer InfraCo Guinée S.A., a company incorporated in Guinea, which will deliver Simfer's scope of the co-developed rail and port infrastructure. The Group therefore has a 45.05% indirect interest in Simfer S.A. and a 53%

indirect interest in Simfer InfraCo Guinée S.A. These entities are consolidated as subsidiaries and together referred to as the Simandou iron ore project.

- (j) Other operations includes our 86% interest in Energy Resources of Australia, sites being rehabilitated under the management of Rio Tinto Closure, Rio Tinto Marine, and the remaining legacy liabilities of Rio Tinto Coal Australia. These include provisions for onerous contracts, in relation to rail infrastructure capacity, partly offset by financial assets and receivables relating to contingent royalties and disposal proceeds. From 16 June 2022, Commercial Treasury and related central costs are reported as part of 'Other operations' instead of 'Other items' in previous periods
- (k) Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment, capitalised evaluation costs and purchases less sales of other intangible assets as derived from the Group cash flow statement. The details provided include 100% of subsidiaries' capital expenditure and Rio Tinto's share of the capital expenditure of joint operations but exclude equity accounted units.
- (l) Operating assets of the Group represents equity attributable to Rio Tinto adjusted for net (debt)/cash. Operating assets of subsidiaries, joint operations and the Group's share relating to equity accounted units are made up of net assets adjusted for net (debt)/cash and post-retirement assets and liabilities, net of tax. Operating assets are stated after the deduction of non-controlling interests; these are calculated by reference to the net assets of the relevant companies (i.e. inclusive of such companies' debt and amounts due to or from Rio Tinto Group companies).
- (m) North American Aluminium comprises our reporting unit formerly known as Primary Metal and from 1 December 2023 our 50% interest in Matalco which focuses on recycling of aluminium. The operations are principally located in Canada and USA, however this reporting unit also includes our interests in ISAL (Iceland) and Sohar (Oman).

Alternative performance measures

The Group presents certain non-IFRS financial measures (non-IFRS measures) which are reconciled to directly comparable IFRS financial measures below. These non-IFRS measures hereinafter referred to as alternative performance measures (APMs) are used by management to assess the performance of the business and provide additional information, which investors may find useful. APMs are presented in order to give further insight into the underlying business performance of the Group's operations.

APMs are not consistently defined and calculated by all companies, including those in the Group's industry. Accordingly, these measures used by the Group may not be comparable with similarly titled measures and disclosures made by other companies. Consequently, these APMs should not be regarded as a substitute for the IFRS measures and should be considered supplementary to those measures.

The following tables present the Group's key financial measures not defined according to IFRS and a reconciliation between those APMs and their nearest respective IFRS measures.

APMs derived from the income statement

The following income statement measures are used by the Group to provide greater understanding of the underlying business performance of its operations and to enhance comparability of reporting periods. They indicate the underlying commercial and operating performance of our assets including revenue generation, productivity and cost management.

Segmental revenue

Segmental revenue includes consolidated sales revenue plus the equivalent sales revenue of equity accounted units in proportion to our equity interest (after adjusting for sales to/from subsidiaries).

Underlying EBITDA

Underlying EBITDA represents profit before taxation, net finance items, depreciation and amortisation adjusted to exclude the EBITDA impact of items which do not reflect the underlying performance of our reportable segments.

Reconciliation of profit after tax to underlying EBITDA

Items excluded from profit after tax are those gains and losses that, individually or in aggregate with similar items, are of a nature and size to require exclusion in order to provide additional insight into the underlying business performance. The following items are excluded from profit after tax in arriving at underlying EBITDA in each year irrespective of materiality:

- Depreciation and amortisation in subsidiaries and equity accounted units;
- Taxation and finance items in equity accounted units;
- Taxation and finance items relating to subsidiaries;
- Unrealised gains/(losses) on embedded derivatives not qualifying for hedge accounting;
- Net gains/(losses) on disposal of interests in subsidiaries;
- Impairment charges net of reversals;
- The underlying EBITDA of discontinued operations;

- Adjustments to closure provisions where the adjustment is associated with an impairment charge and for legacy sites where the disturbance or environmental contamination relates to the pre-acquisition period.

In addition, there is a final judgemental category which includes, where applicable, other credits and charges that, individually or in aggregate if of a similar type, are of a nature or size to require exclusion in order to provide additional insight into underlying business performance. In 2023, this includes all re-estimates of the closure provisions for fully impaired sites identified in the second-half of the year due to the materiality of the adjustment in aggregate. In 2022 this category included the gain recognised by Kitimat relating to LNG Canada's project and the gain recognised upon sale of the Cortez royalty.

	2023 US\$m	2022 US\$m Restated ^(a)
Profit after tax for the year	9,953	13,048
Taxation	3,832	5,614
Profit before taxation	13,785	18,662
Depreciation and amortisation in subsidiaries excluding capitalised depreciation ^(b)	4,976	4,871
Depreciation and amortisation in equity accounted units	484	470
Finance items in subsidiaries	1,713	1,846
Taxation and finance items in equity accounted units	741	640
(Gains)/losses on embedded commodity derivatives not qualifying for hedge accounting (including foreign exchange)	(15)	(6)
Impairment charges net of reversals ^(c)	936	52
Gain recognised by Kitimat relating to LNG Canada's project ^(d)	—	(116)
Change in closure estimates (non-operating and fully impaired sites) ^(e)	1,272	180
Loss on disposal of interests in subsidiary ^(c)	—	105
Gain on sale of the Cortez royalty ^(f)	—	(432)
Underlying EBITDA	23,892	26,272

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

(b) Depreciation and amortisation in subsidiaries for the year ended 31 December 2023 is net of capitalised depreciation of US\$358 million (2022: US\$139 million; 2021: US\$172 million).

(c) Detailed information over impairment charges is disclosed in note 4 to the Financial Statements of our 2023 *Annual Report*.

(d) During 2022, LNG Canada elected to terminate their option to purchase additional land and facilities for expansion of their operations at Kitimat, Canada. The resulting gain was excluded from underlying EBITDA consistent with prior years as it was part of a series of transactions that together were material.

(e) In 2023 the charge includes US\$0.9 billion related to the closure provision update announced by Energy Resources of Australia on 12 December 2023 together with the update included in their half year results for the period ended 30 June 2023, published in August. This update was considered material and therefore it was aggregated with other closure study updates which were similar in nature and have been excluded from underlying EBITDA. The other closure study updates were at legacy sites managed by our central closure team as well as an update at Yarwun alumina refinery which was expensed due to the impairment earlier in the year. In 2022, the charge related to re-estimates of underlying closure cash flows for legacy sites where the environmental damage preceded ownership by Rio Tinto.

(f) On 2 August 2022, we completed the sale of a gross production royalty which was retained following the disposal of the Cortez Complex in 2008. The gain recognised on sale of the royalty was excluded from underlying EBITDA on the grounds of individual magnitude.

Underlying EBITDA margin

Underlying EBITDA margin is defined as Group underlying EBITDA divided by the aggregate of consolidated sales revenue and our share of equity account unit sales after eliminations.

	2023 US\$m	2022 US\$m
Underlying EBITDA	23,892	26,272
Consolidated sales revenue	54,041	55,554
Share of equity accounted unit sales and inter-subsiary/equity accounted unit sales eliminations	3,016	2,850
	57,057	58,404
Underlying EBITDA margin	42 %	45 %

Pilbara underlying FOB EBITDA margin

The Pilbara underlying free on board (FOB) EBITDA margin is defined as Pilbara underlying EBITDA divided by Pilbara segmental revenue, excluding freight revenue.

	2023 US\$m	2022 US\$m
Pilbara		
Underlying EBITDA	19,828	18,474
Pilbara segmental revenue	30,867	29,313
Less: Freight revenue	(2,098)	(2,206)
Pilbara segmental revenue, excluding freight revenue	28,769	27,107
Pilbara underlying FOB EBITDA margin	69 %	68 %

Underlying EBITDA margin from Aluminium integrated operations

Underlying EBITDA margin from integrated operations is defined as underlying EBITDA divided by segmental revenue.

	2023 US\$m	2022 US\$m
Aluminium		
Underlying EBITDA - integrated operations	2,436	3,842
Segmental revenue - integrated operations	11,513	13,136
Underlying EBITDA margin from integrated operations	21 %	29 %

Underlying EBITDA margin (product group operations)

Underlying EBITDA margin (product group operations) is defined as underlying EBITDA divided by segmental revenue.

	2023 US\$m	2022 US\$m
Copper		
Underlying EBITDA - product group operations	2,436	2,947
Segmental revenue - product group operations	5,811	5,975
Underlying EBITDA margin - product group operations	42 %	49 %

	2023 US\$m	2022 US\$m
Minerals		
Underlying EBITDA - product group operations	1,780	2,665
Segmental revenue - product group operations	5,918	6,742
Underlying EBITDA margin - product group operations	30 %	40 %

Underlying earnings

Underlying earnings represents net earnings attributable to the owners of Rio Tinto, adjusted to exclude items that do not reflect the underlying performance of the Group's operations.

Exclusions from underlying earnings are those gains and losses that, individually or in aggregate with similar items, are of a nature and size to require exclusion in order to provide additional insight into underlying business performance.

The following items are excluded from net earnings in arriving at underlying earnings in each year irrespective of materiality:

- net gains/(losses) on disposal of interests in subsidiaries;
- impairment charges and reversals;
- profit/(loss) after tax from discontinued operations;
- exchange and derivative gains and losses. This exclusion includes exchange gains/(losses) on external net debt and intragroup balances, unrealised gains/(losses) on currency and interest rate derivatives not qualifying for hedge accounting, unrealised gains/(losses) on certain commodity derivatives not qualifying for hedge accounting, and unrealised gains/(losses) on embedded derivatives not qualifying for hedge accounting; and
- adjustments to closure provisions where the adjustment is associated with an impairment charge, or for legacy sites where the disturbance or environmental contamination relates to the pre-acquisition period.

In addition, there is a final judgemental category which includes, where applicable, other credits and charges that, individually or in aggregate if of a similar type, are of a nature or size to require exclusion in order to provide additional insight into underlying business performance.

Exclusions from underlying earnings relating to equity accounted units are stated after tax and included in the column "Pre-tax".

	Pre-tax 2023 US\$m	Taxation 2023 US\$m	Non- controlling interests 2023 US\$m	Net amount 2023 US\$m	Net amount 2022 US\$m Restated ^(a)
Net earnings	13,785	(3,832)	105	10,058	12,392
Items excluded from underlying earnings					
Impairment charges net of reversals ⁽ⁱ⁾	936	(499)	215	652	52
Foreign exchange and derivative (losses)/gains:					
– Exchange losses/(gains) on external net debt, intragroup balances and derivatives ^(b)	253	(12)	2	243	(216)
– Losses on currency and interest rate derivatives not qualifying for hedge accounting ^(c)	58	30	(1)	87	373
– (Gains)/losses on embedded commodity derivatives not qualifying for hedge accounting ^(d)	(21)	6	(8)	(23)	(20)
Change in closure estimates (non-operating and fully impaired sites) ^(e)	1,272	(51)	(119)	1,102	178
Deferred tax arising on internal sale of assets in Canadian operations ^(f)	—	(364)	—	(364)	—
Gains recognised by Kitimat relating to LNG Canada's project ^(g)	—	—	—	—	(106)
Loss on disposal of interest in subsidiary	—	—	—	—	105
Gain on sale of the Cortez royalty ^(h)	—	—	—	—	(331)
Write-off of Federal deferred tax assets in the United States ⁽ⁱ⁾	—	—	—	—	932
Total excluded from underlying earnings	2,498	(890)	89	1,697	967
Underlying earnings	16,283	(4,722)	194	11,755	13,359

- (a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.
- (b) Exchange losses on external net debt and intragroup balances includes post-tax foreign exchange losses on net debt of US\$316 million offset by post-tax gains of US\$73 million on intragroup balances, primarily as a result of the Australian dollar strengthening against the US dollar. In 2022, exchange gains on external net debt and intragroup balances included post-tax foreign exchange losses on net debt of US\$262 million offset by post-tax gains of US\$478 million on intragroup balances, primarily as a result of the Australian dollar weakening against the US dollar during the year.
- (c) Valuation changes on currency and interest rate derivatives, which are ineligible for hedge accounting, other than those embedded in commercial contracts, and the currency revaluation of embedded US dollar derivatives contained in contracts held by entities whose functional currency is not the US dollar.
- (d) Valuation changes on derivatives, embedded in commercial contracts that are ineligible for hedge accounting but for which there will be an offsetting change in future Group earnings. Mark-to-market movements on commodity derivatives entered into with the commercial objective of achieving spot pricing for the underlying transaction at the date of settlement are included in underlying earnings.
- (e) In 2023, the charge includes US\$0.9 billion related to the closure provision update announced by Energy Resources of Australia on 12 December 2023 together with the update included in their half year results for the period ended 30 June 2023, published in August. This update was considered material and therefore it was aggregated with other closure study updates which were similar in nature and have been excluded from underlying earnings. The other closure study updates were at legacy sites managed by our central closure team as well as an update at Yarwun alumina refinery which was expensed due to the impairment earlier in the year. In 2022, the charge related to re-estimates of underlying closure cash flows for legacy sites where the environmental damage preceded ownership by Rio Tinto.
- (f) During the year the Canadian aluminium business completed an internal sale of assets which resulted in the utilisation of previously unrecognised capital losses and an uplift in the tax depreciable value of assets on which a deferred tax asset of US\$364 million is recognised.
- (g) During 2022, LNG Canada elected to terminate their option to purchase additional land and facilities for expansion of their operations at Kitimat, Canada. The resulting gain was excluded from underlying earnings consistent with prior years as it was part of a series of transactions that together were material.
- (h) On 2 August 2022, we completed the sale of a gross production royalty which was retained following the disposal of the Cortez Complex in 2008. The gain recognised on sale of the royalty was excluded from underlying earnings on the grounds of individual magnitude.
- (i) In 2022, we wrote down our deferred tax assets in the United States following the introduction of the Corporate Alternative Minimum Tax regime. The amount has been restated from US\$820 million as previously reported to US\$932 million to reflect the adoption of narrow-scope amendments to IAS 12 as referred to in footnote (a).
- (j) Detailed information about impairment charges is disclosed in note 4 to the Financial Statements of our 2023 Annual Report.

Basic underlying earnings per share

Basic underlying earnings per share is calculated as underlying earnings divided by the weighted average number of shares outstanding during the year.

Year ended 31 December	2023	2022 Restated ^(a)
Net earnings (US\$ million)	10,058	12,392
Weighted average number of shares (millions)	1,621.4	1,619.8
Basic earnings per ordinary share (cents)	620.3	765.0
Items excluded from underlying earnings per share (cents) ^(b)	104.7	59.7
Basic underlying earnings per ordinary share (cents)	725.0	824.7

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

(b) Calculation of items excluded from underlying earnings per share:

	2023	2022 Restated ^(a)
Income excluded from underlying earnings (US\$m) (refer to page 44)	1,697.0	967.0
Weighted average number of shares (millions)	1,621.4	1,619.8
Items excluded from underlying earnings per share (cents)	104.7	59.7

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

We have provided basic underlying earnings per share as this allows the comparability of financial performance adjusted to exclude items that do not reflect the underlying performance of the Group's operations.

Interest cover

Interest cover is a financial metric used to monitor our ability to service debt. It represents the number of times finance income and finance costs (including amounts capitalised) are covered by profit before taxation, before finance income, finance costs, share of profit after tax of equity accounted units and items excluded from underlying earnings, plus dividends from equity accounted units.

	2023 US\$m	2022 US\$m
Profit before taxation	13,785	18,662
Add back		
Finance income	(536)	(179)
Finance costs	967	335
Share of profit after tax of equity accounted units	(675)	(777)
Items excluded from underlying earnings	2,498	(49)
Add: Dividends from equity accounted units	610	879
Calculated earnings	16,649	18,871
Finance income	536	179
Finance costs	(967)	(335)
Add: Amounts capitalised	(279)	(416)
Total net finance costs before capitalisation	(710)	(572)
Interest cover	23	33

Payout ratio

The payout ratio is used by us to guide the dividend policy we implemented in 2016, under which we have sought to return 40-60% of underlying earnings, on average through the cycle, to shareholders as dividends. It is calculated as total equity dividends per share to owners of Rio Tinto declared in respect of the financial year divided by underlying earnings per share (as defined above). Dividends declared usually include an interim dividend paid in the year, and a final dividend paid after the end of the year. Any special dividends declared in respect of the financial year are also included.

	2023 (cents)	2022 (cents) Restated ^(a)
Interim dividend declared per share	177.0	267.0
Final dividend declared per share	258.0	225.0
Total dividend declared per share for the year	435.0	492.0
Underlying earnings per share	725.0	824.7
Payout ratio	60 %	60 %

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

APMs derived from cash flow statement

Capital expenditure

Capital expenditure includes the net sustaining and development expenditure on property, plant and equipment, and on intangible assets. This is equivalent to "Purchases of property, plant and equipment and intangible assets" in the cash flow statement less "Sales of property, plant and equipment and intangible assets".

This measure is used to support management's objective of effective and efficient capital allocation as we need to invest in existing assets in order to maintain and improve productive capacity, and in new assets to grow the business.

Rio Tinto share of capital investment

Rio Tinto's share of capital investment represents our economic investment in capital projects. This measure was introduced in 2022 to better represent the Group's share of funding for capital projects which are jointly funded with other shareholders and which may differ from the consolidated basis included in the Capital expenditure APM. This better reflects our approach to capital allocation.

The measure is based upon the Capital expenditure APM, adjusted to deduct equity or shareholder loan financing provided to partially owned subsidiaries by non-controlling interests in respect of major capital projects in the period. In circumstances where the funding to be provided by non-controlling interests is not received in the same period as the underlying capital investment, this adjustment is applied in the period in which the underlying capital investment is made, not when the funding is received. Where funding which would otherwise be provided directly by shareholders is replaced with project financing, an adjustment is also made to deduct the share of project financing attributable to the non-controlling interest. This adjustment is not made in cases where Rio Tinto has unilaterally guaranteed this project financing. Lastly, funding contributed by the Group to Equity Accounted Units for its share of investment in their major capital projects is added to the measure. No adjustment is

made to the Capital expenditure APM where capital expenditure is funded from the operating cash flows of the subsidiary or Equity Accounted Unit.

	2023 US\$m	2022 US\$m	2021 US\$m
Purchase of property, plant and equipment and intangible assets	7,086	6,750	7,384
Less: Equity or shareholder loan financing received/due from non-controlling interests	(125)	—	—
Rio Tinto share of capital investment	6,961	6,750	7,384

Free cash flow

Free cash flow is defined as net cash generated from operating activities minus purchases of property, plant and equipment and intangibles and payments of lease principal, plus proceeds from the sale of property, plant and equipment and intangible assets.

This measures the net cash returned by the business after the expenditure of sustaining and development capital. This cash can be used for shareholder returns, reducing debt and other investing/financing activities.

	2023 US\$m	2022 US\$m
Net cash generated from operating activities	15,160	16,134
Less: Purchase of property, plant and equipment and intangible assets	(7,086)	(6,750)
Less: Lease principal payments	(426)	(374)
Add: Sales of property, plant and equipment and intangible assets	9	—
Free cash flow	7,657	9,010

APMs derived from the balance sheet

Net debt

Net debt is total borrowings plus lease liabilities less cash and cash equivalents and other liquid investments, adjusted for derivatives related to net debt.

Net debt measures how we are managing our balance sheet and capital structure.

	2023					
	Financial liabilities			Other assets		
	Borrowings excluding overdrafts ^(a)	Lease liabilities ^(b)	Net debt related derivatives ^(c)	Cash and cash equivalents including overdrafts ^(a)	Other investments ^(d)	Net debt
	US\$m	US\$m	US\$m	US\$m	US\$m	US\$m
At 1 January	(11,070)	(1,200)	(690)	6,774	1,998	(4,188)
Foreign exchange adjustment	(87)	(21)	62	(23)	—	(69)
Cash movements excluding exchange movements	(1,523)	426	(4)	2,921	(1,157)	663
Other non-cash movements	(320)	(556)	203	—	36	(637)
At 31 December	(13,000)	(1,351)	(429)	9,672	877	(4,231)

(a) Borrowings excluding overdrafts of US\$13,000 million (2022: US\$11,070 million) differs from Borrowings on the balance sheet as it excludes bank overdrafts of US\$1 million (2022: US\$1 million) which has been included in cash and cash equivalents for the net debt reconciliation.

(b) Other non-cash movements in lease liabilities include the net impact of additions, modifications and terminations during the year.

(c) Included within "Derivatives related to net debt" are interest rate and cross currency interest rate swaps that are in hedge relationships with the Group's debt.

(d) Other investments includes US\$877 million (2022: US\$1,998 million) of highly liquid financial assets held in a separately managed portfolio of fixed income instruments classified as held for trading.

Net gearing ratio

Net gearing ratio is defined as net debt divided by the sum of net debt and total equity at the end of each year. It demonstrates the degree to which the Group's operations are funded by debt versus equity.

	2023 US\$m	2022 US\$m Restated ^(a)
Net debt	(4,231)	(4,188)
Net debt	(4,231)	(4,188)
Total equity	(56,341)	(52,741)
Net debt plus total equity	(60,572)	(56,929)
Net gearing ratio	7%	7%

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

Underlying return on capital employed

Underlying return on capital employed ("ROCE") is defined as underlying earnings excluding net interest divided by average capital employed (operating assets).

Underlying ROCE measures how efficiently we generate profits from investment in our portfolio of assets.

	2023 US\$m	2022 US\$m Restated ^(a)
Profit after tax attributable to owners of Rio Tinto (net earnings)	10,058	12,392
Items added back to derive underlying earnings	1,697	967
Underlying earnings	11,755	13,359
Add/(deduct):		
Finance income per the income statement	(536)	(179)
Finance costs per the income statement	967	335
Tax on finance cost	(373)	(238)
Non-controlling interest share of net finance costs	(429)	(98)
Net interest cost in equity accounted units (Rio Tinto share)	53	42
Net interest	(318)	(138)
Adjusted underlying earnings	11,437	13,221
Equity attributable to owners of Rio Tinto - beginning of the year ^(a)	50,634	51,930
Net debt/(cash) - beginning of the year	4,188	(1,576)
Operating assets - beginning of the year	54,822	50,354
Equity attributable to owners of Rio Tinto - end of the year ^(a)	54,586	50,634
Net debt - end of the year	4,231	4,188
Operating assets - end of the year	58,817	54,822
Average operating assets	56,820	52,588
Underlying return on capital employed	20 %	25 %

(a) Comparative information has been restated to reflect the adoption of narrow scope amendments to IAS12 'Income Taxes'.

Metal prices and exchange rates

		12 month average to 31 December 2023	12 month average to 31 December 2022	Increase/ (Decrease)
Metal prices - average for the period				
Copper	- US cents/lb	386	398	(3)%
Aluminium	- US\$/tonne	2,250	2,703	(17)%
Gold	- US\$/troy oz	1,941	1,800	8 %

	Twelve month average to 31 December			At 31 December		
	2023	2022	Increase/ (Decrease)	2023	2022	Increase/ (Decrease)
Exchange rates against the US dollar						
Pound sterling	1.24	1.24	— %	1.28	1.21	6 %
Australian dollar	0.66	0.69	(4)%	0.69	0.68	1 %
Canadian dollar	0.74	0.77	(4)%	0.76	0.74	3 %
Euro	1.08	1.05	3 %	1.11	1.07	4 %
South African rand	0.054	0.061	(11)%	0.054	0.059	(8)%

Forward-looking statements

This report includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in this report, including, without limitation, those regarding Rio Tinto’s financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to Rio Tinto’s products, production forecasts and reserve and resource positions), are forward-looking statements. The words “intend”, “aim”, “project”, “anticipate”, “estimate”, “plan”, “believes”, “expects”, “may”, “should”, “will”, “target”, “set to” or similar expressions, commonly identify such forward-looking statements.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Rio Tinto, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding Rio Tinto’s present and future business strategies and the environment in which Rio Tinto will operate in the future. Among the important factors that could cause Rio Tinto’s actual results, performance or achievements to differ materially from those in the forward-looking statements include, but are not limited to: an inability to live up to Rio Tinto’s values and any resultant damage to its reputation; the impacts of geopolitics on trade and investment; the impacts of climate change and the transition to a low-carbon future; an inability to successfully execute and/or realise value from acquisitions and divestments; the level of new ore resources, including the results of exploration programmes and/or acquisitions; disruption to strategic partnerships that play a material role in delivering growth, production, cash or market positioning; damage to Rio Tinto’s relationships with communities and governments; an inability to attract and retain requisite skilled people; declines in commodity prices and adverse exchange rate movements; an inability to raise sufficient funds for capital investment; inadequate estimates of ore resources and reserves; delays or overruns of large and complex projects; changes in tax regulation; safety incidents or major hazard events; cyber breaches; physical impacts from climate change; the impacts of water scarcity; natural disasters; an inability to successfully manage the closure, reclamation and rehabilitation of sites; the impacts of civil unrest; the impacts of the Covid-19 pandemic; breaches of Rio Tinto’s policies, standard and procedures, laws or regulations; trade tensions between the world’s major economies; increasing societal and investor expectations, in particular with regard to environmental, social and governance considerations; the impacts of technological advancements; and such other risks identified in Rio Tinto’s most recent Annual Report and accounts in Australia and the United Kingdom and the most recent Annual Report on Form 20-F filed with the United States Securities and Exchange Commission (the “SEC”) or Form 6-Ks furnished to, or filed with, the SEC. Forward-looking statements should, therefore, be construed in light of such risk factors and undue reliance should not be placed on forward-looking statements. These forward-looking statements speak only as of the date of this report. Rio Tinto expressly disclaims any obligation or undertaking (except as required by applicable law, the UK Listing Rules, the Disclosure Guidance and Transparency Rules of the Financial Conduct Authority and the Listing Rules of the Australian Securities Exchange) to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in Rio Tinto’s expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

Nothing in this report should be interpreted to mean that future earnings per share of Rio Tinto plc or Rio Tinto Limited will necessarily match or exceed its historical published earnings per share.

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This announcement is authorised for release to the market by Rio Tinto's Group Company Secretary.

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Classification: 3.1 Additional regulated information required to be disclosed under the laws of a Member State