

19 February 2025

Strong operating performance underpins financial results

- Resilient financials with underlying EBITDA of 23.3 billion, despite 11% lower iron ore price*.
- Higher net cash generated from operating activities of 15.6 billion, driven by portfolio mix and effective working capital management.
- Profit after tax attributable to owners of Rio Tinto (referred to as "net earnings" throughout this release) of 11.6 billion.
- Full year ordinary dividend of 6.5 billion, a 60% payout: nine-year track record at top end of payout range

Year ended 31 December	2024	2023	Change
Net cash generated from operating activities (US millions)	15,599	15,160	3 %
Purchases of property, plant and equipment and intangible assets (US millions)	9,621	7,086	36 %
Free cash flow ¹ (US millions)	5,553	7,657	(27) %
Consolidated sales revenue (US millions)	53,658	54,041	(1) %
Underlying EBITDA ¹ (US millions)	23,314	23,892	(2) %
Profit after tax attributable to owners of Rio Tinto (net earnings) (US millions)	11,552	10,058	15 %
Underlying earnings per share (EPS) ¹ (US cents)	669.5	725.0	(8) %
Ordinary dividend per share (US cents)	402.0	435.0	(8) %
Underlying return on capital employed (ROCE) ¹	18%	20%	
	At 31 December 2024	At 31 December 2023	
Net debt ¹ (US millions)	5,491	4,231	30 %

Rio Tinto Chief Executive Jakob Stausholm said: "We continue to build on our momentum with another set of strong operational and financial results. With underlying EBITDA of 23.3 billion and operating cash flow of 15.6 billion, we are increasing our investments to underpin our plans for a decade of profitable growth. We are reporting underlying earnings of 10.9 billion, after taxes and government royalties of 8.2 billion, and a healthy return on capital employed of 18%.

"Our strong balance sheet enables us to pay a 6.5 billion ordinary dividend, maintaining our practice of a 60% payout, the ninth consecutive year at the top end of our payout range, as we continue to invest with discipline.

"We are excited as we head into 2025, with all the building blocks for an incredibly successful, diversified and growing business in place including the expected closing of the Arcadium acquisition in March. We will remain disciplined in the short, medium and long term, while paying attractive returns to shareholders."

* On a Free on Board (FOB) basis.

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 37 to 46. Our financial results are prepared in accordance with IFRS - see page 32 for further information.

Safety is our top priority. Tragically, there were **5 fatalities in our business in 2024**. On 23 January 2024, a plane crashed shortly after takeoff near Fort Smith, Northwest Territories, Canada, resulting in the loss of 4 Diavik team members and 2 airline crew. On 26 October 2024, an employee of one of our contractors was injured at the SimFer Port Project in Morebaya, part of the Simandou project in Guinea, and subsequently passed away from his injuries.

Our team is **committed to learning how we continuously improve safety**. This remains imperative throughout 2025 and underpins our ability to deliver on our four objectives.

Prioritising the health of our people, our ore body knowledge and the health of our assets, we have improved our operational performance and delivered strong financial results. We have maintained our financial strength, which allows us to invest for the future to deliver profitable growth, while also continuing to pay attractive returns.

Continued successful delivery in 2024: accelerating growth in 2025 and beyond

As part of our focus on **Best Operator**, we aim to safely and sustainably realise the full value of our assets, through our Safe Production System (SPS). Our operational performance is improving: in 2024, **we delivered over 1% production growth and a 3% increase in sales volumes**, both on a copper equivalent basis (based on long-term consensus pricing), and by the end of the year we had commenced deployment of SPS at 31 (~80%) of our sites. Just one outcome of the program is the achievement of a 5 million tonne production uplift for Pilbara Iron Ore in 2024 for the second consecutive year.

In line with our **Excel in Development** objective, we are growing and diversifying our portfolio, as we build a pipeline for the future:

- at the **Oyu Tolgoi copper-gold mine in Mongolia**, we commissioned ventilation Shafts 3 and 4 and are commissioning the conveyor to surface, as the mine **ramps up to 500 thousand tonnes¹ of copper per year from 2028 to 2036**.
- at the Simandou iron ore project in Guinea, the **SimFer mine² is on track to deliver first production at the mine gate in 2025**, ramping up over 30 months to an annualised capacity of 60 million tonnes per year³ (27 million tonnes per year Rio Tinto share).
- in the Pilbara, **we advanced 5 replacement iron ore projects**, including Western Range where first ore is on plan for the first half of 2025.
- we announced a **definitive agreement to acquire Arcadium Lithium plc** in an all-cash transaction for 6.7 billion, establishing ourselves as a global leader in energy transition commodities. The transaction is expected to close in March 2025.
- we **approved 2.5 billion to expand the Rincon project in Argentina**, our first commercial scale lithium operation, to an annual capacity of 60,000 tonnes of battery grade lithium carbonate.

Aligned with striving for **impeccable ESG credentials**, the low-carbon transition continues to be at the heart of our strategy. In 2024, **our Scope 1 and 2 emissions**, on an equity basis, were **30.7Mt CO₂e** (33.9Mt⁴ adjusted emissions in 2023), **14% below our 2018 baseline** of 35.7Mt CO₂e⁴.

In 2024, **we reduced our emissions by 3.2Mt CO₂e**, primarily through new renewable energy contracts. We also **made commitments to projects that are expected to deliver abatement of around 3.6Mt per year in 2030**, mostly through renewable electricity and biofuels. Significant progress on the repowering of our Gladstone assets was made when we announced two major renewable Power Purchase Agreements in early 2024, one for solar and one for wind.

We are also **supporting our customers and suppliers in reducing emissions from our value chain**, particularly those from steelmaking. We continued to advance the development of Biolron™, an innovative ironmaking process. When combined with the use of renewable energy and fast-growing biomass, this has the potential to reduce CO₂ emissions by up to 95% compared with the current blast furnace method. We are investing 143 million to build a research and development facility in Western Australia, scheduled for commissioning in 2026, with a pilot plant 10 times larger than its predecessor.

For further detail, please refer to the climate section of our 2024 Annual Report released today.

In 2024, we **strengthened our social performance capacity** to become a better operator and partner. Together with Voconiq, a third-party engagement science research company, we launched our global Community Perception Monitoring program, Local Voices. The program will help us to engage more effectively and better understand communities' perceptions, leading to improved data-driven decisions.

In 2024, we **completed one of the final recommendations of the Everyday Respect report**; publishing an independent progress review conducted by Elizabeth Broderick & Co. Change is happening: one of the findings indicates people are more empowered to speak up and Everyday Respect is now widely considered a normal conversation within the company, which is a critical step for culture change.

Developing our talent and diversity, we **increased gender diversity to 25.2%** (from 24.3% in 2023).

The increases were distributed across all levels of the organisation with **female senior leaders increasing to 32%** (from 30.1% in 2023).

1. 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.

2. 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 Infraco Guinée S.A. will deliver SimFer's scope of the co-developed rail and port infrastructure, and is co-owned by SimFer Jersey (85%) and the Guinean State (15%). SimFer Jersey will ultimately own 42.5% of Compagnie du Transguinée, which will own and operate the co-developed infrastructure during operations.

3. 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 ASX dated 6 December 2023 titled "Investor Seminar 2023". Rio Tinto confirms that all material assumptions underpinning that production target and those production profiles continue to apply and have not materially changed.

4. We have adjusted our 2018 baseline and 2023 emissions to exclude emissions reductions achieved by divesting assets and allow increases associated with acquisitions. In 2023, we restated prior year emissions numbers and our 2018 baseline following an update to our GHG reporting methodology. Further detail on these changes in reporting is available in our Scope 1, 2 and 3 Emissions Calculation Methodology.

Guidance

- **Our share of capital investment** (non-IFRS measure, refer to APMs on page 43) is unchanged. **In 2025 we expect it to be ~ 11 billion:** this includes ~ 3 billion in growth, depending on opportunities, ~ 4 billion of sustaining capital, ~ 3 to 4 billion of replacement capital and ~ 0.3 billion of decarbonisation capital. Up to 2030, cumulative decarbonisation capital is expected to be at the lower end of our 5 to 6 billion range, subject to Traditional Owner and other stakeholder engagement, regulatory approvals and technology developments, due to the increased role of commercial partnerships. **Mid-term guidance for our share of capital investment is ~ 10 to 11 billion.** All capital guidance is subject to ongoing inflationary pressures and exchange rates.
- In 2025, we expect our ongoing **exploration and evaluation expense to be ~ 1.0 billion.**
- In the coming years, we expect to spend (on a cash basis) ~ **1 billion per year on closure activities** as we continuously rehabilitate our operations and progress work 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. All these amounts are fully provided for within our provision for closure costs of 15.7 billion.
- Effective tax rate on underlying earnings is expected to be around 30% in 2025.

Unit costs	2024 Actuals	2025 Guidance
Pilbara iron ore unit cash costs, free on board (FOB) basis - US per wet metric tonne	23.0	23.0-24.50
Australian dollar exchange rate	0.66	0.66
Copper C1 net unit costs (includes Kennecott, Oyu Tolgoi and Escondida) - US cents per lb	142	130-150

Production (Rio Tinto share, unless otherwise stated)	2024 Actuals	2025 Guidance
Pilbara iron ore (shipments, 100% basis) (Mt)	328.6	323 to 338
Bauxite (Mt)	58.7	57 to 59
Alumina (Mt)	7.3	7.4 to 7.8
Aluminium (Mt)	3.3	3.25 to 3.45
Copper (consolidated basis) (kt)	792.6	780 to 850
Titanium dioxide slag (Mt)	1.0	1.0 to 1.2
Iron Ore Company of Canada iron ore pellets and concentrate (Mt)	9.4	9.7 to 11.4
Boric oxide equivalent (Mt)	0.5	~0.5

- Production guidance is consistent with our Investor Seminar, released on 4 December 2024.
- Iron ore shipments and bauxite production guidance remain subject to weather impacts.
- Pilbara iron ore guidance remains subject to the timing of approvals for planned mining areas and heritage clearances. SP10 levels are expected to remain elevated until replacement projects are delivered.
- On 24 January 2025, we provided an update on Tropical Cyclone Sean which caused record rainfall along parts of the Pilbara coastline of Western Australia, flooding a key railcar dumper and closing East Intercourse Island (EII) port. The rectification works to repair the flood damage to the railcar dumper are well progressed and commissioning activities have commenced this week. Our other Pilbara port operations were also impacted by Tropical Cyclones Tahlia, Vince and Zelia over 5 February to 14 February. The total losses from all four cyclones are anticipated to be around 13 million tonnes. We have mitigation plans in place to offset around half of this over the course of the year. The system has limited ability to mitigate further losses from weather if incurred. There is no change to full year shipments guidance. A full assessment of the cost from the weather disruption will be undertaken at the end of the first quarter.

Financial performance

Income Statement

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 2024 was 11.6 billion (2023: 10.1 billion).

Financial strength through greater diversification

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 [37](#) and [41](#), respectively.

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

	US bn
2023 underlying EBITDA	23.9
Prices	(1.6)
Exchange rates	0.3
Volumes and mix	0.2
General inflation (including net impact on provisions)	(0.6)
Energy	0.2
Operating cash unit costs	0.6
Exploration and evaluation expenditure (net of profit from disposal of interests in undeveloped projects)	0.3
Non-cash costs/other	0.1
Change in underlying EBITDA	(0.6)
2024 underlying EBITDA	23.3

Financial figures are rounded to the nearest 100 million, hence small differences may result in the totals.

In 2024, we started to see the benefits of our diversified portfolio and operational improvements. Higher prices for copper, bauxite and aluminium together with rising copper and bauxite volumes, and our focus on cost discipline helped to offset much of the impact of the iron ore price decline, leading to underlying EBITDA of 23.3 billion.

Lower iron ore price partly offset by stronger copper, bauxite and aluminium

Movements in commodity prices resulted in a 1.6 billion decline in underlying EBITDA compared with 2023, reflecting the impact of a lower iron ore price, which was partly offset by higher prices for bauxite and LME copper and aluminium.

We have included a table of prices and exchange rates on page [47](#).

The monthly average Platts index for 62% iron fines converted to a Free on Board (FOB) basis was 11% lower, on average, compared with 2023.

Average LME prices for copper and aluminium were both 8% higher, the bauxite index was 26% higher and the gold price was 23% higher compared with 2023.

The Midwest premium duty paid for aluminium in the US declined by 17% to 427 per tonne.

Marginal benefit from weaker local currencies

Compared with 2023, on average, the US dollar strengthened by 1% against the Australian and Canadian dollars. Currency movements increased underlying EBITDA by 0.3 billion relative to 2023.

Rising copper volumes

A 3% rise in copper equivalent sales volumes led to a 0.2 billion increase in underlying EBITDA. This was underpinned by 25% higher copper sales volumes, along with increases in gold, driven by the steady ramp-up of the Oyu Tolgoi underground mine and higher copper grades at Escondida, which, together with a 7% rise in bauxite volumes, offset the impact of 1% lower iron ore shipments from the Pilbara.

Impact of inflation partly offset by lower energy prices

The impact of inflation on our cost base lowered underlying EBITDA by 0.6 billion. The easing of diesel prices and lower prices for natural gas partly offset this, with a favourable impact to underlying EBITDA of 0.2 billion.

Lower market-linked raw material prices, in particular for aluminium and alumina

We remain focused on cost control, in particular maintaining discipline on fixed costs. Overall, lower operating cash unit costs benefited underlying EBITDA by 0.6 billion. This was driven by lower unit costs in Aluminium from the easing of market-linked raw materials prices, such as caustic, coke and pitch, in conjunction with higher bauxite volumes. Higher Copper volumes led to greater cost efficiencies, where we saw a 27% reduction in Copper C1 net unit costs. Partially offsetting these were slightly lower volumes in the Pilbara and Iron Ore Company of Canada (IOC), along with diamonds and titanium dioxide feedstocks as these businesses managed through weaker markets, leading to fixed cost inefficiencies.

Continued investment in exploration and evaluation

Our ongoing exploration and evaluation expenditure was 0.9 billion, compared with 1.4 billion in

Our ongoing exploration and evaluation expenditure was 0.3 billion, compared with 1.7 billion in 2023. The decrease was mainly attributable to the capitalisation of exploration and evaluation expenditure for Simandou from October 2023. 2023 also included a gain on disposal of 55% of our interest in the La Granja copper project in Peru (0.2 billion, pre-tax).

Net earnings

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

	US bn
2023 net earnings	10.1
Changes in underlying EBITDA (see above)	(0.6)
Increase in depreciation and amortisation (pre-tax) in underlying earnings	(0.8)
Decrease in interest and finance items (pre-tax) in underlying earnings	0.3
Decrease in tax on underlying earnings	0.5
Increase in underlying earnings attributable to outside interests	(0.3)
Total changes in underlying earnings	(0.9)
Changes in items excluded from underlying earnings (see below)	2.4
Movement in impairment charges net of reversals	0.1
Movement from consolidation and disposal of interests in businesses	0.9
Movement in closure estimates (non-operating and fully impaired sites)	1.0
Movement in exchange differences and gains/losses on derivatives	0.5
Other	(0.1)
2024 net earnings	11.6

Financial figures are rounded to the nearest 100 million, hence small differences may result in the totals.

Increase in depreciation

Higher depreciation was due to an increase in capital expenditure in prior years, production growth at Kennecott and lower capitalised depreciation, which resulted in underlying earnings being 0.8 billion lower than 2023.

Modest decrease in tax on underlying earnings

The effective tax rate on underlying earnings of 28% (2023: 30%) primarily reflects the mix of profits across different jurisdictions. This, coupled with lower profits, resulted in tax on underlying earnings being 0.5 billion lower than 2023.

Increase in underlying earnings attributable to outside interests

In 2024, expenditure at Simandou was capitalised whereas until September 2023 it was expensed, resulting in a year-on-year decrease in costs attributable to outside interests following the capitalisation.

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).

	2024	2023
Year ended 31 December	US bn	US bn
Underlying earnings	10.9	11.8
Items excluded from underlying earnings		
Net gains on consolidation and disposal of interests in businesses	0.9	-
Impairment charges net of reversals	(0.5)	(0.7)
Foreign exchange and derivative gains/(losses) on net debt and intragroup balances and derivatives not qualifying for hedge accounting	0.2	(0.3)
Change in closure estimates (non-operating and fully impaired sites)	(0.1)	(1.1)
Other	0.2	0.4
Total items excluded from underlying earnings	0.7	(1.7)
Net earnings	11.6	10.1

Financial figures are rounded to the nearest 100 million, hence small differences may result in the totals.

On page [41](#) 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 [38](#).

Net gains on consolidation and disposal of interests in businesses of 0.9 billion primarily related to a gain following the increase in ownership of Tiwai Point Smelter (NZAS), New Zealand, the sale of Sweetwater, a former uranium legacy site in Wyoming, United States, and the sale of Dampier Salt's Lake MacLeod operation in Western Australia.

We recognised impairment charges net of reversals of 0.5 billion (after tax), mainly related to our alumina refineries in Queensland: a review was triggered by studies for the double digestion project indicating increased capital costs. In 2023, we recognised impairment charges net of reversals of 0.7 billion (after tax), also mainly related to our alumina refineries. The full analysis is set out in note 4 to the consolidated financial statements.

Foreign exchange and derivative gains were 0.2 billion in 2024 compared to a loss of 0.3 billion in

foreign exchange and derivative gains were 0.2 billion in 2024 compared to a loss of 0.3 billion in 2023. Exchange losses are largely offset by currency translation gains recognised in equity and vice-versa. The quantum of US dollar debt is largely unaffected and we will repay it from US dollar sales receipts.

In 2023, 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.

Net earnings and underlying earnings refer to amounts attributable to the owners of Rio Tinto.

Underlying EBITDA and underlying earnings by product group

Year ended 31 December	Underlying EBITDA			Underlying earnings		
	2024 US bn	2023 US bn	Change %	2024 US bn	2023 US bn	Change %
Iron Ore	16.2	20.0	(19) %	9.1	11.9	(23) %
Aluminium	3.7	2.3	61 %	1.5	0.5	176 %
Copper	3.4	2.0	75 %	0.8	0.2	327 %
Minerals	1.1	1.4	(24) %	0.1	0.3	(54) %
Reportable segments total	24.4	25.6	(5) %	11.5	12.9	(11) %
Simandou iron ore project	-	(0.5)	(96) %	-	(0.2)	(76) %
Other operations	-	(0.1)	- %	(0.2)	(0.3)	(27) %
Central pension costs, share-based payments, insurance and derivatives	0.2	0.2	(9) %	0.2	-	375 %
Restructuring, project and one-off costs	(0.3)	(0.2)	34 %	(0.2)	(0.1)	59 %
Other central costs	(0.8)	(1.0)	(18) %	(0.6)	(0.9)	(29) %
Central exploration and evaluation	(0.2)	(0.1)	138 %	(0.2)	(0.1)	260 %
Net interest				0.4	0.3	24 %
Total	23.3	23.9	(2) %	10.9	11.8	(8) %

Financial figures are rounded to the nearest 100 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 [37](#) to [46](#).

Simandou iron ore project

We commenced capitalising qualifying costs attributable to the Simandou project in Guinea from the fourth quarter of 2023. In 2023, we expensed 0.5 billion.

Central and other costs

Pre-tax central pension costs, share-based payments, insurance and derivatives were a 0.2 billion credit, mainly associated with the premiums paid by the business to our Captive insurers. This was largely unchanged from 2023: although there was an insurance charge relating to the Captive's payout of the process safety incidents at Rio Tinto Iron and Titanium (RTIT) and the forest fires at IOC in 2024, this movement was offset by unrealised derivative gains recognised in 2024 (unrealised loss in 2023).

On a pre-tax basis, restructuring, project and one-off central costs increased modestly as we continue to drive productivity by investing in group-wide projects.

Other central costs of 0.8 billion (pre-tax) decreased by 18% compared to 2023, reflecting lower costs across a number of our functions together with higher central recoveries.

On an underlying earnings basis, net interest was a credit of 0.4 billion (2023: credit of 0.3 billion) with the variance between the two years being additional costs associated with the refinancing of Oyu Tolgoi in 2023.

Sustained investment in greenfield exploration

We have a strong portfolio of greenfield exploration projects in early exploration and studies stages, with activity in 17 countries across eight commodities. This is reflected in our pre-tax central spend of 0.2 billion. The bulk of this expenditure was focused on copper in Angola, Australia, Chile, Colombia, Kazakhstan, Papua New Guinea, Peru, the US and Zambia, nickel in Australia, Brazil, Canada and Finland, lithium in Australia, Brazil, Canada, Finland, Rwanda and the US, potash in Canada, diamonds in Angola, heavy mineral sands in South Africa and rutile-graphite in Malawi. The Rio Tinto operated Nuevo Cobre joint venture copper project in Chile continues to make good progress with permitting advancing alongside ongoing geological field programs.

Year ended 31 December	US bn	US bn
Net cash generated from operating activities	15.6	15.2
Purchases of property, plant and equipment and intangible assets	(9.6)	(7.1)
Lease principal payments	(0.5)	(0.4)
Free cash flow¹	5.6	7.7
Dividends paid to equity shareholders	(7.0)	(6.5)
Net funding relating to Simandou (outside of free cash flow)	0.5	-
Non Simandou-related acquisitions (mainly Matalco in 2023)	-	(0.8)
Other	(0.3)	(0.4)
Movement in net debt¹	(1.3)	-

Financial figures are rounded to the nearest 100 million, hence small differences may result in the totals.

- 15.6 billion in net cash generated from operating activities, which was 3% higher than 2023, reflects a 67% underlying EBITDA cash conversion (compared to 63% in 2023). This was driven by favourable working capital movements (+ 0.1 billion in 2024; - 0.9 billion in 2023), along with higher dividends from Escondida (1.0 billion in 2024; 0.6 billion in 2023). We managed our inventory levels down in 2024 to a more optimised level, which included processing concentrate at Kennecott following the smelter rebuild in 2023.
- Taxes paid of 4.2 billion, which were 0.5 billion lower than 2023, mainly reflected lower profits in Australia.
- Purchases of property, plant and equipment and intangible assets (capital expenditure) of 9.6 billion comprised 2.7 billion of growth, 2.5 billion of replacement, 4.2 billion of sustaining and 0.2 billion of decarbonisation capital (in addition to 0.3 billion of decarbonisation spend in operating costs). We funded our share of capital expenditure in 2024 from internal sources. We will continue to fund our capital program in accordance with our capital allocation framework.
- 7.0 billion of dividends reflected the 2023 final ordinary and the 2024 interim ordinary dividends.
- In 2024, we received 1.5 billion from CIOH for its share of cash expenditures for the Simandou project and we paid 1.0 billion to WCS to support funding development of the infrastructure.
- The above movements, together with 0.3 billion of other movements, resulted in an increase in net debt¹ of 1.3 billion in 2024 to 5.5 billion at 31 December 2024.

Year ended 31 December	2024 US m	2023 US m
Purchase of property, plant and equipment and intangible assets	9,621	7,086
Funding provided by the group to EAUs ^(a)	965	-
Less: Equity or shareholder loan financing received/due from non-controlling interests ^(b)	(1,063)	(125)
Rio Tinto share of capital investment	9,523	6,961

- (a) In 2024, funding provided by the group to EAUs relates to funding of WCS rail and port entities (WCS) in relation to the Simandou project, consisting of a direct equity investment in WCS of US 431 million and loans provided totalling US 534 million.
- (b) In 2024, we received US 1,505 million from Chalco Iron Ore Holdings Ltd (CIOH), of which US 1,063 million relates to CIOH's 47% share of capital expenditure incurred on the Simandou project and associated funding provided by the Group to EAUs during the year, accounted for on an accrual basis.

- Our share of capital investment in 2024 was 9.5 billion, comprised of capital expenditure of 9.6 billion and funding provided by the group to equity accounted units for its share of investment of 1.0 billion, net of equity/shareholder loan financing received/due from non-controlling interests of 1.1 billion.

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 37 to 46. Our financial results are prepared in accordance with IFRS - see page 32 for further information.

Retaining a strong balance sheet

Net debt¹ of 5.5 billion at 31 December 2024 increased by 1.3 billion compared to 2023 year end.

Our net gearing ratio¹ (net debt to total capital) was 9% at 31 December 2024 (31 December 2023: 7%). See page 45.

Our total financing liabilities excluding net debt derivatives at 31 December 2024 (see page 45) were 13.8 billion (31 December 2023: 14.4 billion) and the weighted average maturity was 11 years. At 31 December 2024, 76% of these liabilities were at floating interest rates (84% excluding leases). The maximum amount within non-current borrowings maturing in any one calendar year is 1.67 billion, which matures in 2033.

We had 8.7 billion in cash and cash equivalents plus other short-term highly liquid investments at 31 December 2024 (31 December 2023: 10.5 billion).

Provision for closure costs

At 31 December 2024, provisions for close-down and restoration costs and environmental clean-up obligations were 15.7 billion (31 December 2023: 17.2 billion). There was a revision of the closure discount rate to 2.5% (from 2.0%), reflecting expectations of higher yields from long-dated bonds, including the 30-year US Treasury Inflation Protected Securities, a key input to our closure discount rate. This resulted in a 1.0 billion decrease, most of which was adjusted against capitalised closure costs, with a 0.2 billion credit reflected in underlying EBITDA relating to our closed and non-operating sites. The provision further reduced by 1.1 billion due to the strengthening of the US dollar against local currencies. During the year, there was a 1.1 billion spend against the provision as we advanced our closure activities at Argyle, ERA, the Gove alumina refinery and other legacy sites, along with progressive closure activity across our operations.

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 37 to 46. Our financial results are prepared in accordance with IFRS - see page 32 for further information.

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.

Nine-year track record of 60% payout on the ordinary dividend, at top end of range

	2024 US bn	2023 US bn
Ordinary dividend		
Interim ^a	2.9	2.9
Final ^a	3.7	4.2
Full-year ordinary dividend^a	6.5	7.1
Payout ratio on ordinary dividend	60%	60%

(a) Based on weighted average number of shares and declared dividends per share for the respective periods and excluding foreign exchange impacts on payment. Financial figures are rounded to the nearest 100 million, hence small differences may result in the totals.

As announced on 26 July 2024, we determine Rio Tinto plc and Rio Tinto Limited dividends in US dollars, our reporting currency. Historically, we have declared and announced these dividends in pounds sterling and Australian dollars, respectively. However, following changes to Rio Tinto Limited's constitution approved by shareholders in 2024, we now declare and announce dividends in US dollars.

Ordinary dividend per share declared	2024	2023
Interim (US cents)	177.0	177.0
Final (US cents)	225.0	258.0
Full-year (US cents)	402.0	435.0

The 2024 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 17 April 2025, we will pay the 2024 final ordinary dividend to holders of Rio Tinto plc and Rio Tinto Limited ordinary shares and holders of Rio Tinto plc ADRs (American Depositary Receipts) on the register at the close of business on 7 March 2025 (record date). The ex-dividend date for Rio Tinto plc and Rio Tinto Limited holders is 6 March 2025. For holders of Rio Tinto plc ADRs, the ex-dividend date is 7 March 2025.

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

the prevailing exchange rates seven business days prior to the dividend payment date.

Shareholders must register any changes to their currency elections by 27 March 2025.

ADR holders receive dividends at the declared rate in US dollars.

We will operate our Dividend Reinvestment Plans for the 2024 final dividend (visit riotinto.com for details). Rio Tinto plc and Rio Tinto Limited shareholders' elections to participate in the Dividend Reinvestment Plans must be received by 27 March 2025. Purchases under the Dividend Reinvestment Plans 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 2025	Status/Milestones
Ongoing			
Iron ore			
Investment in the Western Range iron ore project in Western Australia, 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.	1.3bn (Rio Tinto share) ¹	0.4bn (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 now 90% complete, with fabrication and overland conveyor belt installation finalised. We continue to focus on completion of the new crushing and screening facilities, with first ore from that new system on plan for the first half of 2025.
Investment in the Simandou high-grade iron ore project in Guinea in partnership with CIOH, a Chinalco-led consortium (the SinFer joint venture) and co-development of the rail and port infrastructure with Winning Consortium Simandou ² (WCS), Baowu and the Republic of Guinea (the partners) for the export of up to 120 million tonnes per year of iron ore mined by SinFer's and WCS's respective mining concessions. ³ The SinFer joint venture will develop, own and operate a 60 million tonne per year mine in blocks 3 & 4. WCS will construct the project's ~536 kilometre shared dual track main line, a 16 kilometre spur connecting its mine to the mainline as well as the WCS barge port, while SinFer will construct the ~70 kilometre spur line, connecting its mining concession to the main rail line, and the transhipment vessel (TSV) port. The conditions for this investment were satisfied in July 2024.	6.2bn (Rio Tinto share)	3.8bn (Rio Tinto share)	Announced in December 2023, first production at the SinFer mine gate is expected in 2025, ramping up over 30 months to a 60 million tonne per year capacity (27 million tonnes Rio Tinto share). For the SinFer mine, bulk earthworks are progressing to plan. All mine construction contracts are complete, and the two initial crushers are now commissioned, with first ore crushed on 1 January 2025. For the SinFer infrastructure scope, all construction milestones for the period stipulated by the Government of Guinea were achieved. In connection with SinFer's construction of the ~70 kilometre spur line, which will connect Simandou's mine operations to the shared mainline, with the arrival of track laying locomotives, 8.5 kilometres of rail was installed. In October 2024, construction of the 275 metre Mlo River bridge was completed. Tunnel excavation activity on the SinFer scope is now more than 75% complete, with construction at the port continuing to advance on the TSV wharf and rail car dumper infrastructure. Expectations for delivery of the first TSVs remain on plan.
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. 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.	1.1bn	0.8bn	Approved in June 2023, AP60 expansion construction activities remain on schedule. Once completed, the project will add 96 new AP60 pots, increasing capacity by approximately 160,000 tonnes of primary aluminium per year by the end of 2026. This new capacity, in addition to 30,000 tonnes of new recycling capacity at Arvida expected to open in the fourth quarter of 2025, will offset the 170,000 tonnes of capacity lost through the gradual closure of potrooms at the Arvida smelter from 2024.
Copper			
Phase two of the south wall pushback to extend mine life at Kennecott in Utah by a further six years. The project largely consists of mine stripping activities and includes some additional infrastructure development, including a tailings facility expansion. The project will allow mining to continue into a new area of the orebody between 2026 and 2032.	1.8bn	0.9bn	Approved in December 2019, stripping commenced in 2020 and will continue through 2027. 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.
Investment in the Kennecott underground development of the North Rim Skarn (NRS) area.	0.6bn	0.4bn	Approved in June 2023, production from NRS is expected to commence in mid-2025, delivering around 250,000 tonnes through to 2033. A further 0.1 billion was approved in December 2024 for additional infrastructure and geotechnical controls.
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 of copper per year from 2028 to 2036.	7.06bn	0.5bn	First ore on the conveyor to surface belt was achieved in October 2024, with the conveyor system now able to transport ore to the surface from a depth of 1,300 metres. Load and production testing of the conveyor system is progressing. Construction works for the concentrator conversion remain on schedule, with commissioning activities commencing in the fourth quarter of 2024 and forecast to be progressively completed through to the second quarter of 2025. Construction of primary crusher 2 is progressing to

Project	Total capital cost (100% unless otherwise stated)	Capital remaining to be spent from 1 Jan 2025	plan and remains on track to be completed by the end of 2025.
Rio Tinto owned unless otherwise stated)			
Expansion of the Rincon project in Argentina to 60,000 tonnes per year of battery grade lithium carbonate, comprised of the 3,000-tonne starter plant and 57,000-tonne expansion plant. The mine is expected to have a 40-year life and operate in the first quartile of the cost curve.			Approved in December 2024, construction of the expanded plant is scheduled to begin in mid-2025, subject to permitting. First production from the expanded plant is expected in 2028 followed by a three-year ramp-up to full capacity. We released the Rincon Project Mineral Resources and Ore Reserves statement on 4 December 2024.

1. Rio Tinto share of the Western Range capital cost includes 100% of funding costs for Paraburdoo plant upgrades.
2. 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. WCS was originally held by WCS Holdings, a consortium of Singaporean company, Winning International Group (50%) and Weiqiao Aluminium (part of the China Hongqiao Group) (50%). On 19 June 2024, Baowu Resources completed the acquisition of a 49% share of WCS mine and infrastructure projects with WCS Holdings holding the remaining 51%. In the case of the mine, Baowu also has an option to increase to 51% during operations. During construction, SimFer will hold 34% of the shares in the WCS infrastructure entities with WCS holding the remaining 66%.
3. WCS holds the mining concession for Blocks 1 & 2, while SimFer holds the mining concession for Blocks 3 & 4. SimFer and WCS will independently develop their mines.
4. 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 Infraco Guinée S.A. will deliver SimFer's scope of the co-developed rail and port infrastructure, and is co-owned by SimFer Jersey (85%) and the Guinean State (15%). SimFer Jersey will ultimately own 42.5% of Compagnie du Transguinéen, which will own and operate the co-developed infrastructure during operations.
5. 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.
6. 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.
7. 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.
8. 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.
9. The production target of approximately 53 kt of battery grade lithium carbonate per year for a period of 40 years was previously reported in a release to the ASX dated 4 December 2024 titled "Rincon Project Mineral Resources and Ore Reserves: Table 1". Rio Tinto confirms that all material assumptions underpinning that production target continue to apply and have not materially changed. Plans are in place to build for a capacity of 60 kt of battery grade lithium carbonate per year with debottlenecking and improvement programs scheduled to unlock this additional throughput.

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.	We continue to work closely with local communities, Traditional Owners and governments to progress approvals for these new mining projects. We continue to advance our next tranche of Pilbara mine replacement studies at Hope Downs 1 (Hope Downs 2 and Bedded Hilltop), Brockman 4 (Brockman Syncline 1), Greater Nammuldi and West Angelas. Funding for the full execution of the Brockman 4 project was obtained in fourth quarter of 2024. Early works and design are underway for the Brockman 4 and Hope Downs 1 projects. Environmental and heritage approvals are progressing and timelines remain subject to receiving these approvals. The Greater Nammuldi project continues to progress at a rate behind the original development schedule.
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.	In December 2023, we announced approval of a 77 million pre-feasibility study (PFS). The PFS continues to progress with good engagement with Traditional Owners and government. The PFS, which is targeting an initial capacity of up to 40 million tonnes per year, subject to relevant approvals, remains on track to be completed in 2025. First ore is 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 world-class Jadar lithium brine project in	On 10 July 2024, the Constitutional Court of Spain issued a

Development of the greenfield Jadar lithium-borates project in Serbia will include an underground mine with associated infrastructure and equipment, as well as a beneficiation chemical processing plant. The Board committed funding in July 2021, subject to receiving all relevant approvals, permits and licences. The studies and capital estimates will need to be updated before project approval.	On 16 July 2024, the Constitutional Court of Serbia issued a decision stating the 2022 decree by the Government of Serbia to abolish the Jadar project spatial plan was unconstitutional and illegal. Subsequently, the Government of Serbia has reinstated the spatial plan to its previously adopted form. Following the decisions, we have continued to focus on consultation with all key stakeholders, including providing comprehensive factual information about the project. The application process for obtaining the Exploitation Field Licence (EFL) continued during the fourth quarter of 2024. The EFL is essential for commencing fieldwork, including detailed geotechnical investigations, while cultural heritage and environmental surveys have resumed. The Environmental Impact Assessment process for the scoping and content for the mine progressed through the public consultation phase. This step includes legally mandated consultations, which the project supports, to encourage an open, fact-based dialogue.
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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 RBMs supply of zircon and ilmenite over the life of the mine. The project remains on indefinite suspension, while a feasibility study refresh is underway.
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Copper: Resolution

The Resolution Copper project is a proposed underground copper mine in the Copper Triangle, in Arizona, US (Rio Tinto 55%).	We continue to await a decision from the U.S. Supreme Court on the petition filed by the Apache Stronghold requesting to hear its case to stop the land exchange between Resolution Copper and the federal government. Separately the Supreme Court denied a petition from the San Carlos Apache Tribe, asking the Court to review a decision by the Arizona Supreme Court regarding a water discharge permit issued to Resolution Copper. We continue to progress the Final Environmental Impact Statement with the United States Forest Service, however they have yet to advise on the date of republication. We also advanced partnership discussions with several federally-recognised Native American Tribes. 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 concerns.
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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 December 2024, we signed a Term Sheet with Sumitomo Metal Mining for a Joint Venture to deliver the project. A pre-feasibility study with an initial development of processing capacity of up to 10 million tonnes per year is expected to be completed in 2025, along with the submission of an Environmental Review Document under the EPA Environmental Impact Assessment process. Project Agreement negotiations with Nyangumarta and the Martu Traditional Owner Groups remain our priority.
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Copper: La Granja

In August 2023, we completed a transaction to form a joint venture with First Quantum Minerals (FQM) 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.	FQM acquired a 55% stake 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. FQM is currently progressing community engagement and engineering studies.
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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.	We will install carbon free aluminium smelting cells at our Arvida smelter in Quebec using the first technology licence issued by the ELYSIS joint venture. We will design, engineer and build a demonstration plant equipped with ten pots operating at 100 kiloamperes (kA), for a total investment of 285 million (Rio Tinto 179 million, Government of Quebec 106 million). The plant will have an annual capacity of 2,500 tonnes of commercial quality aluminium, with first production targeted by 2027. The joint venture is continuing its R&D program to scale up the ELYSIS TM technology. It has begun commissioning the larger prototype 450 kA cells at the Alma smelter, with the start-up sequence set to begin in 2025 (previously 2024).
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Review of operations

Iron Ore

Manufactured Gas	2024	2023	2022
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year ended 31 December	2024	2023	Change
Pilbara production (million tonnes - 100%)	328.0	331.5	(1) %
Pilbara shipments (million tonnes - 100%)	328.6	331.8	(1) %
Salt production (million tonnes - Rio Tinto share) ¹	5.8	6.0	(3) %
Segmental revenue (US millions)	29,339	32,249	(9) %
Average realised price (US per dry metric tonne, FOB basis)	97.4	108.4	(10) %
Underlying EBITDA (US millions)	16,249	19,974	(19) %
Pilbara underlying FOB EBITDA margin ²	65%	69%	
Underlying earnings (US millions)	9,097	11,882	(23) %
Net cash generated from operating activities (US millions)	11,652	14,045	(17) %
Capital expenditure (US millions) ³	(3,012)	(2,588)	16 %
Free cash flow (US millions)	8,561	11,374	(25) %
Underlying return on capital employed	50%	64%	

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. 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 excluding net interest divided by average capital employed.

Financial performance

Underlying EBITDA of 16.2 billion was 19% lower than 2023, primarily due to lower realised prices (2.7 billion) and marginally lower shipments.

Unit costs of 23.0 per tonne were 1.5 per tonne higher than 2023, driven by lower iron ore production and inflation.

Our Pilbara operations delivered an underlying FOB EBITDA margin of 65%, compared with 69% in 2023, largely due to the lower iron ore price and lower volumes.

We price the majority of our iron ore sales (78%) by reference to the average index price for the month of shipment. In 2024, 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, or other mechanisms. We made approximately 75% of sales including freight and 25% on an FOB basis.

We achieved an average iron ore price of 89.6 per wet metric tonne (2023: 99.7 per wet metric tonne) on an FOB basis, equivalent to 97.4 per dry metric tonne, with an 8% moisture assumption (2023: 108.4 per dry metric tonne). This compares to the average price for the monthly average Platts index for 62% iron fines converted to a FOB basis of 98.4 per dry metric tonne (2023: 110.3 per dry metric tonne).

Segmental revenue for our Pilbara operations included freight revenue of 2.3 billion (2023: 2.1 billion).

Net cash generated from operating activities of 11.7 billion was 17% lower than 2023, driven by the same drivers as underlying EBITDA. After capital investment, which included 0.4 billion increased investment in Pilbara replacement projects, free cash flow of 8.6 billion was 2.8 billion lower than 2023.

Review of operations

Pilbara operations produced 328.0 million tonnes (100% basis), 1% lower than 2023. Shipments (100% basis) were also 1% lower. Production was affected by depletion, predominantly at Paraburdoo as we transition to Western Range and Yandicoogina, as well as higher than average rainfall. The Safe Production System target of 5 million tonnes for 2024 was achieved for the second consecutive year. Gudai-Darri demonstrated 50 million tonne per annum rates during the fourth quarter. Sustaining production at these rates is subject to the timing of approvals for planned mining areas and heritage clearances, and continuation of the debottlenecking program at the main plant.

We grew our portside business in 2024, with total iron ore sales in China of 29.9 million tonnes (23.3 million tonnes in 2023). At the end of December, inventory levels were 7.1 million tonnes (6.4 million tonnes at the end of December 2023), including 4.9 million tonnes of Pilbara product. In 2024, approximately 89% of our portside sales were either screened or blended in Chinese ports (86% in 2023).

In December 2024, we [completed](#) the sale of Dampier Salt Limited's Lake MacLeod operation to Leichhardt Industrials Group for consideration of A 375 million.

Aluminium

Year ended 31 December	2024	2023	Change
Bauxite production ('000 tonnes - Rio Tinto share)	58,653	54,619	7 %
Alumina production ('000 tonnes - Rio Tinto share)	7,303	7,537	(3) %
Aluminium production ('000 tonnes - Rio Tinto share)	3,296	3,272	1 %
Segmental revenue (US millions)	13,650	12,285	11 %
Average realised aluminium price (US per tonne)	2,834	2,738	4 %
Underlying EBITDA (US millions)	3,673	2,282	61 %
Underlying EBITDA margin (integrated operations)	30%	21%	
Underlying earnings (US millions)	1,483	538	176 %
Net cash generated from operating activities (US millions)	3,032	1,980	53 %
Capital expenditure - excluding EAUs (US millions) ¹	(1,694)	(1,331)	27 %
Free cash flow (US millions)	1,302	619	110 %
Underlying return on capital employed ²	10%	3%	

1. 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).
2. Underlying return on capital employed (ROCE) is defined as underlying earnings excluding net interest divided by average capital employed.

Financial performance

Overall we delivered a significant uplift in profitability for our Aluminium business with a 61% increase in underlying EBITDA to 3.7 billion, underlying EBITDA margin rising nine percentage points to 30% and underlying ROCE of 10%. We saw an 8% increase in the average LME price with price support from high alumina costs and the cancellation of Chinese VAT rebates on the export of semi-finished goods. Market-related costs for key materials such as caustic, coke and pitch moderated with some of this flowing through to underlying EBITDA, offsetting some of the impact of a higher alumina price. Higher bauxite volumes from record annual production at Gove and Amrun and increased bauxite pricing were partially offset by lower alumina production following the breakage of a third-party gas pipeline in Queensland.

We achieved an average realised aluminium price of 2,834 per tonne, 4% higher than 2023. The average realised aluminium price comprises the LME price, a market premium and a value-added product (VAP) premium. The cash LME price averaged 2,419 per tonne, 8% higher than 2023, while in our key US market, the Midwest premium duty paid, which is 59% of our total volumes (2023: 57%), decreased by 17% to 427 per tonne (2023: 512 per tonne). Our VAP sales represented 46% of the primary metal we sold (2023: 46%) and generated product premiums averaging 295 per tonne of VAP sold (2023: 354 per tonne).

Our cash generation also improved significantly, with net cash generated from operating activities of 3.0 billion, a rise of 53%, compared with 2023. Free cash flow of 1.3 billion reflected capital investment in the business of 1.7 billion.

Review of operations

Bauxite production of 58.7 million tonnes was 7% higher than 2023, exceeding our guidance. We delivered record annual production at Gove and Amrun following implementation of the Safe Production System.

We shipped 40.9 million tonnes of bauxite to third parties, 10% higher than 2023. Segmental revenue for bauxite increased 28% to 3.1 billion. This includes freight revenue of 0.5 billion (2023: 0.5 billion).

Alumina production of 7.3 million tonnes was 3% lower than 2023, due to the impacts to our Gladstone operations from the breakage of the third-party operated Queensland Gas Pipeline in March. Gas supplies to our Gladstone operations from the third-party operated Queensland Gas Pipeline were meeting 100% of our requirements by year-end.

As the result of sanction measures by the Australian Government, Rio Tinto has taken on 100% of capacity of Queensland Alumina Limited (QAL) for as long as the sanctions continue. This results in use of Rusal's 20% share of capacity by Rio Tinto under the tolling arrangement with QAL. This additional output is excluded from the production tables in this report as QAL remains 80% owned by Rio Tinto and 20% owned by Rusal.

Aluminium production of 3.3 million tonnes was 1% higher than 2023. At our New Zealand Aluminium Smelter (NZAS), production continued to ramp up following a previous call from Meridian Energy to reduce electricity usage in August 2024, for which we are compensated. As previously reported, we expect the ramp-up to run through to the second quarter of 2025.

We [completed](#) the previously announced [acquisition](#) of Sumitomo Chemical Company's (SCC's) 20.44% interest in NZAS on 4 November 2024, and now fully own the Third Debt substation.

20.64% interest in NZAS on 1 November 2024 and now fully own the Tiwai Point aluminium smelter.

We also [completed](#) the previously announced acquisition of SCC's 2.46% stake in Boyne Smelters Limited (BSL). The completion of this transaction, along with the recently [completed](#) acquisition of Mitsubishi's 11.65% stake in BSL, brings Rio Tinto's total interest in BSL to 73.5%.

Production is reported including these changes in ownership from 1 November 2024.

Copper

Year ended 31 December	2024	2023	Change
Mined copper production ('000 tonnes - consolidated basis)	697	620	13 %
Refined copper production ('000 tonnes - Rio Tinto share)	248	175	42 %
Segmental revenue (US millions)	9,275	6,678	39 %
Average realised copper price (US cents per pound) ¹	422	390	8 %
Underlying EBITDA (US millions) ²	3,437	1,960	75 %
Underlying EBITDA margin (product group operations)	49%	42%	
Underlying earnings (US millions) ²	811	190	327 %
Net cash generated from operating activities (US millions) ³	2,590	596	335 %
Capital expenditure - excluding EALs (US millions)	(2,055)	(1,976)	4 %
Free cash flow (US millions) ²	526	(1,386)	
Underlying return on capital employed (product group operations)	6%	3%	

1. Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which negatively impacted revenues by 92 million (2023: 2 million positive).
2. Accountability for Rio Tinto Guinea, our in-country external affairs office, remains with Bold Baatar, and has therefore moved from the Copper product group to "Other operations" following his change in role to Chief Commercial Officer. Accordingly, prior period amounts have been adjusted for comparability.
3. Net cash generated from operating activities excludes the operating cash flows of equity accounted units (EALs) but includes dividends from EALs (Escondida).
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. It excludes EALs.
5. Underlying return on capital employed (ROCE) is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed.

Financial performance

Improved financials benefited from the steady ramp-up at Oyu Tolgoi, the strong performance at Escondida and the successful restart of the Kennecott smelter, following the rebuild in 2023, releasing working capital through the drawdown of inventories, enhancing operating cash flow. Underlying EBITDA increased by 75% compared with 2023 and free cash flow turned positive supported by a strong LME copper price and higher volumes. Overall, mined copper production rose by 13% and refined copper production by 42%.

Copper C1 net unit costs, at 142 cents per pound, reduced by 53 cents per pound, or 27%, from 2023, reflecting cost efficiencies on the higher mined copper production at Oyu Tolgoi and Escondida, and higher refined copper production at Kennecott, following the smelter rebuild in 2023.

We generated significantly higher net cash from operating activities of 2.6 billion, which included higher dividends from Escondida.

Review of operations

Mined copper production, at 697 thousand tonnes, was 13% higher than 2023, reflecting the ramp-up of Oyu Tolgoi underground and increased production from Escondida due to higher grades fed to the concentrator (0.99% versus 0.83%). This offset geotechnical challenges at Kennecott as instabilities in the pit wall impacted the mining sequence from the second quarter of 2024.

Refined copper production increased by 42% to 248 thousand tonnes with the Kennecott smelter and refinery returning to normal operations following the successful rebuild in 2023.

Oyu Tolgoi underground project

In 2024, we delivered 6.5 million tonnes of ore milled from the underground mine at an average copper head grade of 1.94% and 34.5 million tonnes from the open pit with an average grade of 0.39%. The ramp-up remains on track to reach 500 thousand tonnes of copper production per annum (100% basis and stated as recoverable metal) for the Oyu Tolgoi underground and open pit mines for the years 2028 to 2036¹.

We continue to see good performance from the underground mine. We completed drawbell construction at Panel 0, with a total of 124 drawbells opened. The sinking of ventilation Shafts 3 and 4 was completed in April 2024 following the breakthrough to surface. Both shafts were commissioned in the second half of 2024.

In November 2024, Oyu Tolgoi successfully concluded Collective Agreement negotiations, marking a historic milestone as the first agreement involving two trade unions at the operation. The agreement will remain in effect for the next three years.

¹ 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.

Minerals

Year ended 31 December	2024	2023	Change
Iron ore pellets and concentrates production ¹ (million tonnes - Rio Tinto share)	9.4	9.7	(2) %
Titanium dioxide slag production ('000 tonnes - Rio Tinto share)	990	1,111	(11) %
Borates production ('000 tonnes - Rio Tinto share)	504	495	2 %
Diamonds production ('000 carats - Rio Tinto share)	2,759	3,340	(17) %
Segmental revenue (US millions)	5,531	5,934	(7) %
Underlying EBITDA (US millions)	1,080	1,414	(24) %
Underlying EBITDA margin (product group operations)	26%	30%	
Underlying earnings (US millions)	143	312	(54) %
Net cash generated from operating activities (US millions)	705	548	29 %
Capital expenditure (US millions) ²	(798)	(746)	7 %
Free cash flow (US millions)	(126)	(229)	45 %
Underlying return on capital employed (product group operations) ³	8%	13%	

1. Iron Ore Company of Canada (IOC) continues to be reported within Minerals.

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.

3. 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 1.1 billion was 24% lower than 2023, primarily due to lower pricing across most commodities, in particular titanium dioxide feedstocks, borates and iron ore. Underlying demand for titanium dioxide feedstocks remains soft while the borates market is recovering from supply chain disruptions.

Net cash generated from operating activities of 0.7 billion was 29% higher than 2023, when a build in working capital took place. Further investment is being made to develop our battery minerals business, resulting in negative free cash flow of 126 million.

Underlying EBITDA and net cash generated from operating activities in 2024 include 0.2 billion¹ insurance proceeds relating to the process safety incidents at RTIT and the forest fires at IOC which took place in 2023.

Review of operations

Production of iron ore pellets and concentrate at IOC of 9.4 million tonnes was 2% lower than 2023 primarily due to an 11-day site-wide shutdown driven by forest fires in mid-July, resulting in a revised mine plan and maintenance schedule. We also experienced operational challenges in the mine and concentrator throughout the year. Annual rail haulage was 36.4 million tonnes, 7% higher than in 2023, driven by continued operational improvements to meet increasing third-party and IOC demand. Our focus going forward is to stabilise the operation and achieve safe, cost-effective and consistent production.

TiO₂ slag production of 990 thousand tonnes was 11% lower than 2023, primarily due to reduced market demand. A furnace reconstruction, starting in the first quarter of 2024, continues at our RTIT Quebec Operations. Through 2024, we operated six out of nine furnaces in Quebec and three out of four at Richards Bay Minerals (RBM).

Borates production was 2% higher than 2023 supported by recovering market demand, and despite unplanned plant downtime in April 2024.

Our share of carats recovered was 17% lower than 2023. Diamond production was impacted by the tragic plane crash earlier in 2024, as well as cessation of A21 open pit mining in the third quarter of 2023.

First lithium was produced from the Rincon project starter plant in Argentina in November 2024. First commercial production is targeted for the first half of 2025.

¹ There is no overall financial impact to the Rio Tinto Group, with the offset reflected centrally.

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 2024	US million impact on full-year 2024 underlying EBITDA of a 10% change in prices/exchange rates
Aluminium (LME) - US per tonne	2,419	1,170
Copper (LME) - US cents per pound	415	699
Gold - US per troy ounce	2,386	96
Iron ore realised price (FOB basis) - US per dry metric tonne	97.4	2,488
Australian dollar against the US dollar	0.66	666
Canadian dollar against the US dollar	0.73	335
Oil (Brent) - US per barrel	81	113

Selected financial information for the year ended 31 December 2024

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Consolidated income statement

Year ended 31 December	2024 US m	2023 US m
Consolidated operations		
Consolidated sales revenue	53,658	54,041

Net operating costs (excluding items disclosed separately)	(37,745)	(37,052)
Impairment charges net of reversals	(538)	(936)
Gains on consolidation and disposal of interests in businesses	1,214	-
Exploration and evaluation expenditure (net of profit from disposal of interests in undeveloped projects)	(936)	(1,230)
Operating profit	15,653	14,823
Share of profit after tax of equity accounted units	838	675
Profit before finance items and taxation	16,491	15,498
Finance items		
Net exchange gains/(losses) on external net debt and intragroup balances	322	(251)
Losses on derivatives not qualifying for hedge accounting	(92)	(54)
Finance income	514	536
Finance costs	(763)	(967)
Amortisation of discount on provisions	(857)	(977)
	(876)	(1,713)
Profit before taxation	15,615	13,785
Taxation	(4,041)	(3,832)
Profit after tax for the year	11,574	9,953
- attributable to owners of Rio Tinto (net earnings)	11,552	10,058
- attributable to non-controlling interests	22	(105)
Basic earnings per share	711.7c	620.3c
Diluted earnings per share	707.2c	616.5c

Consolidated statement of comprehensive income

	2024 US m	2023 US m
Profit after tax for the year	11,574	9,953
Other comprehensive (loss)/income		
Items that will not be reclassified to the income statement:		
Remeasurement gains/(losses) on pension and post-retirement healthcare plans	83	(461)
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	(22)	152
Share of other comprehensive income/(loss) of equity accounted units, net of tax	4	(3)
	65	(336)
Items that have been/may be subsequently reclassified to the income statement:		
Currency translation adjustment ^(a)	(3,391)	644
Currency translation on operations disposed of, transferred to the income statement	(27)	-
Fair value movements:		
- Cash flow hedge gains	13	30
- Cash flow hedge losses/(gains) transferred to the income statement	17	(39)
Net change in costs of hedging reserve	4	5
Tax relating to these components of other comprehensive loss	(10)	1
Share of other comprehensive (loss)/income of equity accounted units, net of tax	(45)	14
	(3,439)	655
Total other comprehensive (loss)/income for the year, net of tax	(3,374)	319
Total comprehensive income for the year	8,200	10,272
- attributable to owners of Rio Tinto	8,375	10,335
- attributable to non-controlling interests	(175)	(63)

(a) Excludes a currency translation charge of US 317 million (2023: gain of US 47 million) arising on Rio Tinto Limited's share capital for the year ended 31 December 2024, which is recognised in the Group statement of changes in equity on page 30.

Consolidated cash flow statement

	2024 US m	2023 US m
Cash flows from consolidated operations^(a)	19,859	20,251
Dividends from equity accounted units	1,067	610
Cash flows from operations	20,926	20,861
Net interest paid	(685)	(612)
Dividends paid to holders of non-controlling interests in subsidiaries	(477)	(462)
Tax paid	(4,165)	(4,627)
Net cash generated from operating activities	15,599	15,160
Cash flows from investing activities		
Purchases of property, plant and equipment and intangible assets ^(b)	(9,621)	(7,086)
Sales of property, plant and equipment and intangible assets	30	9
Acquisitions of subsidiaries, joint ventures and associates ^(b)	(346)	(834)
Disposals of subsidiaries, joint ventures, joint operations and associates	427	-
Purchases of financial assets	(113)	(39)
Sales of financial assets ^(c)	677	1,220
Net funding of equity accounted units ^(b)	(784)	(144)
Other investing cash flows	136	(88)
Net cash used in investing activities	(9,594)	(6,962)
Cash flows before financing activities	6,005	8,198
Cash flows from financing activities		
Equity dividends paid to owners of Rio Tinto	(7,025)	(6,470)
Proceeds from additional borrowings, net of issue costs	261	1,833
Repayment of borrowings and associated derivatives	(860)	(310)
Lease principal payments	(455)	(426)
Proceeds from issue of equity to non-controlling interests ^(b)	1,574	127
Purchase of non-controlling interest	(591)	(33)
Other financing cash flows	2	2
Net cash used in financing activities	(7,094)	(5,277)
Effects of exchange rates on cash and cash equivalents	(99)	(23)
Net (decrease)/increase in cash and cash equivalents	(1,188)	2,898
Opening cash and cash equivalents less overdrafts	9,672	6,774
Closing cash and cash equivalents less overdrafts	8,484	9,672
(a) Cash flows from consolidated operations	2024 US m	2023 US m
Profit after tax for the year	11,574	9,953
Adjustments for:		
- Taxation	4,041	3,832
- Finance items	876	1,713
- Share of profit after tax of equity accounted units	(838)	(675)
- Gains on consolidation and disposal of interests in businesses	(1,214)	-
- Impairment charges net of reversals	538	936
- Depreciation and amortisation	5,918	5,334
- Provisions (including exchange differences on provisions)	398	1,470
Utilisation of other provisions	(94)	(104)
Utilisation of provisions for close-down and restoration	(1,142)	(777)
Utilisation of provisions for post-retirement benefits and other employment costs	(133)	(277)
Change in inventories	205	(422)
Change in receivables and other assets	(202)	(418)
Change in trade and other payables	54	(86)
Other items ^(d)	(122)	(228)
	19,859	20,251

Consolidated cash flow statement (continued)

- (b) In 2024, our net cash outflow in relation to the Simandou iron ore project was US 1.3 billion. This includes cash outflows of US 1,831 million for purchase of property, plant and equipment, US 313 million as acquisition of associates for WCS Rail and Port, and US 652 million as net funding of equity accounted units for the subsequent funding of that shared infrastructure. We received related cash inflows of US 1,505 million from Chalco Iron Ore Holdings Ltd (CIOH) for cash calls by SimFerJersey Limited, of which US 411 million relates to CIOH's share of expenditure incurred up until the end of December 2023 to progress critical works.
- (c) In 2024, we received net proceeds of US 675 million (2023: US 1,157 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.
- (d) In 2024 Other items includes the recognition of realised losses of US 88 million on currency forwards not designated as hedges (2023: realised losses US 57 million).

Consolidated balance sheet

	2024 US m	2023 US m
Non-current assets		
Goodwill	727	797
Intangible assets	2,804	4,389
Property, plant and equipment	68,573	66,468
Investments in equity accounted units	4,837	4,407
Inventories	222	214
Deferred tax assets	4,016	3,624
Receivables and other assets	1,397	1,659
Other financial assets	1,090	481
	83,666	82,039
Current assets		
Inventories	5,860	6,659
Receivables and other assets	4,241	3,945
Tax recoverable	105	115
Other financial assets	419	1,118
Cash and cash equivalents	8,495	9,673
	19,120	21,510
Total assets	102,786	103,549
Current liabilities		
Borrowings	(180)	(824)
Leases	(354)	(345)
Other financial liabilities	(112)	(273)
Trade and other payables	(8,178)	(8,238)
Tax payable	(585)	(542)
Close-down, restoration and environmental provisions	(1,183)	(1,523)
Provisions for post-retirement benefits and other employment costs	(359)	(361)
Other provisions	(792)	(637)
	(11,743)	(12,743)
Non-current liabilities		
Borrowings	(12,262)	(12,177)
Leases	(1,059)	(1,006)
Other financial liabilities	(591)	(513)
Trade and other payables	(543)	(596)
Tax payable	(28)	(31)
Deferred tax liabilities	(2,635)	(2,584)
Close-down, restoration and environmental provisions	(14,548)	(15,627)
Provisions for post-retirement benefits and other employment costs	(1,097)	(1,197)
Other provisions	(315)	(734)
	(33,078)	(34,465)
Total liabilities	(44,821)	(47,208)
Net assets	57,965	56,341
Capital and reserves		
Share capital ^(a)		
- Rio Tinto plc	207	207
- Rio Tinto Limited	3,060	3,377
Share premium account	4,326	4,324
Other reserves	5,114	8,328
Retained earnings	42,539	38,350

Equity attributable to owners of Rio Tinto	55,246	54,586
Attributable to non-controlling interests	2,719	1,755
Total equity	57,965	56,341

- (a) At 31 December 2024, Rio Tinto plc had 1,252.9 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 period presented. As required to be disclosed under the ASX Listing Rules, the net tangible assets per share amounted to US 31.84 (31 December 2023: US 30.45).

Consolidated statement of changes in equity

	Attributable to owners of Rio Tinto					Non-controlling interests	Total equity
	Share capital	Share premium account	Other reserves	Retained earnings	Total		
Year ended 31 December 2024	US m	US m	US m	US m	US m	US m	US m
Opening balance	3,584	4,324	8,328	38,350	54,586	1,755	56,341
Total comprehensive income for the year ^(a)	-	-	(3,242)	11,617	8,375	(175)	8,200
Currency translation arising on Rio Tinto Limited's share capital	(317)	-	-	-	(317)	-	(317)
Dividends ^(b)	-	-	-	(7,025)	(7,025)	(528)	(7,553)
Newly consolidated operation	-	-	-	-	-	5	5
Own shares purchased from Rio Tinto shareholders to satisfy share awards to employees ^(c)	-	-	(44)	(13)	(57)	-	(57)
Change in equity interest held by Rio Tinto	-	-	-	(468)	(468)	88	(380)
Treasury shares reissued and other movements	-	2	-	-	2	-	2
Equity issued to holders of non-controlling interests	-	-	-	-	-	1,574	1,574
Employee share awards charged to the income statement	-	-	72	78	150	-	150
Closing balance	3,267	4,326	5,114	42,539	55,246	2,719	57,965

	Attributable to owners of Rio Tinto					Non-controlling interests	Total equity
	Share capital	Share premium account	Other reserves	Retained earnings	Total		
Year ended 31 December 2023	US m	US m	US m	US m	US m	US m	US m
Opening balance	3,537	4,322	7,755	35,020	50,634	2,107	52,741
Total comprehensive income for the year ^(a)	-	-	585	9,750	10,335	(63)	10,272
Currency translation arising on Rio Tinto Limited's share capital	47	-	-	-	47	-	47
Dividends ^(b)	-	-	-	(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

Consolidated statement of changes in equity (continued)

- (a) Refer to the Consolidated 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.

- (b) Dividends per share announced or paid during the period are summarised below:

Year ended 31 December	2024 US	2023 US
Dividends per share: Ordinary - paid during the year	435.0c	402.0c
Ordinary dividends per share: announced with the results for the year	225.0c	258.0c

- (c) Net of contributions received from employees for share awards.

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 2024. These statutory accounts have been audited, were approved by the Board on 19 February 2025, 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 2023 have been filed with the Registrar of Companies.

Unless stated otherwise, financial information for the years ended 31 December 2024 and 31 December 2023 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 2024 and 31 December 2023 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 11 July 2024.

Rio Tinto financial information by business unit

		Segmental revenue ^(a) for the year ended 31 December		Underlying EBITDA ^(a) for the year ended 31 December		Depreciation and amortisation for the year ended 31 December		Underlying earnings ^(a) for the year ended 31 December	
	Rio Tinto interest %	2024 US m	2023 US m	2024 US m	2023 US m Adjusted ^(m)	2024 US m	2023 US m	2024 US m	2023 US m Adjusted ^(m)
Iron Ore									
Pilbara	(b)	27,849	30,867	16,543	19,828	2,390	2,128	9,550	11,945
Dampier Salt	68.4%	412	422	117	120	23	21	46	49
Evaluation projects/other	(c)	3,197	2,701	(478)	57	-	-	(550)	(89)
Intra-segment	(c)	(2,119)	(1,741)	67	(31)	-	-	51	(23)
Total Iron Ore segment		29,339	32,249	16,249	19,974	2,413	2,149	9,097	11,882
Aluminium									
Bauxite	(d)	3,061	2,390	1,250	662	365	373	579	141
Alumina	(e)	3,612	2,882	799	136	142	170	417	(56)
North American Aluminium	(f)	7,030	6,581	1,639	1,480	785	710	632	566
Pacific Aluminium	(g)	2,844	2,613	363	169	154	165	131	18
Intra-segment and other		(3,651)	(2,953)	(194)	(11)	-	-	(136)	(15)
Integrated operations		12,896	11,513	3,857	2,436	1,446	1,418	1,623	654
Other product group items		754	772	35	9	-	-	23	5
Product group operations		13,650	12,285	3,892	2,445	1,446	1,418	1,646	659
Evaluation projects/other		-	-	(219)	(163)	-	-	(163)	(121)
Total Aluminium segment		13,650	12,285	3,673	2,282	1,446	1,418	1,483	538
Copper									
Kennecott	100%	2,599	1,430	720	178	718	500	(54)	(328)
Escondida	30%	3,424	2,756	2,221	1,619	426	355	921	684
Oyu Tolgoi	(h)	2,184	1,625	1,105	639	473	476	388	161
Product group operations		8,207	5,811	4,046	2,436	1,617	1,331	1,255	517
Evaluation projects/other	(m)	1,068	867	(609)	(476)	3	5	(444)	(327)
Total Copper segment		9,275	6,678	3,437	1,960	1,620	1,336	811	190

Minerals								
Iron Ore Company of Canada	58.7%	2,450	2,500	746	942	229	214	293
Rio Tinto Iron & Titanium	(i)	1,993	2,172	609	582	226	222	221
Rio Tinto Borates	100%	763	802	183	212	65	58	125
Diamonds	(j)	279	444	(115)	44	29	35	26
Product group operations		5,485	5,918	1,423	1,780	549	529	665
Evaluation projects/other		46	16	(343)	(366)	1	1	(353)
Total Minerals segment		5,531	5,934	1,080	1,414	550	530	312
Reportable segments total								
Simandou iron ore project	(k)	-	-	(22)	(539)	7	-	(160)
Other operations	(l)(m)	120	142	43	(95)	320	290	(307)
Inter-segment transactions	(c)	(209)	(231)	9	8		4	4
Central pension costs, share-based payments, insurance and derivatives				153	168		228	48
Restructuring, project and one-off costs				(254)	(190)		(178)	(112)
Central costs				(816)	(990)	121	95	(898)
Central exploration and evaluation				(238)	(100)		(216)	(60)
Net interest							395	318
Underlying EBITDA/earnings				23,314	23,892		10,867	11,755
Items excluded from underlying EBITDA/earnings				1,055	(1,257)		685	(1,697)
Reconciliation to consolidated income statement								
Share of EAU's sales and inter-subsidiary/EAU's sales		(4,048)	(3,016)					
Impairment charges net of reversals	(n)			(573)	(936)			
Depreciation and amortisation in subsidiaries excluding capitalised depreciation				(5,744)	(4,976)			
Depreciation and amortisation in EAU's				(559)	(484)	(559)	(484)	
Taxation and finance items in EAU's				(1,002)	(741)			
Finance items				(876)	(1,713)			
Consolidated sales revenue/profit before taxation/depreciation and amortisation/net earnings		53,658	54,041	15,615	13,785	5,918	5,334	10,058

Rio Tinto financial information by business unit (continued)

		Capital expenditure ^(o) for the year ended 31 December		Operating assets ^(p) as at	
	Rio Tinto interest %	2024 US m	2023 US m	2024 US m	2023 US m Adjusted ^(m)
Iron Ore					
Ilbara	(b)	2,985	2,563	17,016	17,959
Dampier Salt	68.4%	27	25	5	146
Evaluation projects/other	(c)	-	-	718	780
Intra-segment	(c)	-	-	(193)	(243)
Total Iron Ore segment		3,012	2,588	17,546	18,642
Aluminium					
Bauxite	(d)	159	159	2,289	2,649
Alumina	(e)	279	325	804	1,315
North American Aluminium	(f)	1,153	748	10,516	10,582
Pacific Aluminium	(g)	102	99	706	340
Intra-segment and other		1	-	795	997
Total Aluminium segment		1,694	1,331	15,110	15,883
Copper					
Kennecott	100%	774	735	2,391	2,606
Escondida	30%	-	-	2,779	2,844
Oyu Tolgoi	(h)	1,277	1,230	16,692	15,334
Product group operations		2,051	1,965	21,862	20,784
Evaluation projects/other	(m)	4	11	262	266
Total Copper segment		2,055	1,976	22,124	21,050
Minerals					
Iron Ore Company of Canada	58.7%	291	364	1,240	1,347
Rio Tinto Iron & Titanium	(i)	244	240	3,215	3,386
Rio Tinto Borates	100%	57	49	475	502
Diamonds	(j)	48	66	(38)	29
Product group operations		640	719	4,892	5,264
Evaluation projects/other		158	27	1,138	873
Total Minerals segment		798	746	6,030	6,137
Reportable segments total					
		7,559	6,641	60,810	61,712
Simandou iron ore project	(k)	1,832	266	2,106	738
Other operations	(l)(m)	66	57	(1,446)	(2,638)
Inter-segment transactions	(c)			22	20
Other items		134	113	(755)	(1,015)
Total		9,591	7,077	60,737	58,817
Add back: Proceeds from disposal of property, plant and equipment		30	9		
Total purchases of property, plant & equipment and intangibles as per cash flow statement		9,621	7,086		

now Statement	2024	2023
Add: Net debt	(5,491)	(4,231)
Equity attributable to owners of Rio Tinto	55,246	54,586

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 alternative performance 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 [37](#) to [46](#)).

- a. Segmental revenue is defined within Alternative performance measures section on page [37](#). Underlying EBITDA is defined and calculated within the Alternative performance measures section on pages [37](#) to [39](#). Underlying earnings is defined and calculated within the Alternative performance measures section on pages [40](#) to [41](#).
- b. 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 53.0%, as 30% is held through a 60.0% owned subsidiary and 35% is held through a 100% owned subsidiary.
- c. 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".
- d. Bauxite represents the Group's 100% interest in Gove and Weipa, 22% interest in Porto Trombetas and 22.9% interest in Sangarédi.
- e. Alumina represents the Group's 100% interest in Jonqui re (Vaudreuil), Yarwun, 80% interest in Queensland Alumina and 10% interest in S o Luis (Alumar).
- f. North American Aluminium represents the Group's 100% interest in Alma, Arvida, Arvida AP60, Grande-Baie, ISAL, Kitimat, Laterri re, 40% interest in Alouette, 25.1% interest in B cancour, 20% interest in Sohar and 50% interest in Matalco.
- g. Pacific Aluminium represents the Group's 100% interest in Bell Bay, 73.5% interest in Boyne Island, 100% interest in Tiwai Point and 51.6% interest in Tomago. On 30 September 2024, our interest in Boyne Island was increased from 59.4% to 71.05% following our acquisition of Mitsubishi Corporation's 11.65% interest in Boyne Smelters Limited (BSL). On 1 November 2024, our interest was further increased to 73.5% following our acquisition of Sumitomo Chemical Company's (SCC) 2.46% interest in BSL. On 1 November 2024, we also acquired SCC's 20.64% interest in New Zealand Aluminium Smelters, increasing our interest from 79.36% to 100%.
- h. Oyu Tolgoi represents the Group's 66% investment in Oyu Tolgoi LLC.
- i. Includes our interests in Rio Tinto Iron and Titanium Quebec Operations (100%), QIT Madagascar Minerals (QMM, economic interest of 85%) and Richards Bay Minerals (attributable interest of 74%).
- j. Relates to our 100% interest in the Diavik diamond mine and diamond marketing operations.
- k. Rio Tinto SimFer UK Limited (which is wholly owned by the Group) holds a 53% interest in SimFer Jersey Limited (SimFer Jersey) which in turn, has an 85% interest in SimFer S.A., the company that will carry out the Simandou mining operations in Guinea, and an 85% interest in the company which will deliver SimFer Jersey's scope of the co-developed rail and port infrastructure. SimFer Jersey at present has a 100% interest in the companies that will own and operate the transshipment vessels, however this is anticipated to reduce to 85% with the Government of Guinea taking a 15% interest before operations commence. These entities, together with the equity accounted WCS Rail and Port entities (refer to Note 32 of the Financial Statements to our 2024 *Annual Report*), are referred to as the Simandou iron ore project.

- l. Other operations includes our 98.43% interest in Energy Resources of Australia (increased from 86.3% in November 2024 - refer to note 30 of the Financial Statements to our *2024 Annual Report*), 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.
- m. Accountability for Rio Tinto Guinea, our in-country external affairs office remains with Bold Baatar, and has therefore moved from the Copper product group to "Other operations" following his change in role to Chief Commercial Officer. Accordingly, prior period amounts have been adjusted for comparability even though there is no material impact as a result of the change.
- n. Refer to note 4 to the Financial Statements of our *2024 Annual Report* for allocation of impairment charges net of reversals between consolidated amounts and share of profit in EAUs.
- o. 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 consolidated 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.
- p. Operating assets of the Group represents equity attributable to Rio Tinto adjusted for net debt. 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 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 (ie inclusive of such companies' debt and amounts due to or from Rio Tinto Group companies).

Alternative performance measures

The Group presents certain alternative performance 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 (EAUs) 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:

- all depreciation and amortisation in subsidiaries and the corresponding share of profit in EAU's
- all taxation and finance items in subsidiaries and the corresponding share of profit in EAU's
- unrealised (gains)/losses on embedded derivatives not qualifying for hedge accounting (including foreign exchange)
- net (gains)/losses on consolidation or disposal of interests in businesses
- impairment charges net of reversals including corresponding amounts in share of profit in EAU's
- 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.

Alternative performance measures (continued)

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 included 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. There were no similar items in 2024.

	2024 US m	2023 US m
Year ended 31 December		
Profit after tax for the period	11,574	9,953
Taxation	4,041	3,832
Profit before taxation	15,615	13,785
Depreciation and amortisation in subsidiaries, excluding capitalised depreciation ^(a)	5,744	4,976
Depreciation and amortisation in equity accounted units	559	484
Finance items in subsidiaries	876	1,713
Taxation and finance items in equity accounted units	1,002	741
Unrealised losses/(gains) on embedded commodity and currency derivatives not qualifying for hedge accounting (including foreign exchange)	73	(15)
Gains on consolidation and disposal of interests in businesses ^(b)	(1,214)	-
Impairment charges net of reversals ^(c)	573	936
Change in closure estimates (non-operating and fully impaired sites) ^(d)	86	1,272
Underlying EBITDA	23,314	23,892

(a) Depreciation and amortisation in subsidiaries for the year ended 31 December 2024 is net of capitalised depreciation of US 174 million (31 December 2023: US 358 million).

(b) Gains on consolidation of businesses include the revaluation of our previously held interest in the NZAS joint operation as we acquired the remaining shares during the year and this became a subsidiary. Disposals include the sale of Wyoming Uranium and Lake MacLeod as described in note 5 to the Financial Statements of our 2024 Annual Report.

(c) Detailed information about impairment charges net of reversals is disclosed in note 4 to the Financial Statements of our 2024 Annual Report.

(d) In 2024, the charge to the income statement relates to the change in estimates of underlying closure cash flows, net of impact of a change in discount rate, expressed in real-terms, from 2.0% to 2.5% as applied to provisions for close-down, restoration and environmental liabilities at legacy sites where the environmental damage preceded ownership by Rio Tinto. US 873 million related to the closure provision update announced by ERA on 12 December 2023, together with the update included in

their half year results for the period ended 30 June 2023, published in August 2023. 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.

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.

Year ended 31 December	2024 US m	2023 US m
Underlying EBITDA	23,314	23,892
Consolidated sales revenue	53,658	54,041
Share of equity accounted unit sales and inter-subsidiary/equity accounted unit sales eliminations	4,048	3,016
	57,706	57,057
Underlying EBITDA margin	40 %	42 %

Alternative performance measures (continued)

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.

Year ended 31 December	2024 US m	2023 US m
Pilbara		
Underlying EBITDA	16,543	19,828
Pilbara segmental revenue	27,849	30,867
Less: Freight revenue	(2,344)	(2,098)
Pilbara segmental revenue, excluding freight revenue	25,505	28,769
Pilbara underlying FOB EBITDA margin	65 %	69 %

Underlying EBITDA margin from Aluminium integrated operations

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

Year ended 31 December	2024 US m	2023 US m
Aluminium		
Underlying EBITDA - integrated operations	3,857	2,436
Segmental revenue - integrated operations	12,896	11,513
Underlying EBITDA margin from integrated operations	30 %	21 %

Underlying EBITDA margin (product group operations)

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

Year ended 31 December	2024 US m	2023 US m
Copper		
Underlying EBITDA - product group operations	4,046	2,436
Segmental revenue - product group operations	8,207	5,811
Underlying EBITDA margin - product group operations	49 %	42 %

Year ended 31 December	2024 US m	2023 US m
Minerals		
Underlying EBITDA - product group operations	1,423	1,780
Segmental revenue - product group operations	5,485	5,918
Underlying EBITDA margin - product group operations	26 %	30 %

Alternative performance measures (continued)

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 period irrespective of materiality:

- net (gains)/losses on consolidation or disposal of interests in businesses
- impairment charges and reversals
- (profit)/loss after tax from discontinued operations
- exchange and derivative gains and losses. This adjustment 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
- 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. In 2024 this includes provision for uncertain tax positions in relation to disputes with the Mongolian Tax Authority and the recognition of deferred tax assets at Energy Resources of Australia.

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

Alternative performance measures (continued)

Reconciliation of net earnings to underlying earnings

	Pre-tax 2024 US m	Taxation 2024 US m	Non- controlling interests 2024 US m	Net amount 2024 US m	Net amount 2023 US m
Net earnings	15,615	(4,041)	(22)	11,552	10,058
Items excluded from underlying earnings					
(Gains)/losses on consolidation and disposal of interests in businesses ^(a)	(1,214)	274	43	(897)	-
Impairment charges net of reversals ^(b)	561	(27)	-	534	652
Foreign exchange and derivative losses/(gains):					
- Exchange (gains)/losses on external net debt, intragroup balances and derivatives ^(c)	(308)	13	2	(293)	243
- Losses on currency and interest rate derivatives not qualifying for hedge accounting ^(d)	68	2	4	74	87
- Losses/(gains) on embedded commodity derivatives not qualifying for hedge accounting ^(e)	92	(27)	-	65	(23)
Change in closure estimates (non-operating and fully impaired sites) ^(f)	86	(13)	-	73	1,102
Uncertain tax provisions ^(g)	-	295	(100)	195	-
Recognition of deferred tax assets at Energy Resources of Australia ^(h)	-	(443)	7	(436)	-
Deferred tax arising on internal sale of assets in Canadian operations ⁽ⁱ⁾	-	-	-	-	(364)
Total excluded from underlying earnings	(715)	74	(44)	(685)	1,697
Underlying earnings	14,900	(3,967)	(66)	10,867	11,755

- (a) Gains on consolidation of businesses include the revaluation of our previously held interest in the NZAS joint operation as we acquired the remaining shares during the year and this became a subsidiary. Disposals include the sale of Wyoming Uranium and Lake MacLeod as described in note 5 to the Financial Statements of our 2024 Annual Report.
- (b) Detailed information about impairment charges is disclosed in note 4 to the Financial Statements of our 2024 Annual Report.
- (c) Exchange (gains)/losses on external net debt, intragroup balances and derivatives includes post-tax gains on intragroup balances of US 647 million (2023: US 316 million loss) offset by post-tax losses on external net debt of US 354 million (2023: US 73 million gain), primarily as a result of the Australian dollar weakening against the US dollar.
- (d) 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.
- (e) 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. In 2024, the charge includes unrealised losses recognised in relation to our renewable PPAs.
- (f) In 2024, the charge to the income statement relates to the change in estimates of underlying closure cash flows, net of impact of a change in discount rate, expressed in real-terms, from 2.0% to 2.5% as applied to provisions for close-down, restoration and environmental liabilities at legacy sites where the environmental damage preceded ownership by Rio Tinto. In 2023, the charge included 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 2023. 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.
- (g) The uncertain tax provision in 2024 represents amounts provided in relation to disputes with the Mongolian Tax Authority for which the timing of resolution and potential economic outflow are uncertain.
- (h) Recognition of deferred tax assets at Energy Resources of Australia (ERA) relates to rehabilitation provisions which are tax deductible when paid in the future. In November 2024, our interest in ERA increased from 86.3% to 98.43% and Rio Tinto stated its intention to proceed with compulsory acquisition of the remaining shares during 2025. Tax deductions for rehabilitation payments made after completion of the compulsory acquisition process will be applied against taxable profits from other Australian operations, including our iron ore business.
- (i) In 2023, 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 was recognised.

Alternative performance measures (continued)

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	2024 (cents)	2023 (cents)
Basic earnings per ordinary share	711.7	620.3
Items excluded from underlying earnings per share ^(a)	(42.2)	104.7
Basic underlying earnings per ordinary share	669.5	725.0

(a) Calculation of items excluded from underlying earnings per share.

Year ended 31 December	2024	2023
Items excluded from underlying earnings (US m) (refer to page 41)	(685.0)	1,697.0
Weighted average number of shares (millions)	1,623.1	1,621.4
Items excluded from underlying earnings per share (cents)	(42.2)	104.7

We have provided basic underlying earnings per share as this allows the comparability of financial performance adjusted to exclude items which 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.

Year ended 31 December	2024 US m	2023 US m
Profit before taxation	15,615	13,785
Add back		
Finance income	(514)	(536)
Finance costs	763	967
Share of profit after tax of equity accounted units	(838)	(675)
Items excluded from underlying earnings	(715)	2,498
Add: Dividends from equity accounted units	1,067	610
Calculated earnings	15,378	16,649
Finance income	514	536
Finance costs	(763)	(967)
Add: Amounts capitalised	(424)	(279)
Total net finance costs before capitalisation	(673)	(710)
Interest cover	23	23

Alternative performance measures (continued)

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.

Year ended 31 December	2024 (cents)	2023 (cents)
Interim dividend declared per share	177.0	177.0
Final dividend declared per share	225.0	258.0
Total dividend declared per share for the year	402.0	435.0
Underlying earnings per share	669.5	725.0
Payout ratio	60 %	60 %

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.

Year ended 31 December	2024 US m	2023 US m
Purchase of property, plant and equipment and intangible assets	9,621	7,086
Less: Sales of property, plant and equipment and intangible assets	(30)	(9)
Capital expenditure	9,591	7,077

Alternative performance measures (continued)

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 purchase of property, plant and equipment and intangible assets and 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 EAU.

Year ended 31 December	2024 US m	2023 US m
Purchase of property, plant and equipment and intangible assets	9,621	7,086
Funding provided by the group to EAU ^(a)	965	-
Less: Equity or shareholder loan financing received/due from non-controlling interests ^(b)	(1,063)	(125)
Rio Tinto share of capital investment	9,523	6,961

(a) In 2024, funding provided by the group to EAU^(a) relates to funding of WCS rail and port entities (WCS) in relation to the Simandou project, consisting of a direct equity investment in WCS of US 431 million and loans provided totalling US 534 million.

(b) In 2024, we received US 1,505 million from Chalco Iron Ore Holdings Ltd (CIOH), of which US 1,063 million relates to CIOH's 47% share of capital expenditure incurred on the Simandou project and associated funding provided by the Group to EAU^(a) during the year, accounted for on an accrual basis.

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.

Year ended 31 December	2024 US m	2023 US m
Net cash generated from operating activities	15,599	15,160
Less: Purchase of property, plant and equipment and intangible assets	(9,621)	(7,086)
Less: Lease principal payments	(455)	(426)
Add: Sales of property, plant and equipment and intangible assets	30	9
Free cash flow	5,553	7,657

Alternative performance measures (continued)

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.

Year ended 31 December 2024						
	Financial liabilities			Other assets		
	Borrowings excluding overdrafts	Lease liabilities ^(b)	Derivatives related to net debt	Cash and cash equivalents including overdrafts	Other investments	Net debt US m
	(a) US m	(b) US m	(c) US m	(a) US m	(d) US m	
At 1 January	(13,000)	(1,351)	(429)	9,672	877	(4,231)
Foreign exchange adjustment	57	69	(30)	(99)	(1)	(4)
Cash movements excluding exchange movements	404	455	404	(4,080)	(675)	(741)

exchange movements	434	433	104	(1,063)	(873)	(711)
Other non-cash movements	18	(586)	12	-	11	(545)
At 31 December	(12,431)	(1,413)	(343)	8,484	212	(5,491)

- (a) Borrowings excluding overdrafts of US 12,431 million (2023: US 13,000 million) differs from Borrowings on the balance sheet as it excludes bank overdrafts of US 11 million (2023: 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 period.
- (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 212 million (2023: US 877 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.

	2024 US m	2023 US m
Net debt	5,491	4,231
Net debt	5,491	4,231
Total equity	57,965	56,341
Net debt plus total equity	63,456	60,572
Net gearing ratio	9%	7%

Alternative performance measures (continued)

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.

Year ended 31 December	2024 US m	2023 US m
Profit after tax attributable to owners of Rio Tinto (net earnings)	11,552	10,058
Items added back to derive underlying earnings	(685)	1,697
Underlying earnings	10,867	11,755
Add/(deduct):		
Finance income per the income statement	(514)	(536)
Finance costs per the income statement	763	967
Tax on finance cost	(208)	(373)
Non-controlling interest share of net finance costs	(496)	(429)
Net interest cost in equity accounted units (Rio Tinto share)	60	53
Net interest	(395)	(318)
Adjusted underlying earnings	10,472	11,437
Equity attributable to owners of Rio Tinto - beginning of the year	54,586	50,634
Net debt - beginning of the year	4,231	4,188
Operating assets - beginning of the year	58,817	54,822
Equity attributable to owners of Rio Tinto - end of the year	55,246	54,586
Net debt - end of the year	5,491	4,231
Operating assets - end of the year	60,737	58,817
Average operating assets	59,777	56,820
Underlying return on capital employed	18 %	20 %

Metal prices and exchange rates

		12 month average to 31 December 2024	12 month average to 31 December 2023	Increase/ (Decrease)	
Metal prices - average for the period					
Copper	- US cents/lb	415	386	8	%
Aluminium	- US /tonne	2,419	2,250	8	%
Gold	- US /troy oz	2,386	1,941	23	%

	Twelve month average to 31 December				At 31 December			
	2024	2023	Increase/ (Decrease)		2024	2023	Increase/ (Decrease)	
Exchange rates against the US dollar								
Pound sterling	1.28	1.24	3	%	1.25	1.28	(2)	%
Australian dollar	0.66	0.66	(1)	%	0.62	0.69	(9)	%
Canadian dollar	0.73	0.74	(1)	%	0.70	0.76	(8)	%
Euro	1.08	1.08	-	%	1.04	1.11	(7)	%
South African rand	0.055	0.054	1	%	0.053	0.054	(2)	%

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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