

31 July 2024

Consistent, stable financial performance as we ramp up our investments in growth; underlying EBITDA of \$12.1 billion and interim ordinary dividend of 177 US cents per share

- Underlying EBITDA of \$12.1 billion. Net cash generated from operating activities of \$7.1 billion.
- Profit after tax attributable to owners of Rio Tinto (referred to as "net earnings" throughout this release) of \$5.8 billion.
- Underlying earnings of \$5.8 billion, leading to an interim ordinary dividend of \$2.9 billion, a 50% payout.

Six months ended 30 June	2024	2023	Change
Net cash generated from operating activities (US\$ millions)	7,056	6,975	1 %
Purchases of property, plant and equipment and intangible assets (US\$ millions)	4,018	3,001	34 %
Free cash flow ¹ (US\$ millions)	2,843	3,769	(25) %
Consolidated sales revenue (US\$ millions)	26,802	26,667	1 %
Underlying EBITDA ¹ (US\$ millions)	12,093	11,728	3 %
Profit after tax attributable to owners of Rio Tinto (net earnings) (US\$ millions)	5,808	5,117	14 %
Underlying earnings per share (EPS) ¹ (US cents)	354.3	352.9	- %
Ordinary dividend per share (US cents)	177.0	177.0	- %
Underlying return on capital employed (ROCE) ¹	19%	20%	
	At 30 June 2024	At 31 December 2023	
Net debt ¹ (US\$ millions)	5,077	4,231	20 %

Rio Tinto Chief Executive Jakob Stausholm said: "Rio Tinto is both consistently very profitable and growing. This is being driven by the disciplined investments we are making to strengthen our operations and progress major projects for profitable organic growth.

"Our overall copper equivalent production is on track to grow by around 2% this year, and our ambition is to deliver around 3% of compound annual growth from 2024 to 2028 from existing operations and projects.

"We are at an inflection point in our growth, with a step change from our aluminium business and consistent production at our Pilbara iron ore operations. We have considerable growth in cash flow from the ramp-up of the underground copper mine at Oyu Tolgoi, and more value to come as our Simandou investment and Rincon lithium project proceed at pace. We are also solving some of our most complex challenges through technology and partnerships, such as the renewable power solutions announced for Boyne and NZAS.

"Our strengthened operations along with stable pricing for our commodities have allowed us to again deliver robust financial results, with underlying EBITDA of \$12.1 billion. We recorded free cash flow of \$2.8 billion, as we invested in growth, and underlying earnings of \$5.8 billion, after taxes and government royalties of \$4.4 billion. Return on capital employed was a healthy 19%.

"Our strong balance sheet enables us to continue to maintain our practice of a 50% interim payout with a \$2.9 billion ordinary dividend, as we continue to invest with discipline to shape Rio Tinto into an even stronger company."

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 62 to 69. Our financial results are prepared in accordance with IFRS - see page 34 for further information.

Progress against our four objectives

Objective	Key achievements in the first half of 2024
Best operator	Safety is our top priority. Tragically four colleagues and two airline crew members died in a plane crash while travelling to our Diavik diamond mine in Canada in January 2024. The investigation by the authorities is ongoing. Our team is committed to continuing our safety improvement journey by learning from these events. This remains imperative throughout 2024.

Our disciplined investment in lifting the health of our assets and focus on shifting our culture and mindset is delivering results:

- we are committed to having a safe work environment, preventing catastrophic events and injuries. Our All Injury Frequency Rate (AIFR) in the first half of 2024 remained stable at 0.36.
- we continue to see good performance from the Oyu Tolgoi underground mine in Mongolia, with a 15% increase in mined copper production compared with first half 2023.
- the deployment of the Safe Production System (SPS) has now reached 26 sites. We deepened the maturity of SPS at existing sites during the half, with three additional sites setting best throughput rates (over a 90 day period).
- we achieved a 10% increase in bauxite production compared with first half 2023, which reflects implementation of SPS, especially at Weipa where we achieved higher plant utilisation and feed rates.
- we are on track to deliver our targeted 5 million tonne production uplift at Pilbara Iron Ore in 2024 from SPS, which follows the 5 million tonne achieved in 2023.

Impeccable ESG We have committed to reaching net zero Scope 1 and 2 emissions by 2050 and set ambitious interim targets relative to our 2018 equity emissions baseline: to reduce greenhouse gas (GHG) emissions by 50% by 2030.

In 2024 first half, our Scope 1 and 2 emissions were 16.1Mt CO₂e (16.3Mt in 2023 first half, restated to reflect market-based Scope 2 reporting and current asset ownership; 32.6Mt in 2023). Our capital expenditure on decarbonisation projects in 2024 first half was \$69 million. We also made \$46 million of equity investments related to our decarbonisation programs. Our related operational expenditure was \$96 million.

Progress during the half on decarbonising our operations and value chains included:

- [Rio Tinto announced drive to develop Australia's largest solar farm at Gladstone](#)
- [Australia's leading iron ore producers partner with BlueScope on steel decarbonisation](#)
- [Rio Tinto signs Australia's largest wind power deal as it works to repower its Gladstone operations](#)
- [Rio Tinto and BHP collaborate on battery-electric haul truck trials in the Pilbara](#)
- [Rio Tinto to develop Biolron™ R&D facility in Western Australia to test low-carbon steelmaking](#)
- [Long-term future for New Zealand's Tiwai Point aluminium smelter secured with new power deals](#)
- [Rio Tinto to install carbon free aluminium smelting cells using first ELYSIS technology licence](#)
- [Richards Bay Minerals signs agreement for an additional 140 MW of renewable energy](#)
- [Ngarluma and Rio Tinto to progress renewable energy project](#)

Excel in Development We made significant progress with our objective to excel in development with the following key milestones in the half:

- the ramp-up of the Oyu Tolgoi underground copper-gold mine in Mongolia is progressing in line with our long-term plan and is on track to reach 500 thousand tonnes¹ of copper per year from 2028 to 2036.
- the construction of the Simandou high-grade iron ore project in Guinea is advancing at pace. [All conditions for Rio Tinto's investment to develop the deposit were satisfied in July](#), including the completion of necessary Guinean and Chinese regulatory approvals, and we completed our investment to co-develop the rail and port infrastructure.
- development of the 3,000 tonne per annum lithium carbonate starter plant at Rincon in Argentina is on plan: we expect first production by the end of 2024.
- at the Serbian Critical Raw Materials Summit on 19 July, governments, potential customers and European leaders endorsed the Jadar lithium project. This followed the Government of Serbia's reinstatement of the Jadar project spatial plan to its previously adopted form.

Social licence We continue to strive to restore trust and rebuild relationships, particularly with Indigenous peoples as we continue to invest in cultural knowledge.

In March, we officially launched a global community perception monitoring program, [Local Voices](#). The program is an important part of our commitment to truly listen to communities so we can continually find better ways to work together. Other key highlights in the half include:

- [Sokhulu and RBM agree to implement trust reform and support long-term community benefit](#)
- [Rio Tinto commits \\$10 million to boost Tom Price sports and recreation](#)
- [Yinhawangka People and Rio Tinto partner to co-design 'Living Cultures Program'](#)
- [Rio Tinto celebrates WA businesses as regional and Indigenous supplier spend grows](#)

- [Rio Tinto celebrates 171st anniversary as regional and international supplier opens grille](#)
- [Rio Tinto donates \\$1.5 million to support the people and community of Grindavik in Iceland](#)
- [Rio Tinto invests \\$8 million in Pilbara conservation land management](#)

People and culture

We increased our gender diversity to 25.0% (from 24.3% at year end). The increases were distributed across all levels of the organisation with female senior leaders increasing to 31.0% (from 30.1% at year end).

During the first half, we continued to work on the Everyday Respect recommendations. As part of this, we commenced our independently led Progress Review. The outcomes will enable us to understand where our actions have had the most impact and where we need to focus on our journey of culture change to continue to create a safe, respectful and inclusive organisation. We expect to receive the final report in the fourth quarter of 2024 and will subsequently make this publicly available.

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.

Guidance

- Our share of capital investment (non-IFRS measure, refer to APMs on page 67) is unchanged. In 2024, 2025 and 2026 we expect it to be up to \$10.0 billion per year, including up to \$3.0 billion in growth per year, depending on opportunities. Each guidance year also includes sustaining capital of around \$4.0 billion and \$2.0 to \$3.0 billion of replacement capital. Sustaining capital includes around \$1.5 billion over the next three years on decarbonisation projects (\$5 to \$6 billion in total up to 2030). This remains subject to Traditional Owner and other stakeholder engagement, regulatory approvals and technology developments. All capital guidance is subject to ongoing inflationary pressures and exchange rates.
- In 2024, we expect our ongoing exploration and evaluation expense (excluding Simandou) to be around \$1.0 billion. We have been capitalising all qualifying Simandou costs from the fourth quarter of 2023: our guidance assumes this continues.
- In the coming years, we expect to spend (on a cash basis) around \$1 billion per year on closure activities as we advance our closure activities at Argyle, Energy Resources of Australia (ERA), the Gove alumina refinery and legacy sites. Spend will vary from year to year as we execute individual programs of work and optimise investment across the portfolio. In 2024, the cash spend is expected to be around \$1.2 billion following a one-off investment in July to reduce our long-term exposure to a legacy site in France. All these amounts are fully provided for within our provision for closure costs of \$15.9 billion, which has decreased by \$1.3 billion since 2023 year end primarily due to a change in discount rate.
- Effective tax rate on underlying earnings is expected to be around 30% in 2024.

Unit costs	H1 2024 Actuals	2024 Guidance
Pilbara iron ore unit cash costs, free on board (FOB) basis - US\$ per wet metric tonne	23.2	21.75-23.50
Australian dollar exchange rate	0.66	0.66
Copper C1 unit costs (includes Kennecott, Oyu Tolgoi and Escondida) - US cents per lb	147	140-160

Production (Rio Tinto share, unless otherwise stated)	H1 2024 Actuals	2024 Guidance
Pilbara iron ore (shipments, 100% basis) (Mt)	158.3	323 to 338
Bauxite (Mt)	28.1	53 to 56 ¹
Alumina (Mt)	3.5	7.0 to 7.3
Aluminium (Mt)	1.7	3.2 to 3.4
Mined copper (consolidated basis) (kt)	327	660 to 720 ²
Refined copper (kt)	125	230 to 260
Titanium dioxide slag (Mt)	0.5	0.9 to 1.1
Iron Ore Company of Canada iron ore pellets and concentrate (Mt)	4.8	9.8 to 11.5
Boric oxide equivalent (Mt)	0.2	~0.5

1. Around the top end
2. Around the bottom end.

- Production guidance is consistent with our Second Quarter Operations Review, released on 16 July 2024.
- Iron ore shipments and bauxite production guidance remain subject to weather impacts.
- Expectations for Pilbara iron ore shipments in 2024 remain at 323 to 338 million tonnes. SP10 levels are expected to remain elevated until replacement projects are delivered. This guidance remains subject to the timing of approvals for planned mining areas and heritage clearances.

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 first half was \$5.8 billion (2023 first half: \$5.1 billion). We recorded a profit after tax in 2024 first half of \$5.9 billion (2023 first half: \$4.9 billion) of which a profit of \$0.1 billion was attributable to non-controlling interests (2023 first half loss: \$0.2 billion).

Underlying EBITDA

To provide additional insight into the performance of our business, we report underlying EBITDA and underlying earnings. Underlying EBITDA and underlying earnings are non-IFRS measures. For definitions and a detailed reconciliation of underlying EBITDA and underlying earnings to the nearest IFRS measures, see pages [39](#) and [64](#), respectively.

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

	US\$bn
2023 first half underlying EBITDA	11.7
Prices	(0.2)
Exchange rates	0.2
Volumes and mix	(0.1)
General inflation (including net impact on provisions)	(0.4)
Energy	0.1
Operating cash unit costs	0.2
Exploration and evaluation expenditure (net of profit from disposal of interests in undeveloped projects)	0.2
Non-cash costs/other	0.4
Change in underlying EBITDA	0.4
2024 first half underlying EBITDA	12.1

Consistent financial results as costs stabilise

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

Movements in commodity prices resulted in a \$0.2 billion decline in underlying EBITDA overall compared with 2023 first half, reflecting a lower iron ore price and lower aluminium premiums, offset by an increase in the copper LME price.

We have included a table of prices and exchange rates on page [70](#).

The monthly average Platts index for 62% iron fines converted to a Free on Board (FOB) basis was 3% lower, on average, compared with 2023 first half.

The average LME price for copper was 4% higher, the average LME aluminium price was 1% higher while the gold price was 14% higher compared with 2023 first half.

The Midwest premium duty paid for aluminium in the US averaged \$417 per tonne, 28% lower than in 2023 first half.

Continued benefit from weaker local currencies

Compared with 2023 first half, on average, the US dollar strengthened by 3% against the Australian dollar and was broadly flat against the Canadian dollar. Currency movements increased underlying EBITDA by \$0.2 billion relative to 2023 first half.

Stable sales volumes

Copper equivalent sales volumes were 1.4% higher than 2023 first half, underpinned by 15% higher copper sales volumes (consolidated share) and an uplift in volumes from Matalco, following the 2023 acquisition. Underlying EBITDA was \$0.1 billion lower, impacted by the margin lost on 3% lower iron ore shipments from the Pilbara (consolidated basis).

Impact of inflation partly offset by lower energy prices

The impact of ~3.5% inflation on our cost base lowered underlying EBITDA by \$0.3 billion compared to 2023 first half. The easing of diesel prices and lower prices for natural gas partly offset this impact.

Unit cost pressures ease in first half as lower market-linked raw material prices flow through

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

We started to see some easing of market-linked prices for key raw materials such as caustic, coke and pitch: these benefited underlying EBITDA by \$0.3 billion.

We saw a 20% decline in Copper C1 unit costs, primarily driven by higher refined volumes at Kennecott following the restart of the smelter and refinery.

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

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

Increasing our global exploration and evaluation activity

Our ongoing exploration and evaluation expenditure was \$0.5 billion, compared with \$0.4 billion in 2023 first half on the same basis. This excludes Simandou spend which was \$0.3 billion in the first half of 2023 and is now being capitalised. The like-for-like rise was mainly attributable to increased activity at the Rincon lithium project in Argentina and across the other product group projects. Overall the charge to the Income Statement was \$0.5 billion compared to \$0.7 billion in 2023 first half.

Net earnings

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

	US\$bn
2023 first half net earnings	5.1
Changes in underlying EBITDA (see above)	0.4
Increase in depreciation and amortisation (pre-tax) in underlying earnings	(0.4)
Decrease in interest and finance items (pre-tax) in underlying earnings	0.3
Increase in tax on underlying earnings	(0.1)
Increase in underlying earnings attributable to outside interests	(0.3)
Total changes in underlying earnings	-
Changes in items excluded from underlying earnings (see below)	0.7
Movement in impairment charges net of reversals	0.9
Movement in exchange differences and gains/losses on derivatives	(0.2)
2024 first half net earnings	5.8

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

Modest increase in tax on underlying earnings from higher profits

The 2024 first half effective tax rate on underlying earnings was 29.5% compared with 30.8% in 2023 first half. The tax on underlying earnings increased by \$0.1 billion primarily driven by the increase in underlying EBITDA.

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 period-on-period decrease in costs attributable to outside interests following 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 US\$bn	2023 US\$bn
Six months ended 30 June		
Underlying earnings	5.8	5.7
Items excluded from underlying earnings		
Net impairment reversal/(charges)	0.1	(0.8)
Foreign exchange and derivative (losses)/gains on net debt and intragroup balances and derivatives not qualifying for hedge accounting	-	0.2
Total items excluded from underlying earnings	0.1	(0.6)
Net earnings	5.8	5.1

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

On pages 64 to 65 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 39.

We recognised net impairment reversals of \$0.1 billion (after tax), with the analysis set out on page 41.

Exchange and derivative movements were minimal in first half 2024 (2023 first half: gain of \$0.2 billion). 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.

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

Underlying EBITDA and underlying earnings by product group

	Underlying EBITDA			Underlying earnings		
	2024 US\$bn	2023 US\$bn	Change %	2024 US\$bn	2023 US\$bn	Change %
Six months ended 30 June						
Iron Ore	8.8	9.8	(10) %	5.2	5.8	(11) %
Aluminium	1.6	1.1	38 %	0.6	0.3	113 %
Copper	1.8	1.1	67 %	0.5	0.2	131 %
Minerals	0.7	0.7	-	0.1	0.2	(57) %
Reportable segments total	12.9	12.7	1 %	6.3	6.4	(3) %
Simandou iron ore project	-	(0.3)	(0.3) %	-	(0.1)	(0.1) %

Central and other costs	2024	2023	%	2024	2023	%
Other operations	0.1	(0.1)	-	(0.1)	(0.2)	(70)
Central pension costs, share-based payments, insurance and derivatives	(0.2)	0.2	(195)	(0.1)	0.1	(148)
Restructuring, project and one-off costs	(0.1)	(0.1)	32	(0.1)	(0.1)	28
Other central costs	(0.5)	(0.5)	(4)	(0.4)	(0.5)	(11)
Central exploration and evaluation	(0.1)	(0.1)	(15)	(0.1)	(0.1)	(17)
Net interest				0.2	0.1	152
Total	12.1	11.7	3	5.8	5.7	1

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 62 to 69.

Simandou iron ore project

We commenced capitalising qualifying costs attributable to the Simandou project in Guinea from the fourth quarter of 2023. In 2023 first half, we expensed \$0.3 billion.

Central and other costs

Pre-tax central pension costs, share-based payments, insurance and derivatives were a \$0.2 billion charge compared with a \$0.2 billion credit in 2023 first half, reflecting the movement on our unrealised derivative position between the two years as well as the insurance charges incurred by our Captives in relation to claims made by our Minerals business in 2024.

On a pre-tax basis, restructuring, project and one-off central costs were mainly associated with corporate projects and were comparable to 2023 first half.

Other central costs of \$0.5 billion were comparable to 2023 first half, with productivity gains offsetting inflation.

On an underlying earnings basis, net interest was a credit of \$0.2 billion (2023 first half: credit of \$0.1 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 18 countries across eight commodities. This is reflected in our pre-tax central spend of \$114 million. The bulk of this expenditure focused on copper in Chile, Kazakhstan and Serbia, nickel in Brazil and Canada, lithium in Canada, US, Chile, Rwanda and Australia, potash in Canada and heavy mineral sands in South Africa and Rwanda.

Cash flow

	2024	2023
Six months ended 30 June	US\$bn	US\$bn
Net cash generated from operating activities	7.1	7.0
Purchases of property, plant and equipment and intangible assets	(4.0)	(3.0)
Lease principal payments	(0.2)	(0.2)
Free cash flow¹	2.8	3.8
Dividends paid to equity shareholders	(4.1)	(3.7)
Chalco Iron Ore Holdings (CIOH) contribution towards Sinfer cash expenditures	0.4	-
Other	-	(0.3)
Movement in net debt¹	(0.8)	(0.2)

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

- \$7.1 billion in net cash generated from operating activities, 1% higher than 2023 first half, primarily driven by higher underlying EBITDA and a smaller seasonal increase in working capital, partially offset by higher taxes paid. The cash outflow from working capital of \$0.7 billion in the period reflected the draw down of royalties and taxes payable in the period as prices fell from late 2023, along with seasonal movements in amounts due to JV partners and employees. Operating cash flow also benefited from higher dividends, primarily from Escondida (\$0.4 billion in 2024 first half; \$0.3 billion in 2023 first half).
- Taxes paid of \$2.6 billion were \$0.2 billion higher than 2023 first half, including the impact of timing of payments in Australia.
- Purchases of property, plant and equipment and intangible assets (capital expenditure) of \$4.0 billion was comprised of \$1.1 billion of growth (\$0.9 billion on a Rio Tinto share basis), \$1.1 billion of replacement, \$1.7 billion of sustaining and \$0.1 billion of decarbonisation capital (in addition to \$0.1 billion of decarbonisation spend in operating costs). We funded our capital expenditure from operating activities and generally expect to continue funding our capital program from internal sources.
- \$4.1 billion of dividends paid, being the 2023 final ordinary dividend.
- The above movements, including \$411 million relating to CIOH paying its share of cash expenditures until the end of 2023 for the Simandou project on 28 June 2024, resulted in net debt¹ rising by \$0.8 billion during 2024 first half to \$5.1 billion at 30 June 2024.

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Purchase of property, plant and equipment and intangible assets	4,018	3,001
Less: Equity or shareholder loan financing received/due from non-controlling interests	(349)	-
Rio Tinto share of capital investment	3,669	3,001

- Our share of capital investment in 2024 first half was \$3.7 billion, comprised of capital expenditure of \$4.0 billion net of equity/shareholder loan financing due from non-controlling interests of \$349 million. We expect this to accelerate in the second half of 2024, as we invest in and fund our share of the co-developed rail and port infrastructure being progressed in partnership with Winning Consortium Simandou (WCS)², Baowu and the Republic of Guinea.

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² WCS is the holder of Simandou North Blocks 1 & 2 and associated infrastructure vehicle (with the Government of Guinea holding a 15% interest in each of the Guinean mining and infrastructure vehicles and WCS holding 85%). 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. After Closing, Simfer Jersey will hold 34% of the shares in the WCS Singapore-incorporated infrastructure entities during construction with WCS holding the remaining 66%.

Balance sheet

Net debt¹ of \$5.1 billion at 30 June 2024 increased by \$0.8 billion compared to the year end.

Our net gearing ratio¹ (net debt to total capital) was 8% at 30 June 2024 (31 December 2023: 7%). See page 68.

Our total financing liabilities excluding net debt derivatives at 30 June 2024 (see page 68) were \$14.3 billion (31 December 2023: \$14.4 billion) and the weighted average maturity was around 11 years. At 30 June 2024, approximately 75% of these liabilities were at floating interest rates (83% 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 \$9.7 billion in cash and cash equivalents plus other short-term cash investments at 30 June 2024 (31 December 2023: \$10.5 billion).

Provision for closure costs

At 30 June 2024, provisions for close-down and restoration costs and environmental clean-up obligations were \$15.9 billion (31 December 2023: \$17.2 billion). The decrease was largely due to 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, which is a key input to our closure discount rate and resulted in a \$1.0 billion decrease. The provision further reduced by \$0.4 billion due to the strengthening of the US dollar against local currencies and cash spend on rehabilitation activities of \$0.4 billion, offset by amortisation of the discount (\$0.4 billion). In 2024, the cash spend is expected to be around \$1.2 billion following a one-off investment in July to reduce our long term exposure to a legacy site in France.

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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.

50% payout ratio on the ordinary dividend, in line with our practice

	2024 US\$bn	2023 US\$bn
Ordinary dividend		
Interim ¹	2.9	2.9

Payout ratio on ordinary dividend	50%	50%
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¹ Based on weighted average number of shares and declared dividends per share for the respective periods and excluding foreign exchange impacts on payment.

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

The 2024 interim 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 26 September 2024, we will pay the 2024 interim ordinary dividend to Rio Tinto plc and Rio Tinto Limited holders of ordinary shares and holders of Rio Tinto plc ADRs (American Depositary Receipts) on the register at the close of business on 16 August 2024 (record date). The ex-dividend date is 15 August 2024.

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 pound sterling, Australian dollar and New Zealand dollar exchange rates seven business days before the dividend payment date. Rio Tinto plc and Rio Tinto Limited shareholders must register any changes to their currency elections, including elections to receive their dividend payments in US dollars, by 5 September 2024. In the absence of updated payment elections being received by the share registrar, interim dividends will be paid as per the existing payment currency elections.

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

We will operate our Dividend Reinvestment Plans for the 2024 interim dividend (visit riotinto.com for details). Rio Tinto plc and Rio Tinto Limited shareholders' election notice for the Dividend Reinvestment Plans must be received by 5 September 2024. 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 July 2024	Status/Milestones
Ongoing			
Iron ore			
Investment in the Western Range iron ore project, a joint venture between Rio Tinto (54%) and China Baowu Steel Group Co. Ltd (46%) in the Pilbara to sustain production of the Pilbara Blend™ from Rio Tinto's existing Paraburdoo hub. First production is anticipated in 2025.	\$1.3bn (Rio Tinto share) ¹	\$0.5bn (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 70% complete, with development of the initial mining area completed during the half. First ore from the new primary crusher and conveyor system is on plan for 2025.
Investment in the Simandou high grade iron ore project in Guinea in partnership with COH, a China-led consortium (the Simfer 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 Simfer's and WCS's respective mining concessions. ³ The Simfer joint venture ⁴ will develop, own and operate a 60 million tonne per year ⁵ mine in blocks 3 & 4. WCS will construct the project's ~536 kilometre dual track main line as well as the WCS barge port, while Simfer will construct the ~70 kilometre spur line, connecting its mining concession to the main rail line, and the transshipment vessel port.	\$6.2bn (Rio Tinto share)	\$5.3bn (Rio Tinto share)	Announced in December 2023, first production at the Simfer mine 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 Simfer mine, work on support facilities, including camps, roads, and water and waste facilities is progressing well. For the Simfer infrastructure scope, we completed preparatory work on the bridge foundations which will be used to construct the railway spur. All infrastructure contracts have now been awarded. All conditions have now been satisfied for Rio Tinto's investment to develop the deposit, including the completion of necessary Guinean and Chinese regulatory approvals, and we have completed our investment in WCS ² to co-develop the rail and port infrastructure.
Aluminium			
Investment to expand the low-carbon AP60 aluminium smelter at the Complexe Jonqui�re 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	\$0.9bn	Approved in June 2023, AP60 expansion construction activities progressed, with the first prefabricated steel structures delivered to site. Once completed, the project will add 96 new AP60 pots, increasing capacity by approximately 160,000 metric 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.

Project	Total capital cost (100% unless otherwise stated)	Capital remaining to be spent from 1 July 2024	Status/Milestones
<p>Rio Tinto 100% owned unless otherwise stated</p> <p>Investment in the Kennecott underground development of the North Rim Skarn (NRS) area.</p>	\$0.5bn	\$0.5bn	<p>Approved in June 2023, production from NRS⁶ is expected to commence around mid-year 2025 and is expected to ramp up over two years, to deliver around 250,000 tonnes of additional mined copper over the next 10 years⁷ alongside open cut operations.</p>
<p>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 tonnes⁸ of copper per year from 2028 to 2036.</p>	\$7.06bn	\$0.7bn	<p>We delivered first sustainable underground production from Panel 0 in March 2023.</p> <p>The commissioning of infrastructure for ramp-up to full capacity remains on target: we expect shafts 3 and 4 and the conveyor to surface in the second half of 2024, while the concentrator conversion is expected to be progressively completed from the fourth quarter of 2024 through to the second quarter of 2025. Construction of primary crusher 2 commenced in December 2023 and is due to be complete by the end of 2025.</p>

- Rio Tinto share of the Western Range capital cost includes 100% of funding costs for Paraburdoo plant upgrades.
- 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. After Closing, Simfer will hold 34% of the shares in the WCS infrastructure entities during construction with WCS holding the remaining 66%.
- WCS holds the mining concession for Blocks 1 and 2, while Simfer SA holds the mining concession for blocks 3 and 4. Simfer and WCS will independently develop their mines.
- 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 Infracore Guinée S.A.U. will deliver Simfer Jersey's scope of the co-developed rail and port infrastructure, and is, an indirect subsidiary of Simfer Jersey Limited (85%) co-owned by the Guinean State (15%) as of 17 July 2024. 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%).
- 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.
- 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.
- 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.
- 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.

Future options

	Status
<p>Iron Ore: Pilbara brownfields</p> <p>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.</p>	<p>We continue to work closely with local communities, Traditional Owners and governments to progress approvals for these new mining projects. We are advancing our next tranche of Pilbara mine replacement studies including the Hope Downs 1 (Hope Downs 2 and Bedded Hilltop), Brockman 4 (Brockman Syncline 1), Greater Nammuldi and West Angelas projects. Early works have commenced at Hope Downs 1. Project timelines remain subject to timing of approvals and heritage clearances with the Greater Nammuldi project starting to diverge from the original development schedule.</p>
<p>Iron Ore: Rhodes Ridge</p> <p>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.</p>	<p>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, is expected to be completed in 2025. First ore is expected by the end of the decade.</p>

Longer term, the resource could support a world-class mining hub with a potential capacity of more than 100 million tonnes of high-quality iron ore a year.

Lithium: Jadar

Development of the greenfield Jadar lithium-borates project in Serbia will include an underground mine with associated infrastructure and equipment, 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. To support a public dialogue, the Jadar project released the draft Environmental Impact Assessment (EA) studies which provide insights into the project's potential environmental impacts and the proposed mitigation actions. Independent Serbian and international experts have confirmed the Jadar Project can be implemented safely in line with the highest environmental standards. The Jadar project will be subject to stringent environmental requirements in compliance with Serbian and EU regulations. This includes having to progress through an extended phase of legal, EA and permitting procedures, as well as public consultations, and further business evaluations, before implementation of the project.

Lithium: Rincon

We completed the acquisition of the Rincon Lithium project in Salta province, Argentina in March 2022. Studies are continuing on the full-scale plant, which will have benefits of economies of scale, with the capital intensity, based on current stage of studies, forecast to be in line with regional lithium industry benchmarks. In July 2022, we approved \$140 million of investment and \$54 million for early works to support a full-scale operation. To date, the majority of costs have been expensed through exploration and evaluation expenditure. In July 2023, we approved a further \$195 million to complete the starter plant. Following approval by the Argentine Congress of the new "RIGI" legislation (Law 27,742), we intend to capitalise qualifying Rincon expenditure from 1 July 2024.

Development of the 3,000 tonne per annum battery-grade lithium carbonate starter plant continues to progress to plan with civil concrete work completed and all steel, cable and piping on site, and being progressively installed. An additional 400-bed camp facility has also been constructed, bringing the total number of new beds on site to 900. Commissioning planning is advancing and we continue to expect first production from the starter plant by the end of 2024. We expect to complete the feasibility study for the full-scale operation in the third quarter of 2024. We continue to engage with communities, the province of Salta and the Government of Argentina to ensure an open and transparent dialogue with stakeholders about the works underway.

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.

Copper: Resolution

The Resolution Copper project is a proposed underground copper mine in the Copper Triangle, in Arizona, US (Rio Tinto 55%). It has the potential to supply up to 25% of US copper demand. The United States Forest Service (USFS) continued work to progress the Final Environmental Impact Statement (FEIS) and complete actions necessary for the land exchange.

The Ninth Circuit Court of Appeals denied Apache Stronghold's request to further hear their case to stop the land exchange between Resolution Copper and the federal government. It is anticipated that Apache Stronghold will file a petition in the second half of 2024 for the case to be heard by the U.S. Supreme Court. We continue to progress the FEIS with the USFS, but they have yet to advise on the date of re-publication. We also advanced partnership discussions with federally-recognised Native American Tribes who are part of the formal consultation process. 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.

Copper: Wunu

In late 2017, we discovered copper-gold mineralisation at the Wunu project in the Paterson Province in Western Australia. In 2021, we reported our first Indicated Mineral Resource. The pathway remains subject to regulatory and other required approvals. In parallel, we continue to explore options aimed at enhancing project value, including further optimisation of the current pathway and alternative development models and partnerships.

We continue to work with the Traditional Owners to progress the Wunu copper-gold project, which remains subject to all of the required approvals. Drilling, studies and fieldwork to advance the key environmental permitting and Project Agreement negotiations with Nyangumarta and the Martu remain our priority.

Copper: La Granja

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

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

Aluminium: ELYSIS

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

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 technology.

ELYSIS™ technology. It has begun commissioning the larger prototype 450 kA cells at the Alma smelter, with the start-up sequence set to begin in 2024.

Review of operations

Iron Ore

Six months ended 30 June	2024	2023	Change
Pilbara production (million tonnes - 100%)	157.4	160.5	(2) %
Pilbara shipments (million tonnes - 100%)	158.3	161.7	(2) %
Salt production (million tonnes - Rio Tinto share) ¹	3.0	3.1	(4) %
Segmental revenue (US\$ millions)	15,206	15,600	(3) %
Average realised price (US\$ per dry metric tonne, FOB basis)	105.8	107.2	(1) %
Underlying EBITDA (US\$ millions)	8,807	9,792	(10) %
Pilbara underlying FOB EBITDA margin ²	67%	69%	
Underlying earnings (US\$ millions)	5,170	5,787	(11) %
Net cash generated from operating activities (US\$ millions)	6,312	6,782	(7) %
Capital expenditure (US\$ millions) ³	(1,258)	(1,094)	15 %
Free cash flow (US\$ millions)	5,029	5,639	(11) %
Underlying return on capital employed ⁴	55%	63%	

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 \$8.8 billion was 10% lower than 2023 first half, primarily due to lower realised prices (\$0.2 billion) and lower shipments, which were impacted by a train collision in May.

Unit cost guidance for 2024 is unchanged at \$21.75 to \$23.5 per tonne (based on an average A\$:US\$ exchange rate of 0.66). In 2024 first half, unit costs were \$23.2 per tonne, with shipments weighted to the second half.

Our Pilbara operations delivered an underlying FOB EBITDA margin of 67%, compared with 69% in 2023 first half, largely due to the lower iron ore price and lower volumes.

We price the majority of our iron ore sales (77%) by reference to the average index price for the month of shipment. In 2024 first half, we priced approximately 10% of sales with reference to the prior quarter's average index lagged by one month with the remainder sold either on current quarter average, on the spot market or other mechanisms. We made approximately 74% of sales including freight and 26% on an FOB basis.

We achieved average pricing in the first half of 2024 of \$97.3 per wet metric tonne (\$98.6 in the first half of 2023) on an FOB basis (equivalent to \$105.8 per dry metric tonne, with an 8% moisture assumption). This compares to the average first half price for the monthly average Platts index for 62% iron fines converted to a FOB basis of \$106.0 per dry metric tonne.

Segmental revenue for our Pilbara operations included freight revenue of \$1.1 billion (2023 first half: \$0.9 billion).

Net cash generated from operating activities of \$6.3 billion was 7% lower than 2023 first half, driven by the same drivers as underlying EBITDA. Free cash flow of \$5.0 billion was \$0.6 billion lower than 2023 first half, mostly driven by the \$0.2 billion increase in capital expenditure

Review of operations

Pilbara operations produced 157.4 million tonnes (100% basis), 2% lower than 2023 first half. Shipments (100% basis) were also 2% lower. Productivity gains offset ore depletion, however production and shipping in the half were impacted by a train collision in May, which resulted in around six days of lost rail capacity and full stockpiles at some mines.

Our iron ore portside sales in China were 14.0 million tonnes in the first half of 2024 (11.9 million tonnes in 2023 first half). At the end of June, inventory levels were 6.1 million tonnes (6.4 million tonnes at the end of December 2023), including 3.2 million tonnes of Pilbara product. In the first half of 2024, approximately 90% of our portside sales were either screened or blended in Chinese ports.

In January 2024, Dampier Salt Limited entered into a sales agreement for the Lake MacLeod salt and

gypsum operation in Carnarvon, Western Australia with privately-owned salt company Leichhardt Industrials Group for \$251 million (A\$375 million). Completion of the sale is subject to certain commercial and regulatory conditions being satisfied. The transaction is subject to capital gains tax.

Aluminium

Six months ended 30 June	2024	2023	Change
Bauxite production ('000 tonnes - Rio Tinto share)	28,142	25,581	10 %
Alumina production ('000 tonnes - Rio Tinto share)	3,540	3,720	(5) %
Aluminium production ('000 tonnes - Rio Tinto share)	1,650	1,598	3 %
Segmental revenue (US\$ millions)	6,486	6,263	4 %
Average realised aluminium price (US\$ per tonne)	2,746	2,866	(4) %
Underlying EBITDA (US\$ millions)	1,577	1,140	38 %
Underlying EBITDA margin (integrated operations)	27%	21%	
Underlying earnings (US\$ millions)	555	260	113 %
Net cash generated from operating activities (US\$ millions)	1,112	777	43 %
Capital expenditure - excluding EAUs (US\$ millions) ¹	(705)	(597)	18 %
Free cash flow (US\$ millions)	390	165	136 %
Underlying return on capital employed ²	7%	4%	

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

We saw a 1% increase in the average LME price but there was no corresponding uplift in market and product premiums. 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 from a higher alumina price. Overall there was significant rise in margins for our Aluminium business with a 38% increase in underlying EBITDA to \$1.6 billion. Underlying EBITDA margin rose six percentage points to 27%.

We achieved an average realised aluminium price of \$2,746 per tonne, 4% lower than 2023 first half. The average realised aluminium prices comprise the LME price, a market premium and a value-added product (VAP) premium. The cash LME price averaged \$2,358 per tonne, 1% higher than 2023 first half, while in our key US market, the Midwest premium duty paid, which is 59% of our total volumes (2023 first half: 56%), decreased by 28% to \$417 per tonne (2023 first half: \$583 per tonne). Our VAP sales represented 45% of the primary metal we sold (2023 first half: 47%) and generated product premiums averaging \$287 per tonne of VAP sold (2023 first half: \$377 per tonne).

Our cash generation remained relatively strong, with net cash generated from operating activities of \$1.1 billion, a rise of 43%. Free cash flow of \$0.4 billion reflected investment in the business of \$0.7 billion.

Review of operations

Bauxite production of 28 million tonnes was 10% higher than 2023 first half, reflecting the implementation of the Safe Production System, especially at Weipa where we achieved higher plant utilisation and feed rates. As a consequence, our Group full year bauxite production guidance is expected to be around the top end of our 53 to 56 million tonne range.

We shipped 19.2 million tonnes of bauxite to third parties, 13% higher than 2023 first half. Segmental revenue for bauxite increased 29% to \$1.4 billion. This includes freight revenue of \$0.2 billion (2023 first half: \$0.2 billion).

Alumina production of 3.5 million tonnes was 5% lower than 2023 first half, due to the impacts to our Gladstone operations from the breakage of the third-party operated Queensland Gas Pipeline in March. The gas pipeline outage has reduced our third party sales but there has been no impact on our aluminium production. As a result, our net long alumina position in 2024 first half was only 0.1 million tonnes.

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 our production results as QAL remains 80% owned by Rio Tinto and 20% owned by Rusal.

Aluminium production of 1.7 million tonnes was 3% higher than 2023 first half, with our smelters continuing to demonstrate stable performance, with ISAL returning to 100% capacity after reducing its electricity load following volcanic eruptions earlier in the half.

Copper

Six months ended 30 June	2024	2023	Change
Mined copper production ('000 tonnes - consolidated basis)	327	290	13 %
Refined copper production ('000 tonnes - Rio Tinto share)	125	95	32 %

Segmental revenue (US\$ millions)	4,408	3,487	26	%
Average realised copper price (US cents per pound) ¹	419	396	6	%
Underlying EBITDA (US\$ millions)	1,804	1,082	67	%
Underlying EBITDA margin (product group operations)	53%	43%		
Underlying earnings (US\$ millions)	457	198	131	%
Net cash generated from operating activities (US\$ millions) ²	1,101	409	169	%
Capital expenditure - excluding EAU's ³ (US\$ millions)	(970)	(917)	6	%
Free cash flow (US\$ millions)	127	(512)		
Underlying return on capital employed (product group operations)	7%	4%		

1. Average realised price for all units sold. Realised price does not include the impact of the provisional pricing adjustments, which positively impacted revenues by \$93 million (2023 first half: \$10 million negative).
2. Net cash generated from operating activities excludes the operating cash flows of equity accounted units (EAUs) but includes dividends from EAUs (Escondida).
3. Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment, capitalised evaluation costs and purchases less sales of other intangible assets. It excludes EAUs.
4. Underlying return on capital employed (ROCE) is defined as underlying earnings (product group operations) excluding net interest divided by average capital employed.

Financial performance

Improved financials benefited from the steady ramp-up at Oyu Tolgoi and the Kennecott smelter resuming normal operations following the rebuild in 2023. Underlying EBITDA increased by 67% from first half 2023 and free cash flow turned positive supported by a strong LME copper price and higher volumes. Overall, our mined copper rose by 13% and refined by 32%.

Our copper unit costs, at 147 cents per pound, down by 37 cents per pound, or 20%, as a result of the higher production of refined copper with the Kennecott smelter processing material from both the mine and concentrate inventory. Guidance for 2024 copper C1 unit cost is unchanged at 140 to 160 US cents per pound.

We generated \$1.1 billion in net cash from operating activities, a 169% increase from first half 2023, from the same drivers as underlying EBITDA and a higher dividend from Escondida.

Review of operations

Mined copper production, at 327 thousand tonnes, was 13% higher than 2023 first half, reflecting higher output from all three operations. Oyu Tolgoi benefited from the continued ramp-up in underground production in line with our long term plan, Escondida saw an improvement in concentrator feed grade as mining continued into higher grade zones, together with higher concentrator output, while Kennecott was higher following the conveyor outage in 2023 first half.

Refined copper production increased by 32% to 125 thousand tonnes with the Kennecott smelter and refinery returning to normal operations following the successful rebuild in 2023.

Oyu Tolgoi underground project

In 2024 first half, we delivered 2,845 thousand tonnes of ore milled from the underground mine at an average copper head grade of 1.86% and 18,295 thousand tonnes from the open pit with an average grade of 0.38%. 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, with a total of 114 drawbells opened from Panel 0, including 27 during the half.

The sinking of ventilation Shafts 3 and 4 was completed in April following the breakthrough to surface. Both shafts remain on track to be commissioned in the second half of 2024.

Construction works for the conveyor to surface continued to plan and were 97% complete at the end of the quarter. Commissioning remains on track for the second half of 2024.

Construction works for the concentrator conversion remains on schedule. Commissioning is expected to be progressively completed from the fourth quarter of 2024 through to the second quarter of 2025.

Construction of primary crusher 2 is progressing to plan and remains on track to be completed by the end of 2025.

We expect to enter negotiations on a new Collective Labour Agreement in the second half of the year. Our current agreement expires in April 2025.

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

Six months ended 30 June	2024	2023	Change	
Iron ore pellets and concentrates production ¹ (million tonnes - Rio Tinto share)	4.8	4.6	4	%
Titanium dioxide slag production ('000 tonnes - Rio Tinto share)	492	589	(16)	%
Borates production ('000 tonnes - Rio Tinto share)	246	257	(4)	%

Diamonds production ('000 carats - Rio Tinto share)	1,441	1,924	(25) %
Segmental revenue (US\$ millions)	2,738	2,889	(5) %
Underlying EBITDA (US\$ millions)	687	689	- %
Underlying EBITDA margin (product group operations)	34%	30%	
Underlying earnings (US\$ millions)	77	179	(57) %
Net cash generated from operating activities (US\$ millions)	267	89	200 %
Capital expenditure (US\$ millions) ²	(271)	(304)	(11) %
Free cash flow (US\$ millions)	(19)	(229)	(92) %
Underlying return on capital employed (product group operations) ³	12%	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 \$0.7 billion was in line with first half 2023, primarily due to lower volume for titanium dioxide feedstocks and diamonds, and the lower iron ore price. 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 \$0.3 billion was 200% higher than first half 2023, while negative free cash flow of \$19 million reflected the lower underlying EBITDA, higher working capital due to market conditions and lower capital expenditure.

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

Review of operations

Production of iron ore pellets and concentrate at IOC of 4.8 million tonnes was 4% higher than first half 2023 when production was impacted by wildfires. Production is expected to be weighted to the second half of 2024 supported by seasonal factors.

TiO₂ slag production of 492 thousand tonnes was 16% lower than first half 2023, primarily driven by continued weak market conditions. Whilst a furnace reconstruction is underway at our RTIT Quebec Operations, we continue to operate six out of nine furnaces in Quebec and three out of four at Richards Bay Minerals (RBM).

Borates production was 4% lower than first half 2023, impacted by unplanned plant downtime in April and recovering market demand.

Our share of carats recovered was 25% lower than first half 2023. Production was impacted by the tragic plane crash earlier in the year, as well as cessation of A21 open pit mining in the third quarter of 2023.

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 first half	US\$ million impact on full-year 2024 underlying EBITDA of a 10% change in prices/exchange rates
Aluminium(LME) - US\$ per tonne	2,358	1,212
Copper (LME) - US cents per pound	412	627
Gold - US\$ per troy ounce	2,203	74
Iron ore realised price (FOB basis) - US\$ per dry metric tonne	105.8	2,662
Australian dollar against the US dollar	0.66	752
Canadian dollar against the US dollar	0.74	320
Oil (Brent) - US per barrel	84	183

DIRECTORS' REPORT

for the half year ended 30 June 2024

Review of operations and important events

Review of operations and important events

A detailed review of the Group's operations, the results of those operations during the half year ended 30 June 2024 and likely future developments are given on pages 1 to 23. Important events that have occurred during the period and up until the date of this report are set out below.

Financial

On 28 March 2024, we published our 2023 Taxes and Royalties Paid Report, detailing \$8.5 billion of global taxes and royalties paid during the year. This compares to \$10.8 billion in 2022, which included around \$1.5 billion of Australian corporate tax payments related to prior years. In the past ten years, Rio Tinto has paid \$76 billion in taxes and royalties globally, of which more than 78% was paid in Australia.

On 23 May 2024, we published a report on payments to governments made by Rio Tinto and its subsidiary undertakings for the year ended 31 December 2023 as required under the UK's Report on Payments to Governments Regulations 2014 (as amended in December 2015). Rio Tinto paid US\$8.5 billion of taxes and royalties and a further US\$1.8 billion on behalf of its employees during 2023.

Operations

On 16 January 2024, we announced Dampier Salt Limited (a joint venture between Rio Tinto (68%), Marubeni Corporation (22%) and Sojitz (10%)) had entered into a sales agreement for the Lake MacLeod salt and gypsum operation in Carnarvon, Western Australia, with privately-owned salt company Leichhardt Industrials Group for A\$375 million (US\$251 million).

On 24 January 2024, we announced we will drive development of Australia's largest solar power project near Gladstone, after agreeing to buy all electricity from the 1.1GW¹ Upper Calliope Solar Farm to provide renewable power to Rio Tinto's Gladstone operations. Under a new renewable power purchase agreement ("PPA") signed with European Energy Australia, Rio Tinto will buy all power generated from the Upper Calliope solar farm for 25 years.

On 24 January 2024, we were informed by authorities that four team members from our Diavik diamond mine and two airline crew members had died in a plane crash near Fort Smith, Northwest Territories, Canada. Another member of our Diavik team survived the crash and received treatment in hospital.

On 21 February 2024, we announced we had signed Australia's largest renewable PPA to date to supply our Gladstone operations in Queensland, agreeing to buy the majority of electricity from Windlab's planned 1.4GW Bungaban wind energy project. Under the new PPA with Windlab, Rio Tinto will buy 80% of all power generated from the Bungaban wind energy project over 25 years.

On 31 May 2024, we announced New Zealand Aluminium Smelters (NZAS) had signed 20-year electricity arrangements that secure the future of the Tiwai Point aluminium smelter to continue competitively producing high-purity, low-carbon metal, backed by a diversified mix of renewable electricity from New Zealand's South Island. In a separate transaction, Rio Tinto entered into an agreement to acquire Sumitomo Chemical Company Limited's 20.64% interest in NZAS for an undisclosed price. On completion of the transaction, NZAS will be 100% owned by Rio Tinto.

On 28 June 2024, we announced we will install carbon free aluminium smelting cells at our Arvida smelter in Quebec, Canada, using the first technology licence issued by the ELYSIS joint venture. This investment will support the ongoing development of the breakthrough ELYSISTM technology and allow Rio Tinto to build expertise in its installation and operation.

1. 1.1GWac or 1.3GWp

People

On 21 February 2024, we announced that Simon McKeon will step down as a Non-Executive Director at the conclusion of the Rio Tinto Limited annual general meeting on 2 May 2024.

On 8 April 2024, we announced that Bold Baatar will succeed Alf Barrios as Chief Commercial Officer effective 1 September 2024, following Alf's decision to retire from Rio Tinto.

Rio Tinto 2024 Annual General Meetings (AGMs)

The annual general meetings of Rio Tinto plc and Rio Tinto Limited were held on 4 April 2024 and 2 May 2024 respectively. Under Rio Tinto's dual listed companies structure established in 1995, decisions on significant matters affecting shareholders of Rio Tinto plc and Rio Tinto Limited in similar ways are taken through a joint electoral procedure.

At Rio Tinto plc's AGM on 4 April 2024, Resolution 25 (Authority to purchase Rio Tinto plc shares), put to Rio Tinto plc shareholders only, was passed with less than 80% of votes in favour. Shining Prospect (a subsidiary of the Aluminium Corporation of China "Chinalco") voted against it. Chinalco has not sold any of its shares in Rio Tinto plc and now has a holding of over 14% given its non-participation in the Company's significant share buy-back programmes. This places Chinalco close to the 14.99% holding threshold agreed with the Australian Government at the time of its original investment in Rio Tinto.

Directors

The Directors serving on the Boards of Rio Tinto plc and Rio Tinto Limited were as follows:

	Notes	Date of appointment
Chair		
Dominic Barton	(P&R, N and S)	4 April 2022
Executive Directors		
Jakob Stausholm, Chief Executive		3 September 2018
Peter Cunningham, Chief Financial Officer		17 June 2021
Non-Executive Directors		
Sam Laidlaw (senior independent director, Rio Tinto plc)	(P&R, N and S)	10 February 2017
Simon Henry	(A&R and N)	1 April 2017
Jennifer Nason	(P&R)	1 March 2020
Ngairé Woods	(N and S)	1 September 2020
Ben Wyatt	(P&R and A&R)	1 September 2021
Kaisa Hietala	(A&R and S)	1 March 2023
Dean Dalla Valle	(P&R, N and S)	1 June 2023
Susan Lloyd-Hurwitz	(P&R)	1 June 2023
Martina Merz	(S)	1 February 2024
James O'Rourke	(A&R)	25 October 2023
Sharon Thorne	(A&R)	1 July 2024

Notes

(A&R) Audit & Risk Committee, (P&R) People & Remuneration Committee, (N) Nominations Committee, (S) Sustainability Committee.

Dividend

The 2023 final dividend was paid on 18 April 2024 to holders of Rio Tinto plc and Rio Tinto Limited ordinary shares and Rio Tinto plc ADR holders. The 2023 final dividend, equivalent to 258 US cents per share was determined by the Board on 20 February 2024. Rio Tinto plc shareholders received 203.77 pence per share for the final dividend and Rio Tinto Limited shareholders received 392.78 Australian cents per share for the final dividend based on the applicable exchange rates on 11 April 2024. ADR holders receive dividends at the declared rate in US dollars.

The 2024 interim dividend, equivalent to 177 US cents per share will be paid on 26 September 2024 to Rio Tinto Limited, Rio Tinto plc and Rio Tinto plc ADR shareholders on the register at the close of business on 16 August 2024. The ex-dividend date for the 2024 interim dividend for Rio Tinto Limited, Rio Tinto plc and Rio Tinto plc ADR shareholders is 15 August 2024.

Principal risks and uncertainties

The principal risks and uncertainties that could materially impact our ability to deliver on our strategic priorities are set out on pages 81 to 88 of the 2023 Annual Report. For the remaining six months of the financial year, these remain broadly consistent with the trends reported in the Annual Report.

We continue to monitor and respond to changes in our risk profile, including those arising from changes in the macroeconomic and geopolitical environment.

Publication of half year results

In accordance with the UK Financial Conduct Authority's Disclosure Guidance & Transparency Rules and the Australian Securities Exchange Listing Rules, the half year results will be made public and are available on the Rio Tinto Group website.

Auditor's independence declaration

KPMG, the auditors of Rio Tinto Limited, have provided the auditor's independence declaration as required under section 307C of the Corporations Act 2001 in Australia. This has been reproduced on page [57](#) and forms part of this report.

The Directors' report is made in accordance with a resolution of the Board.

Dominic Barton

Chair

31 July 2024

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Group income statement

Six months ended 30 June	Note	2024 US\$m	2023 US\$m
Consolidated operations			
Consolidated sales revenue	3, 4	26,802	26,667
Net operating costs (excluding items disclosed separately)		(18,096)	(17,535)
Net impairment reversals/(charges)	5	41	(1,175)
Exploration and evaluation expenditure (net of profit from disposal of interests in undeveloped projects)		(488)	(710)
Operating profit		8,259	7,247
Share of profit after tax of equity accounted units		422	431
Profit before finance items and taxation		8,681	7,678
Finance items			
Net exchange gains on external net debt and intragroup balances		43	103
(Losses)/gains on derivatives not qualifying for hedge accounting		(81)	32

Finance income		272	245
Finance costs		(381)	(536)
Amortisation of discount on provisions		(419)	(592)
		(566)	(748)
Profit before taxation		8,115	6,930
Taxation	6	(2,225)	(1,983)
Profit after tax for the period		5,890	4,947
- attributable to owners of Rio Tinto (net earnings)		5,808	5,117
- attributable to non-controlling interests		82	(170)
Basic earnings per share		357.9c	315.7c
Diluted earnings per share		355.8c	313.9c

The notes on pages [34](#) to [52](#) are an integral part of these condensed consolidated interim financial statements.

Group statement of comprehensive income

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Profit after tax for the period	5,890	4,947
Other comprehensive income/(loss)		
Items that will not be reclassified to the income statement:		
Re-measurement gains/(losses) on pension and post-retirement healthcare plans	115	(53)
Changes in the fair value of equity investments held at fair value through other comprehensive income (FVOCI)	(14)	(17)
Tax relating to these components of other comprehensive income	(30)	16
Share of other comprehensive income/(loss) of equity accounted units, net of tax	4	(3)
	75	(57)
Items that have been/may be subsequently reclassified to the income statement:		
Currency translation adjustment ^(a)	(1,085)	(387)
Fair value movements:		
- Cash flow hedge gains	-	50
- Cash flow hedge losses/(gains) transferred to the income statement	7	(26)
Net change in costs of hedging reserve	2	2
Tax relating to these components of other comprehensive loss	(2)	(16)
Share of other comprehensive (loss)/income of equity accounted units, net of tax	(21)	11
	(1,099)	(366)
Total other comprehensive (loss) for the period, net of tax	(1,024)	(423)
Total comprehensive income for the period	4,866	4,524
- attributable to owners of Rio Tinto	4,846	4,698
- attributable to non-controlling interests	20	(174)

(a) Excludes a currency translation charge of US\$99 million (30 June 2023: US\$66 million) arising on Rio Tinto Limited's share capital for the period ended 30 June 2024, which is recognised in the Group statement of changes in equity on page [33](#).

Group cash flow statement

	Note	2024 US\$m	2023 US\$m
Six months ended 30 June			
Cash flows from consolidated operations^(a)		9,673	9,435
Dividends from equity accounted units		421	287
Cash flows from operations		10,094	9,722
Net interest paid		(305)	(286)
Dividends paid to holders of non-controlling interests in subsidiaries		(91)	(46)
Tax paid		(2,642)	(2,415)

Net cash generated from operating activities	7,056	6,975
Cash flows from investing activities		
Purchases of property, plant and equipment and intangible assets	(4,018)	(3,001)
Sales of property, plant and equipment and intangible assets	17	8
Acquisitions of subsidiaries, joint ventures and associates	-	(15)
Purchases of financial assets	(53)	(16)
Sales of financial assets ^(b)	424	862
Net funding of equity accounted units	(36)	(88)
Other investing cash flows	122	14
Net cash used in investing activities	(3,544)	(2,236)
Cash flows before financing activities	3,512	4,739
Cash flows from financing activities		
Equity dividends paid to owners of Rio Tinto	(4,121)	(3,691)
Proceeds from additional borrowings ^(c)	62	1,858
Repayment of borrowings and associated derivatives	(76)	(272)
Lease principal payments	(212)	(213)
Proceeds from issue of equity to non-controlling interests ^(d)	445	61
Purchase of non-controlling interest	-	(23)
Other financing cash flows	1	-
Net cash used in financing activities	(3,901)	(2,280)
Effects of exchange rates on cash and cash equivalents	(30)	(59)
Net (decrease)/increase in cash and cash equivalents	(419)	2,400
Opening cash and cash equivalents less overdrafts	9,672	6,774
Closing cash and cash equivalents less overdrafts	8	9,253

	2024	2023
	US\$m	US\$m
(a) Cash flows from consolidated operations		
Profit after tax for the period	5,890	4,947
Adjustments for:		
- Taxation	6	2,225
- Finance items		566
- Share of profit after tax of equity accounted units		(422)
- Net impairment (reversals)/charges	5	(41)
- Depreciation and amortisation		2,821
- Provisions (including exchange differences on provisions)		(41)
Utilisation of other provisions		(51)
Utilisation of provisions for close-down and restoration	9	(361)
Utilisation of provisions for post-retirement benefits and other employment costs		(61)
Change in inventories		(41)
Change in receivables and other assets		107
Change in trade and other payables		(751)
Other items ^(e)		(167)
	9,673	9,435

Group cash flow statement (continued)

- (b) During the six months to 30 June 2024, we received net proceeds of US\$422 million (30 June 2023: US\$801 million) from our sales and purchases of investments within a separately managed portfolio of fixed income instruments. Purchases and sales of these securities are reported on a net cash flow basis within "Sales of financial assets" or "Purchases of financial assets" depending on the overall net position at each reporting date.
- (c) On 7 March 2023, we issued US\$650 million 10-year fixed rate, and US\$1.1 billion of 30-year fixed rate, SEC-registered bonds. The 10-year notes, which mature on 9 March 2033, have a coupon of 5% and the 30-year notes, which mature on 9 March 2053 have a coupon of 5.125%. The funds were received net of issuance fees and discount.
- (d) On 28 June 2024, we received a payment of US\$411 million from Chalco Iron Ore Holdings Ltd (CIOH) in relation to their share of cash expenditure for the Simandou iron ore project in Guinea incurred up until the end of December 2023 to progress critical works. On 11 July 2024, we received a further US\$575 million from CIOH for cash calls by Simfer Jersey to 30 June 2024. Refer to note 12 for further details.
- (e) Other items includes the recognition of realised losses of US\$78 million on currency forwards not designated as hedges (30 June 2023: realised gains US\$32 million).

Group balance sheet

	30 June	31 December
	2024	2023
	US\$m	US\$m
Note		

Non-current assets		
Goodwill	785	797
Intangible assets	3,773	4,389
Property, plant and equipment	66,579	66,468
Investments in equity accounted units	4,454	4,407
Inventories	202	214
Deferred tax assets	3,435	3,624
Receivables and other assets	1,665	1,659
Other financial assets	572	481
	81,465	82,039
Current assets		
Inventories	6,517	6,659
Receivables and other assets	3,884	3,945
Tax recoverable	196	115
Other financial assets	569	1,118
Cash and cash equivalents	8	9,673
	20,422	21,510
Total assets	101,887	103,549
Current liabilities		
Borrowings	(767)	(824)
Leases	(332)	(345)
Other financial liabilities	(305)	(273)
Trade and other payables	(7,689)	(8,238)
Tax payable	(227)	(542)
Close-down, restoration and environmental provisions	9	(1,523)
Provisions for post-retirement benefits and other employment costs	(362)	(361)
Other provisions	(615)	(637)
	(12,034)	(12,743)
Non-current liabilities		
Borrowings	(12,115)	(12,177)
Leases	(1,085)	(1,006)
Other financial liabilities	(524)	(513)
Trade and other payables	(564)	(596)
Tax payable	(30)	(31)
Deferred tax liabilities	(2,443)	(2,584)
Close-down, restoration and environmental provisions	9	(15,627)
Provisions for post-retirement benefits and other employment costs	(1,080)	(1,197)
Other provisions	(714)	(734)
	(32,689)	(34,465)
Total liabilities	(44,723)	(47,208)
Net assets	57,164	56,341
Capital and reserves		
Share capital ^(a)		
- Rio Tinto plc	207	207
- Rio Tinto Limited	3,278	3,377
Share premium account	4,324	4,324
Other reserves	7,295	8,328
Retained earnings	40,149	38,350
Equity attributable to owners of Rio Tinto	55,253	54,586
Attributable to non-controlling interests	1,911	1,755
Total equity	57,164	56,341

(a) At 30 June 2024, Rio Tinto plc had 1,252.6 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\$31.22 (31 December 2023: US\$30.45).

Group statement of changes in equity

	Attributable to owners of Rio Tinto					Non-controlling interests US\$m	Total equity US\$m
	Share capital US\$m	Share premium account US\$m	Other reserves US\$m	Retained earnings US\$m	Total US\$m		
Six months ended 30 June 2024							
Opening balance	3,584	4,324	8,328	38,350	54,586	1,755	56,341
Total comprehensive income for the period ^(a)	-	-	(1,050)	5,896	4,846	20	4,866
Currency translation arising on Rio Tinto Limited's share capital	(99)	-	-	-	(99)	-	(99)
Dividends ^(b)	-	-	-	(4,121)	(4,121)	(310)	(4,431)
Own shares purchased from Rio Tinto shareholders to satisfy share awards to employees ^(c)	-	-	(12)	(2)	(14)	-	(14)
Change in equity interest held by Rio Tinto	-	-	-	(1)	(1)	1	-
Equity issued to holders of non-controlling interests	-	-	-	-	-	445	445
Employee share awards charged to the income statement	-	-	29	27	56	-	56
Closing balance	3,485	4,324	7,295	40,149	55,253	1,911	57,164

	Attributable to owners of Rio Tinto					Non-controlling interests US\$m	Total equity US\$m
	Share capital US\$m	Share premium account US\$m	Other reserves US\$m	Retained earnings US\$m	Total US\$m		
Six months ended 30 June 2023							
Opening balance	3,537	4,322	7,755	35,020	50,634	2,107	52,741
Total comprehensive income for the period ^(a)	-	-	(379)	5,077	4,698	(174)	4,524
Currency translation arising on Rio Tinto Limited's share capital	(66)	-	-	-	(66)	-	(66)
Dividends ^(b)	-	-	-	(3,691)	(3,691)	(262)	(3,953)
Own shares purchased from Rio Tinto shareholders to satisfy share awards to employees ^(c)	-	-	(3)	(3)	(6)	-	(6)
Treasury shares reissued and other movements	-	2	-	-	2	-	2
Equity issued to holders of non-controlling interests	-	-	-	-	-	61	61
Employee share awards charged to the income statement	-	-	27	27	54	-	54
Closing balance	3,471	4,324	7,400	36,430	51,625	1,732	53,357

(a) Refer to the Group statement of comprehensive income for further details. Adjustments to other reserves include currency translation attributable to owners of Rio Tinto, other than that arising on Rio Tinto Limited's share capital.

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

Six months ended 30 June	2024 US\$	2023 US\$
Dividends per share: Ordinary - paid during the period	258.0c	225.0c
Ordinary dividends per share: announced with the results for the period	177.0c	177.0c

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

Selected explanatory notes to the interim financial statements

1. Basis of preparation

The condensed consolidated interim financial statements included in this report have been prepared in accordance with International Accounting Standards (IAS) 34 "Interim Financial Reporting" as issued by the International Accounting Standards Board (IASB) and as adopted for use in the United Kingdom (UK), the UK law (United Kingdom *Companies Act 2006*) applicable to companies reporting under International Financial Reporting Standards (IFRS), applicable Australian law (*Australian Corporations Act 2001*) and in accordance with an order, under section 340 of the *Corporations Act 2001*, issued by the Australian Securities and Investments Commission (ASIC) on 11 July 2024 (ASIC class order).

These condensed consolidated interim financial statements represent a 'condensed set of financial statements' as referred to in the Disclosure Guidance and Transparency Rules sourcebook (DTR) issued by the Financial Conduct Authority (FCA) applicable to interim financial reporting. Accordingly, they do not include all of the information required for a full annual financial report and are to be read in conjunction with the Group's annual financial statements for the year ended 31 December 2023.

The 2023 annual financial statements were prepared on a going concern basis in accordance with UK-adopted international accounting standards, applicable UK law and applicable Australian law as

amended by the ASIC class order and to meet IAS as issued by the IASB and interpretations issued from time to time by the IFRS Interpretations Committee (IFRS IC) which were mandatory at 31 December 2023.

The above accounting standards and interpretations are collectively referred to as 'IFRS' in this report and contain the principles we use to create our accounting policies. Where necessary, adjustments are made to the locally reported assets, liabilities, and results of subsidiaries, joint arrangements and associates to bring their accounting policies in line with ours for consistent reporting.

These condensed consolidated interim financial statements are unaudited and do not constitute statutory accounts as defined in Section 434 of the *Companies Act 2006*. The financial information as at 31 December 2023 included in this report has been extracted from the full financial statements filed with the Registrar of Companies. The Auditors' report on these full financial statements was unqualified, did not include a reference to any matters to which the auditor drew attention by way of emphasis of matter and did not contain statements 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 *Companies Act 2006*.

Going concern

Management has prepared detailed cash flow forecasts for the next 18 months and has updated life-of-mine plan models with longer-term cash flow projections. These forecasts demonstrate that the Group has sufficient cash, other liquid resources and undrawn credit facilities to enable it to meet its obligations as they fall due. As such, the Directors considered it appropriate to adopt the going concern basis of accounting in preparing the interim financial information.

1. Basis of preparation (continued)

Alternative performance measures

We present certain non-IFRS financial measures (non-IFRS measures), which are reconciled to directly comparable IFRS financial measures on pages [62](#) to [69](#) of this report. These non-IFRS measures herein, referred to as alternative performance measures (APMs), are used by management to assess the performance of the business and may therefore be useful to investors. They are not a substitute for the IFRS measures and should be considered supplementary to those measures.

Reconciliation with Australian Accounting Standards

Our financial statements have been prepared in accordance with IFRS, as defined in the "Basis of preparation" section on page [34](#), which differs in certain respects from the version of IFRS that is applicable in Australia, referred to as Australian Accounting Standards (AAS). We are required to disclose the effect of the adjustments to our consolidated income statement, consolidated total comprehensive income/(loss) and consolidated shareholders' funds if our accounts were prepared under the version of IFRS that is applicable in Australia. This is in order to satisfy the obligations of Rio Tinto Limited to prepare consolidated accounts under Australian company law, as amended by an order issued by the Australian Securities and Investments Commission on 11 July 2024.

Prior to 1 January 2004, our financial statements were prepared in accordance with UK Generally Accepted Accounting Practice (UK GAAP). Under IFRS, goodwill on acquisitions prior to 1998, which was eliminated directly against equity in the Group's UK GAAP financial statements, has not been reinstated. This was permitted under the rules governing the transition to IFRS set out in IFRS 1. The equivalent Australian Standard, AASB 1, does not provide for the netting of goodwill against equity. As a consequence, shareholders' funds under AAS include the residue of such goodwill, which amounted to US\$381 million at 30 June 2024 (31 December 2023: US\$380 million).

Save for the exception described above, the Group's financial statements prepared in accordance with IFRS are consistent with the requirements of AAS.

Changes in accounting policies

The condensed consolidated interim financial statements have been prepared on the basis of accounting policies, methods of computation and presentation consistent with those applied in the financial statements for the year ended 31 December 2023, except for the accounting requirements set out below, effective as at 1 January 2024.

New standards and amendments applicable for the current period

Classification of liabilities as current or non-current liabilities with covenants (Amendments to IAS 1 "Presentation of Financial Statements")

We adopted the Amendments to IAS 1 which specify the requirements for classifying liabilities as current or non-current. The amendments clarify that a right to defer settlement must exist at the end of the reporting period and that classification is unaffected by the likelihood that an entity will exercise its deferral right. In addition, a requirement has been introduced whereby an entity must

exercise its deferral right. In addition, a requirement has been introduced whereby an entity must disclose when a liability arising from a loan agreement is classified as non-current and the entity's right to defer settlement is contingent on compliance with future covenants within twelve months. The amendments do not have a material impact on the Group.

2. Changes in accounting policies (continued)

Lease liability in a sale and leaseback (Amendments to IFRS 16 "Leases")

We adopted the Amendments to IFRS 16 which specify the requirements that a seller-lessee uses in measuring the lease liability arising in a sale and leaseback transaction. The amendments do not have an impact on the Group.

Supplier finance arrangements (Amendments to IAS 7 "Statement of Cash Flows" and IFRS 7 "Financial Instruments: Disclosures")

We adopted the Amendments to IAS 7 and IFRS 7 which clarify the characteristics of supplier finance arrangements and require additional disclosure of such arrangements. The amendments do not have a material impact on the Group. We have applied a transition exemption not to provide the disclosures in the interim period in the year of initial application.

New standards or amendments issued but not yet effective

During the six months ended 30 June 2024, we have not early adopted any amendments, standards or interpretations that have been issued but are not yet effective.

3. Segmental information

Our management structure is based on product groups (PG) 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 (CODM) and is responsible for allocating resources and assessing performance of the operating segments. The CODM's primary measure of profit is underlying EBITDA (as defined on page 39).

Our reportable segments are as follows:

Reportable segment	Principal activities
Iron Ore	Iron ore mining and salt and gypsum production in Western Australia.
Aluminium	Bauxite mining; alumina refining; aluminium smelting and recycling.
Copper	Mining and refining of copper, gold, silver, molybdenum, other by-products and licencing of extraction technologies.
Minerals	Includes mining and processing of borates, titanium dioxide feedstock and iron concentrate and pellets from the Iron Ore Company of Canada. Also includes diamond mining, sorting and marketing and development projects for battery materials, such as lithium.

Management responsibility for the Simandou iron ore project in Guinea ('Simandou') during the build phase of the project falls under the Chief Technical Officer and, therefore, is included in "Other Operations", which is below reportable segments in our segmental analysis.

3. Segmental information (continued)

	2024			2023		
	Segmental revenue ^(a)	Underlying EBITDA ^(b)	Capital expenditure ^(c)	Segmental revenue ^(a)	Underlying EBITDA ^(b)	Capital expenditure ^(c)
Six months ended 30 June	US\$m	US\$m	US\$m	US\$m	US\$m	US\$m
Iron Ore	15,206	8,807	1,258	15,600	9,792	1,094
Aluminium	6,486	1,577	705	6,263	1,140	597
Copper	4,408	1,804	970	3,487	1,082	917
Minerals	2,738	687	271	2,889	689	304
Reportable segments total	28,838	12,875	3,204	28,239	12,703	2,912
Other operations	49	85	754	97	(395)	32
Inter-segment transactions	(107)	10		(154)	(17)	
Share of equity accounted units ^(d)	(1,978)			(1,515)		
Central pension costs, share-based payments, insurance and derivatives		(158)			167	
Restructuring, project and one-off costs		(111)			(84)	
Central costs		(494)			(512)	
Central exploration and evaluation						

Central exploration and evaluation expenditures	(114)	(134)
Proceeds from disposal of property, plant and equipment	17	8
Other items	43	49
Consolidated sales revenue	26,802	26,667
Purchases of property, plant and equipment and intangible assets	4,018	3,001
Underlying EBITDA	12,093	11,728

- (a) Segmental revenue includes consolidated sales revenue plus the equivalent sales revenue of equity accounted units in proportion to our equity interest (after adjusting for sales to/from subsidiaries). Segmental revenue measures revenue on a basis that is comparable to our underlying EBITDA metric.
- (b) Underlying EBITDA (calculated on page 39) is reported to provide greater understanding of the underlying business performance of Rio Tinto's operations.
- (c) Capital expenditure for reportable segments includes the net cash outflow on purchases less disposals of property, plant and equipment, capitalised evaluation costs and purchases less disposals of other intangible assets. The details provided include 100% of subsidiaries' capital expenditure and Rio Tinto's share of the capital expenditure of joint operations.
- (d) Consolidated sales revenue includes subsidiary sales of US\$121 million (30 June 2023: US\$21 million) to equity accounted units which are not included in segmental revenue. Segmental revenue includes the Group's proportionate share of product sales by equity accounted units (after adjusting for sales to subsidiaries) of US\$2,099 million (30 June 2023: US\$1,536 million) which are not included in consolidated sales revenue.

3. Segmental information (continued)

Reconciliation of profit after tax to 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.

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 period irrespective of materiality:

- Depreciation and amortisation in subsidiaries, excluding capitalised depreciation;
- Depreciation and amortisation in equity accounted units;
- Taxation and finance items in subsidiaries;
- Taxation and finance items in equity accounted units;
- Unrealised gains/(losses) on embedded derivatives not qualifying for hedge accounting;
- Net gains/(losses) on disposal of interests in subsidiaries;
- Impairment charges net of reversals;
- The underlying EBITDA of discontinued operations;
- Adjustments to closure provisions where the adjustment is associated with an impairment charge and for legacy sites where the disturbance or environmental contamination relates to the pre-acquisition period.

In addition, there is a final judgmental 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. For the periods ended 30 June 2024 and 30 June 2023, there were no items in this category.

Six months ended 30 June	2024 US\$m	2023 US\$m
Profit after tax for the period	5,890	4,947
Taxation	2,225	1,983
Profit before taxation	8,115	6,930
Depreciation and amortisation in subsidiaries, excluding capitalised depreciation ^(a)	2,719	2,405
Depreciation and amortisation in equity accounted units	275	238
Finance items in subsidiaries	566	748
Taxation and finance items in equity accounted units	483	373
Gains on embedded commodity derivatives not qualifying for hedge accounting (including foreign exchange)	(3)	(112)
Net impairment (reversals)/charges ^(b)	(18)	1,175
Change in closure estimates (non-operating and fully impaired sites) ^(c)	(44)	(29)
Underlying EBITDA	12,093	11,728

(a) Depreciation and amortisation in subsidiaries for the period ended 30 June 2024 is net of capitalised depreciation of US\$102 million (30 June 2023: US\$80 million).

(b) Refer to note 5 for allocation of net impairment (reversals)/charges between consolidated amounts and share of profit in EAUs.

- (c) For the period ended 30 June 2024, the credit to the income statement relates to the impact of a change in discount rate, expressed in real-terms, from 2.0% to 2.5% (30 June 2023: from 1.5% to 2.0%) as applied to provisions for close-down, restoration and environmental liabilities at legacy sites where the environmental damage preceded ownership by Rio Tinto.

4. Segmental information - additional information

Consolidated sales revenue by destination^(a)

	2024 %	2023 %	2024 US\$m	2023 US\$m
Six months ended 30 June				
Greater China	58.1	58.1	15,569	15,482
United States of America	16.0	14.6	4,288	3,885
Asia (excluding Greater China and Japan)	6.9	7.3	1,834	1,957
Japan	6.6	6.7	1,769	1,791
Europe (excluding UK)	5.1	5.8	1,373	1,537
Canada	3.0	2.9	800	785
Australia	1.8	1.7	489	451
UK	0.2	0.2	64	66
Other countries	2.3	2.7	616	713
Consolidated sales revenue	100.0	100.0	26,802	26,667

- (a) Consolidated sales revenue by geographical destination is based on the ultimate country of the product's destination, if known. Where the ultimate destination is not known, we have defaulted to the shipping address of the customer. Rio Tinto is domiciled in both the UK and Australia.

Consolidated sales revenue by product

	Revenue from contracts with customers		Other revenue ^(a)	Consolidated sales revenue	Revenue from contracts with customers		Other revenue ^(a)	Consolidated sales revenue
	2024 US\$m	2024 US\$m			2023 US\$m	2023 US\$m		
Six months ended 30 June								
Iron ore	16,572	(527)	16,045	16,319	12	16,331		
Aluminium, alumina and bauxite	6,105	54	6,159	6,194	(45)	6,149		
Copper	2,194	33	2,227	1,695	(6)	1,689		
Industrial minerals (comprising titanium dioxide slag, zircon, borates and salt)	1,173	(2)	1,171	1,246	(1)	1,245		
Gold	345	5	350	236	3	239		
Diamonds	149	-	149	250	-	250		
Other products and freight services ^(b)	701	-	701	765	(1)	764		
Consolidated sales revenue	27,239	(437)	26,802	26,705	(38)	26,667		

- (a) Consolidated sales revenue includes both revenue from contracts with customers, accounted for under IFRS 15 "Revenue from Contracts with Customers"; and subsequent movements in provisionally priced receivables, accounted for under IFRS 9, and included in "Other revenue" above.
- (b) "Other products and freight services" includes metallic co-products, molybdenum, silver and other commodities.

5. Impairment

	Pre-tax amount 2024 US\$m	Taxation 2024 US\$m	Non-controlling interest 2024 US\$m	Net Amount 2024 US\$m	Pre-tax amount 2023 US\$m
Six months ended 30 June					
Aluminium - Tiwai Point	41	37	-	78	-
Aluminium - Porto Trombetas (MRN)	(23)	-	-	(23)	-
Aluminium - Alumina refineries	-	-	-	-	(1,175)
Net impairment reversals/(charges)	18	37	-	55	(1,175)

Allocated as:

Property, plant and equipment	41				(1,175)
Share of profit after tax of equity accounted units	(23)				
Net impairment reversals/(charges)	18				(1,175)

Comprising:

Impairment reversals/(charges) of consolidated balances				41	(1,175)
Impairment charges related to EAUs (pre-tax)				(35)	-
Net impairment reversals/(charges) in the financial information by business unit (page 58)				6	(1,175)
Taxation				49	347
Non-controlling interests				-	-

30 June 2024**Aluminium - Tiwai Point, New Zealand**

On 30 May 2024, we signed 20-year power arrangements with electricity generators Meridian Energy, Contact Energy and Mercury NZ to set pricing for an aggregate of 572 megawatts of electricity to meet the smelter's electricity needs. These new arrangements have been identified as an impairment reversal trigger as they give us confidence that the smelter can continue operations competitively beyond the existing supply arrangement which ran to December 2024.

An impairment reversal is limited by the amount of depreciation that would have been charged had the previous impairments not occurred. In this case, as the previous depreciation period was until December 2024, the impairment reversal is limited to US\$41 million. The recoverable amount for the cash-generating unit, based on value-in-use assumptions aligned with the near-term business plan, comfortably exceeds the carrying value incorporating an impairment reversal amount and, therefore, the previous impairments have been reversed to the maximum extent possible. This impairment reversal also resulted in the recognition of deferred tax assets of US\$37 million due to the improved forecast for taxable profits.

5. Impairment (continued)**Aluminium - Porto Trombetas (MRN), Brazil**

In preparing the local accounts for the year to 31 December 2023, after the publication of the Rio Tinto 2023 annual report, the directors of Mineração Rio do Norte S.A. (MRN) recorded a local impairment charge triggered by cost increases, unfavourable exchange rates and declining sales prices. The Rio Tinto share of that impairment is US\$35 million pre-tax and US\$23 million post-tax, and is included within the current period share of profit after tax of equity accounted units.

Rio Tinto's share of bauxite produced by MRN is vertically integrated into our Quebec Smelter cash-generating unit included in North America Aluminium operations. We reviewed the carrying value of the investment in equity accounted unit as part of this cash-generating unit and did not identify indicators of impairment.

30 June 2023**Aluminium - Alumina refineries, Australia**

The Gladstone alumina refineries are responsible for more than half of our scope 1 carbon dioxide emissions in Australia and therefore have been a key focus as we evaluate options to decarbonise our assets. In March 2023, the Australian Parliament legislated to introduce a requirement for large heavy industrial carbon emitters to purchase carbon credits based on their scope 1 emissions with a reducing baseline for these emissions. The challenging market conditions facing these assets, together with our improved understanding of the capital requirements for decarbonisation and the legislated cost escalation for carbon emissions, were identified as impairment triggers during the six months ended 30 June 2023.

Using a fair value less cost of disposal methodology and discounting real-terms post-tax cash flows at 6.6%, we recognised a pre-tax impairment charge of US\$1,175 million (post-tax US\$828 million). This represented a full impairment of the property, plant and equipment at the Yarwun alumina refinery (US\$948 million) and an impairment of US\$227 million for the property, plant and equipment of Queensland Alumina Limited ('QAL'). These impairments reflect market participant assumptions and the difficult trading conditions for these assets which have operated below our planned output during the first half of 2023.

For QAL, the recoverable amount (net present value of US\$325 million) was represented by future cash flows attributable to the double digestion project. This major capital project improves the energy efficiency of the alumina production process and significantly reduces carbon emissions. These cash flows were risk adjusted to reflect the pre-feasibility study stage of project evaluation. If investment in the double digestion project was not approved, the post-tax impairment charge would have been US\$325 million greater and result in a full impairment of QAL.

Impact of climate change on our business - Gladstone alumina refineries

We are committed to the decarbonisation of our assets to reduce Scope 1 and 2 emissions by 50% by 2030 and to net zero emissions by 2050 relative to our 2018 equity baseline. We anticipate that further carbon action may be necessary to align with the goals of the Paris agreement to limit temperature increases to 1.5°C. To illustrate the sensitivity of the refinery valuations to the cost of carbon credits, we modelled a 10% increase in those unit costs across all years, before the impact of decarbonisation projects with all other inputs to the 30 June 2023 impairment valuation remaining constant. For QAL, this sensitivity indicated a reduction in the pre-tax value by US\$99 million; however, this was expected to be largely mitigated by decarbonisation projects, including double digestion. There was no impact at Yarwun as all property, plant and equipment was already fully impaired.

6. Taxation

Prima facie tax reconciliation

Six months ended 30 June	2024 US\$m	2023 US\$m
Profit before taxation ^(a)	8,115	6,930
Prima facie tax payable at UK rate of 25% (2023: 23.5%) ^(b)	2,029	1,628
Higher rate of taxation of 30% on Australian earnings (2023: 30%)	325	373
Other tax rates applicable outside the UK and Australia	(136)	(130)
Tax effect of profit from equity accounted units and related expenses ^(a)	(106)	(101)
Impact of changes in tax rates	(15)	-
Resource depletion allowances	(7)	(6)
Recognition of previously unrecognised deferred tax assets	(49)	(62)
Write-down of previously recognised deferred tax assets	42	40
Utilisation of previously unrecognised deferred tax assets	(9)	(10)
Unrecognised current period operating losses ^(c)	146	259
Adjustments in respect of prior periods	14	(4)
Other items	(9)	(4)
Total taxation charge	2,225	1,983

(a) The Group profit before tax includes profit after tax of equity accounted units. Consequently, the tax effect on the profit from equity accounted units is included as a separate reconciling item in this prima facie tax reconciliation.

(b) As a UK headquartered and listed Group, the reconciliation of expected tax on accounting profit to tax charge uses the UK corporate tax rate to calculate the prima facie tax payable. In 2024, the UK tax rate for the period was 25% (2023: 23.5%) due to the previously reported increase in the UK corporation tax rate from 19% to 25% effective 1 April 2023. Rio Tinto is also listed in Australia, and the reconciliation includes the impact of the higher tax rate in Australia where a significant proportion of the Group's profits are currently earned. The impact of other tax rates applicable outside the UK and Australia is also included. The weighted average statutory corporate tax rate on profit before tax is approximately 29% (30 June 2023: 30%)

(c) Unrecognised current period operating losses include tax losses around the Group for which no tax benefit is currently recognised due to uncertainty regarding whether suitable taxable profits will be earned in the future to obtain value from the tax losses.

Future tax developments

We continue to monitor and evaluate the domestic implementation by relevant countries of the Organisation for Economic Co-operation and Development's (OECD) Pillar Two which seeks to apply a 15% global minimum tax. Pillar Two was substantively enacted by the United Kingdom on 20 June 2023, with application from 1 January 2024.

We estimate that the exposure to additional taxation under Pillar Two is immaterial for the Group. Our reported tax charge of US\$2,225 million includes US\$1 million current tax expense related to Pillar Two measures. We apply the IAS 12 temporary mandatory exception from deferred tax accounting for Pillar Two.

7. Acquisition and disposals

There were no material acquisitions and disposals during the six months to 30 June 2024 or the six months to 30 June 2023.

In the second half of 2023, we completed the acquisition of a 57.7% share in Agua de la Falda establishing the Nuevo Cobre exploration and evaluation project and acquired a 50% interest in the Matalco aluminium recycling joint venture. We also completed the sale of a 55% interest in the undeveloped La Granja project in Peru. These transactions are described in the 2023 Annual Report and did not have a material impact on profit or loss in the periods presented.

8. Cash and cash equivalents

Closing cash and cash equivalents less overdrafts for the purposes of the cash flow statement differs from cash and cash equivalents on our balance sheet as per the following reconciliation:

	30 June 2024	31 December 2023	30 June 2023
Closing cash and cash equivalents less overdrafts	US\$m	US\$m	US\$m
Balance per Group balance sheet	9,256	9,673	9,179
Bank overdrafts repayable on demand (unsecured)	(3)	(1)	(5)
Balance per Group cash flow statement	9,253	9,672	9,174

9. Close-down, restoration and environmental provisions

	30 June 2024 ^(a)	31 December 2023
	US\$m	US\$m
Opening balance	17,150	15,759
Adjustment on currency translation	(395)	241
Adjustments to mining properties/right of use assets:		
- changes to existing and new provisions	25	629
- change in discount rate ^(b)	(787)	(921)
Charged/(credited) to profit:		
- increases to existing and new provisions	79	1,654
- change in discount rate ^(b)	(235)	(168)
- decreases and unused amounts reversed	(27)	(195)
- exchange losses/(gains) on provisions	14	(16)
- amortisation of discount	412	955
Utilised in the period	(361)	(777)
Transfers and other movements	(4)	(11)
Closing balance	15,871	17,150
Balance sheet analysis:		
Current	1,737	1,523
Non-current	14,134	15,627
Total	15,871	17,150

(a) Close-down, restoration and environmental provisions at 30 June 2024 have not been adjusted for closure-related receivables amounting to US\$364 million (31 December 2023: US\$366 million) due from the ERA trust fund and other financial assets held for the purposes of meeting closure obligations. These are included within "Receivables and other assets" on the balance sheet.

(b) Close-down, restoration and environmental provisions of US\$15,871 million (31 December 2023: US\$17,150 million) are based on risk-adjusted cash flows expressed in real terms. The recent upward trajectory in interest rates has resulted in expectations of higher yields from long-dated bonds, including the 30-year US Treasury Inflation Protected Securities, which is a key input to our closure provision discount rate. On 30 June 2024, we revised the closure discount rate from 2.0% to 2.5% (30 June 2023: from 1.5% to 2.0%), applied prospectively from that date. This assumption is based on the currency in which we plan to fund the closures and our expectation of long-term interest rate and exchange rate parity in the locations of our operations.

10. Financial instruments

Valuation hierarchy of financial instruments carried at fair value on a recurring basis

The table below shows the classifications of our financial instruments by valuation method in accordance with IFRS 13 "Fair Value Measurement" at 30 June 2024 and 31 December 2023.

All instruments shown as being held at fair value have been classified as fair value through the profit and loss unless specifically footnoted.

	30 June 2024					31 December 2023		
	Held at fair value			Held at amortised cost US\$m	Total US\$m	Held at fair value		
	Level 1 ^(a) US\$m	Level 2 ^(b) US\$m	Level 3 ^(c) US\$m			Level 1 ^(a) US\$m	Level 2 ^(b) US\$m	Level 3 ^(c) US\$m
Assets								
Cash and cash equivalents ^(d)	4,129	-	-	5,127	9,256	2,722	-	-
Investments in equity shares and funds ^(e)	82	-	136	-	218	85	-	-
Other investments, including loans ^(f)	474	-	300	21	795	896	-	-
Trade and other financial receivables ^(g)	16	1,115	-	2,055	3,186	9	1,383	-
Forward, option and embedded derivatives contracts, not designated as hedges ^(h)	-	32	50	-	82	-	28	-

contracts, not designated as hedges ⁽ⁱ⁾	-	32	33	-	31	-	28
Derivatives related to net debt ⁽ⁱ⁾	-	37	-	-	37	-	87

Liabilities

Trade and other financial payables ⁽ⁱ⁾	-	(80)	-	(6,005)	(6,085)	-	(47)
Forward, option and embedded derivatives contracts, designated as hedges ^(h)	-	-	(158)	-	(158)	-	-
Forward, option and embedded derivatives contracts, not designated as hedges ^(h)	-	(64)	(65)	-	(129)	-	(63)
Derivatives related to net debt ⁽ⁱ⁾	-	(532)	-	-	(532)	-	(516)

(a) Valuation is based on unadjusted quoted prices in active markets for identical financial instruments.

(b) Valuation is based on inputs that are observable for the financial instruments, which include quoted prices for similar instruments or identical instruments in markets which are not considered to be active, or inputs, either directly or indirectly based on observable market data.

10. Financial instruments (continued)

(c) Valuation is based on inputs that cannot be observed using market data (unobservable inputs). The change in valuation of our level 3 instruments for the period to 30 June 2024 and 31 December 2023 is as follows:

	30 June 2024	31 December 2023
	US\$m	US\$m
Level 3 financial assets and liabilities		
Opening balance	147	131
Currency translation adjustments	(1)	(2)
Total realised gains/(losses) included in:		
- consolidated sales revenue	-	12
- net operating costs	(11)	(18)
Total unrealised gains/(losses) included in:		
- net operating costs	94	43
Total unrealised gains/(losses) transferred into other comprehensive income through cash flow hedges	9	(1)
Additions to financial assets/(liabilities)	50	29
Disposals/maturity of financial instruments	(16)	(47)
Closing balance	272	147
Net gains included in the income statement for assets and liabilities held at period end	84	31

(d) Our Cash and cash equivalents of US\$9,256 million (31 December 2023: US\$9,673 million), includes US\$4,129 million (31 December 2023: US\$2,722 million) relating to money market funds which are treated as fair value through profit or loss (FVPL) under IFRS 9 with the fair value movements reported as finance income.

(e) Investments in equity shares and funds include US\$192 million (31 December 2023: US\$157 million) of equity shares, not held for trading, where we have irrevocably elected to present fair value gains and losses on revaluation in other comprehensive income (FVOCI). The election is made at an individual investment level.

(f) Other investments, including loans, covers cash deposits in rehabilitation funds, government bonds, managed investment funds and royalty receivables.

(g) Trade receivables include provisionally priced invoices. The related revenue is initially based on forward market selling prices for the quotation periods stipulated in the contracts with changes between the provisional price and the final price recorded separately within "Other revenue". The selling price can be measured reliably for the Group's products, as it operates in active and freely traded commodity markets. At 30 June 2024, US\$1,080 million (31 December 2023: US\$1,362 million) of provisionally priced receivables were recognised.

(h) Level 3 derivatives mainly consist of derivatives embedded in electricity purchase contracts linked to the LME, midwest premium and billet premium with terms expiring between 2025 and 2036 (31 December 2023: 2025 and 2036). Derivatives related to renewable power purchase agreements are linked to forward electricity prices with terms expiring between 2053 and 2054.

(i) Net debt derivatives include interest rate swaps and cross-currency swaps. As part of the International Swaps and Derivatives Association (ISDA) Fallbacks Protocol, on 1 July 2023 we completed the transition of our US LIBOR derivatives to SOFR on cessation of US LIBOR at 30 June 2023. There was no impact on our hedging arrangements after taking into account the IFRS 9 'Financial Instruments' LIBOR reform reliefs.

(j) Trade and other financial payables comprise trade payables, other financial payables, accruals and amounts due to equity accounted units.

There were no material transfers between level 1 and level 2, or between level 2 and level 3 in the current or prior period.

10. Financial instruments (continued)

Valuation techniques and inputs

The techniques used to value our more significant fair value assets/(liabilities) categorised under level 2 and level 3 are summarised below:

Description	30 June 2024	31 December 2023	Valuation technique	Significant Inputs
	Fair value US\$m	Fair value US\$m		
Level 2				
Interest rate swaps	(212)	(163)	Discounted cash flows	<ul style="list-style-type: none"> Applicable market quoted swap yield curves Credit default spread

Cross currency interest rate swaps	(283)	(266)	Discounted cash flows	• • •	Applicable market quoted swap yield Credit default spread Market quoted FX rate
Provisionally priced receivables	1,080	1,362	Closely related listed product	•	Applicable forward quoted metal price
Level 3					
Renewable power purchase agreements	(7)	-	Discounted cash flows	• •	Forward electricity price Energy volume
Derivatives embedded in electricity contracts	(157)	(186)	Option pricing model	• •	LME forward aluminium price Midwest premium and billet premium
Royalty receivables	279	214	Discounted cash flows	• •	Forward commodity price Mine production

Sensitivity analysis in respect of level 3 financial instruments

For assets/(liabilities) classified under level 3, the effect of changing the significant unobservable inputs on carrying value has been calculated using a movement that we deem to be reasonably probable.

Net derivative liabilities related to our renewable power purchase agreements have a fair value of US\$7 million at 30 June 2024 (31 December 2023: nil). The fair value is calculated as the present value of the future contracted cash flows using risk-adjusted forecast prices including credit adjustments. A 10% increase in forecast electricity prices over the remaining term of the contract would result in a US\$221 million increase in fair value and a 10% decrease in forecast electricity prices would result in a US\$221 million decrease in fair value.

To value the long-term aluminium embedded power derivatives, we use unobservable inputs when the term of the derivative extends beyond observable market prices. Changing the level 3 inputs to reasonably possible alternative assumptions does not change the fair value significantly, taking into account the expected remaining term of contracts for either reported period. The fair value of these derivatives is a net liability of US\$157 million at 30 June 2024 (31 December 2023: US\$186 million).

10. Financial instruments (continued)

Royalty receivables include amounts arising from our divested coal businesses with a carrying value of US\$279 million (31 December 2023: US\$214 million). These are classified as "Other investments, including loans" within "Other financial assets". The fair values are determined using level 3 unobservable inputs. These royalty receivables include US\$97 million from forecast production beyond 2030. These have not been adjusted for potential changes in production rates that could occur due to climate change targets impacting the operator.

The main unobservable input is the long-term coal price used over the life of these royalty receivables. A 15% increase in the coal spot price would result in a US\$26 million increase (31 December 2023: US\$64 million increase) in the carrying value. A 15% decrease in the coal spot price would result in a US\$81 million decrease (31 December 2023: US\$39 million decrease) in the carrying value. We have used a 15% assumption to calculate our exposure as it represents the annual coal price movement that we deem to be reasonably probable (on an annual basis over the long run).

Fair values disclosure of financial instruments

The following table shows the carrying value and fair value of our borrowings including those which are not carried at an amount which approximates their fair value 30 June 2024 and 31 December 2023. The fair values of some of our financial instruments approximate their carrying values because of their short maturity, or because they carry floating rates of interest.

	30 June 2024		31 December 2023	
	Carrying value US\$m	Fair value US\$m	Carrying value US\$m	Fair value US\$m
Listed bonds	8,532	8,221	8,607	8,672
Oyu Tolgoi project finance	3,851	4,085	3,850	4,090
Other	499	501	544	494
Total borrowings (including overdrafts)	12,882	12,807	13,001	13,256

Borrowings relating to listed bonds are categorised as level 1 in the fair value hierarchy while those relating to project finance drawn down by Oyu Tolgoi use a number of level 3 valuation inputs.

In the prior period, we refinanced the Oyu Tolgoi project finance on 16 February 2023 with a syndicate of international financial institutions, export credit agencies and commercial lenders. The

syndicate of international financial institutions, export credit agencies and commercial lenders. The lenders agreed to a deferral of the principal repayments by three years to June 2026 and to an extension of the final maturity date by five years from 2030 to 2035. As part of refinancing, the debt transitioned to the SOFR benchmark to which we applied the Phase 2 IBOR reform relief under IFRS 9. The refinancing did not result in a derecognition of the drawn down amount, however we recognised an accounting loss on modification of US\$123 million related to changes other than the benchmark transition and capitalised transaction costs incurred of US\$50 million.

Our remaining borrowings have a fair value measured by discounting estimated cash flows with an applicable market quoted yield, and are categorised as level 2 in the fair value hierarchy.

Our borrowings are subject to a number of financial and non-financial covenants. The Group complied with these covenants during the period ending 30 June 2024 and expects to comply with these covenants for at least 12 months after the reporting date

11. Commitments and contingencies

Contingent liabilities (subsidiaries, joint operations, joint ventures and associates)

Contingent liabilities, indemnities and other performance guarantees represent the potential outflow of funds from the Group for the satisfaction of obligations, including those under contractual arrangements (for example, undertakings related to supplier agreements) not provided for on the balance sheet, where the likelihood of the contingent liabilities, guarantees or indemnities being called is assessed as possible rather than probable or remote.

Contingent liabilities, indemnities and other performance guarantees were US\$445 million at 30 June 2024 (31 December 2023: US\$435 million).

There were no material contingent liabilities arising in relation to the Group's joint ventures and associates. We have not established provisions for certain additional legal claims in cases where we have assessed that a payment is either not probable or cannot be reliably estimated. A number of our companies are, and will likely continue to be, subject to various legal proceedings and investigations that arise from time to time. As a result, the Group may become subject to substantial liabilities that could affect our business, financial position and reputation. Litigation is inherently unpredictable and large judgments may at times occur. The Group may in the future incur judgments or enter into settlements of claims that could lead to material cash outflows. We do not believe that any of these proceedings will have a materially adverse effect on our financial position.

Contingent liabilities - not quantifiable

The current status of contingent liabilities where it is not practicable to provide a reliable estimate of possible financial exposure is:

Litigation disputes

Litigation matter	Latest update
2011 Contractual payments in Guinea	<p>In 2023, we resolved a previously self-disclosed investigation by the SEC into certain contractual payments totalling US\$10.5 million made to a consultant who had provided advisory services in 2011, relating to the Simandou project in the Republic of Guinea. In August 2023, the UK Serious Fraud Office closed its case and announced that the Australian Federal Police maintains a live investigation into the matter. Rio Tinto continues to co-operate fully with relevant authorities.</p> <p>At 30 June 2024, the outcome of this investigation remains uncertain, but it could ultimately expose the Group to material financial cost. No provision has been recognised for the investigation. We believe this case is unwarranted and will defend the allegation vigorously.</p>

11. Commitments and contingencies (continued)

Other contingent liabilities

We continue to modernise agreements with Traditional Owner groups in response to the Juukan Gorge incident. We have created provisions, within "Other provisions", based on our best estimate of historical claims. However, the process is incomplete and it is possible that further claims could arise relating to past events.

Close-down, restoration and environmental provisions are not recognised for those operations that have no known restrictions on their lives as the date of closure cannot be reliably estimated. This applies primarily to our Canadian aluminium smelters, which are not dependent upon a specific orebody and have access to indefinite-lived power from owned hydropower stations with water rights permitted by local governments. In these instances, a closure obligation may exist at the reporting date. However, due to the indefinite nature of asset lives it is not possible to arrive at a sufficiently reliable estimate for the purposes of recognising a provision. Close-down, restoration and environmental provisions are recognised at these operations for separately identifiable closure activities which can be reasonably estimated, such as the demolition and removal of fixed structures after a pre-determined period. Any contingent liability for these assets will crystallise into a closure provision if and when a decision is taken to cease operations.

Capital commitments

Our capital commitments include:

- open purchase orders for managed operations and non-managed tolling entities;
- expenditure on major projects already authorised by our Investment Committee for non-managed operations.

Capital commitments, excluding the Group's share of joint venture capital commitments, were US\$6,251 million (31 December 2023: US\$4,385 million).

They do not include the estimated incremental capital expenditure relating to decarbonisation projects of US\$5 billion to US\$6 billion between 2022 and 2030 unless otherwise contractually committed.

On a legally enforceable basis, capital commitments would be approximately US\$2.1 billion (31 December 2023: US\$1.4 billion) as many of the contracts relating to the Group's projects have various cancellation clauses.

The Group's share of joint venture capital commitments was US\$154 million at 30 June 2024 (31 December 2023: US\$227 million).

12. Events after the balance sheet date

On 11 July 2024, we received US\$575 million from CIOH for its share of 2024 cash calls for the period ended 30 June 2024, which are scheduled based on budgeted expenditure.

On 15 July 2024, all conditions required for Rio Tinto's investment to develop the Simandou high-grade iron ore deposit in Guinea were satisfied, including the completion of necessary Guinean and Chinese regulatory approvals. On the same date, Simfer Jersey's investment in Winning Consortium Simandou (WCS) for co-development of the rail and port infrastructure became unconditional.

On 17 July 2024, Simfer Jersey received equity injections of US\$166 million from Rio Tinto and US\$147 million from CIOH. These were used to acquire a 34% equity interest in the WCS Ports and Railway entities for combined consideration of US\$313 million. Further shareholder loan funding to the WCS entities was made on the same day directly by Rio Tinto and CIOH in proportion to their 53%:47% ownership interest of Simfer Jersey.

Directors' declaration

Directors' statement of responsibility

In the Directors' opinion:

The condensed consolidated interim financial statements on pages [28](#) to [52](#) including the notes have been prepared in accordance with IAS 34 'Interim Financial Reporting' as adopted by the UK, applicable UK law, and applicable Australian law as amended by the Australian Securities and Investments Commission Order dated 11 July 2024. We have used the most appropriate accounting policies for Rio Tinto's business, supported by reasonable and prudent judgements.

The condensed consolidated interim financial statements give a true and fair view of the Rio Tinto Group's financial position as at 30 June 2024 and of its performance, as represented by the results of its operations, comprehensive income and expense and its cash flows for the six months then ended. There are reasonable grounds to believe that each of the Rio Tinto Group, Rio Tinto Limited

and Rio Tinto plc will be able to pay its debts as and when they become due and payable.

The interim management report includes a fair review of the information required by DTR 4.2.7R and DTR 4.2.8R, namely:

- an indication of important events that have occurred during the first six months and their impact on the condensed set of consolidated interim financial statements, and a description of the principal risks and uncertainties for the remaining six months of the financial year; and
- material related-party transactions in the first six months and any material changes in the related-party transactions described in the last annual report.

Signed in accordance with a resolution of the Board of Directors.

Dominic Barton

Chair
31 July 2024

Jakob Stausholm

Chief Executive
31 July 2024

Peter Cunningham

Chief Financial Officer
31 July 2024

Independent Auditors' Review Reports of KPMG LLP ("KPMG UK") to Rio Tinto plc and of KPMG ("KPMG Australia") to the members of Rio Tinto Limited

Conclusions

For the purpose of these reports, the terms 'we' and 'our' denote KPMG UK in relation to UK responsibilities and reporting obligations to Rio Tinto plc, and KPMG Australia in relation to Australian responsibilities and reporting obligations to the members of Rio Tinto Limited.

We have been engaged by Rio Tinto Group ("the Group") to review and have reviewed the accompanying condensed consolidated interim financial statements ("Interim Financial Statements") in the Interim Results 2024 ("Interim Report") of the Rio Tinto Group as at and for the six month period ended 30 June 2024 which comprises the:

- Group income statement
- Group statement of comprehensive income;
- Group cash flow statement;
- Group balance sheet;
- Group statement of changes in equity; and
- The related explanatory notes to the Interim Financial Statements on pages [34](#) to [52](#).

The Rio Tinto Group consists of Rio Tinto plc, Rio Tinto Limited and their respective subsidiaries including the Group's share of joint arrangements and associates as at and for the six months ended 30 June 2024. KPMG Australia considers the Directors' Declaration, on page [53](#), to be part of the Interim Financial Statements when forming its conclusion.

Review conclusion by KPMG UK

Based on our review, nothing has come to our attention that causes us to believe that the Interim Financial Statements in the Interim Report for the six months ended 30 June 2024 are not prepared, in all material respects, in accordance with IAS 34 Interim Financial Reporting as adopted for use in the UK and the Disclosure Guidance and Transparency Rules ("the DTR") of the UK's Financial Conduct Authority ("the UK FCA").

Review conclusion by KPMG Australia

Based on our review, which is not an audit, we have not become aware of any matter that makes us believe that the Interim Financial Statements of the Rio Tinto Group, including the Directors' Declaration, does not comply with the Australian Corporations Act 2001, as amended by the Australian Securities and Investments Commission Order dated 11 July 2024, including:

- giving a true and fair view of the Group's financial position as at 30 June 2024 and of its

- giving a true and fair view of the Group's financial position as at 30 June 2024 and of its performance for the six months ended on that date; and
- complying with International Accounting Standards ("IAS") 34 Interim Financial Reporting as adopted for use in the UK and the Australian Corporations Regulations 2001.

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Basis for conclusions

KPMG UK conducted its review in accordance with International Standard on Review Engagements (UK) 2410 *Review of Interim Financial Information Performed by the Independent Auditor of the Entity* ("ISRE (UK) 2410") issued for use in the UK.

In conducting its review, KPMG UK has complied with the ethical and independence requirements of the UK FRC Ethical Standards as applied to listed public interest entities.

KPMG Australia conducted its review in accordance with Auditing Standard on Review Engagements ASRE 2410 *Review of a Financial Report Performed by the Independent Auditor of the Entity* ("ASRE 2410"), as issued by the Australian Auditing and Assurance Standards Board.

KPMG Australia are independent of the Group in accordance with the auditor independence requirements of the Australian Corporations Act 2001 and the ethical requirements of the *Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants* (including Independence Standards) ("the Code") that are relevant to our audit of the annual financial report in Australia. In conducting its review, KPMG Australia have also fulfilled its other ethical responsibilities in accordance with these requirements.

Auditors' responsibilities for the review of the Interim Financial Statements

A review of Interim Financial Statements consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. We read the other information that accompanies the Interim Financial Statements and is contained in the Interim Report and consider whether it contains any apparent misstatements or material inconsistencies with the information in the Interim Financial Statements.

A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) or Australian Auditing Standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, neither KPMG UK nor KPMG Australia express an audit opinion.

KPMG Australia's responsibility is to express a conclusion on the Interim Financial Statements, including the Directors' Declaration, based on its review. ASRE 2410 requires KPMG Australia to conclude whether they have become aware of any matter that makes them believe that the Interim Financial Statements, including the Directors' Declaration, do not comply with the Corporations Act 2001, as amended by the Australian Securities and Investments Commission Order dated 11 July 2024, including giving a true and fair view of the Group's financial position as at 30 June 2024 and its performance for the six months ended on that date, and complying with IAS 34 Interim Financial Reporting as adopted or use in the UK and the Australian Corporations Regulations 2001.

KPMG UK's responsibilities are further described in the Our responsibility section of our report.

KPMG UK's conclusions relating to going concern

Based on KPMG UK's review procedures, which are less extensive than those performed in an audit as described in the Basis for conclusion section of this report, nothing has come to KPMG UK's attention that causes us to believe that the Directors have inappropriately adopted the going concern basis of accounting, or that the Directors have identified material uncertainties relating to going concern that have not been appropriately disclosed.

This conclusion is based on the review procedures performed in accordance with ISRE (UK) 2410. However, future events or conditions may cause the Group to cease to continue as a going concern, and the above conclusions are not a guarantee that the Group will continue in operation.

Responsibilities of the Directors for the Interim Financial Statements and Interim Report

The Interim Report, including the Interim Financial Statements, is the responsibility of, and has been approved by, the Directors of Rio Tinto plc and the Directors of Rio Tinto Limited.

The Directors of Rio Tinto plc are responsible for:

- preparing the half-yearly financial report in accordance with the DTR of the UK FCA;
- preparing the Interim Financial Statements in accordance with IAS 34 *Interim Financial Reporting* as adopted for use in the UK. As disclosed in note 1, the annual financial statements of the group are prepared in accordance with UK-adopted international accounting standards; and
- assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Directors of Rio Tinto Limited are responsible for:

- the preparation of Interim Financial Statements, including the Directors' Declaration, that give a true and fair view in accordance with IAS 34 *Interim Financial Reporting* as adopted for use in the UK and the Australian Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 11 July 2024.

Securities and Investments Commission Order dated 11 July 2024.

- such internal control as the Directors determine is necessary to enable the preparation of the Interim Financial Statements, including the Directors' Declaration, that give a true and fair view and is free from material misstatement, whether due to fraud or error.

Our responsibility

KPMG UK's responsibility is to express to the Rio Tinto plc a conclusion on the Interim Financial Statements in the Interim Report based on its review. KPMG UK's conclusion, including its conclusions relating to going concern, are based on procedures that are less extensive than audit procedures, as described in the Basis for conclusion section of this report.

The purpose of our review work and to whom we owe our responsibilities

KPMG UK's report is made solely to Rio Tinto plc in accordance with the terms of KPMG UK's engagement to assist the Company in meeting the requirements of the DTR of the UK FCA. KPMG UK's review has been undertaken so that we might state to Rio Tinto plc those matters we are required to state to it in this report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than Rio Tinto plc for our review work, for this report, or for the conclusions we have reached.

KPMG Australia's report is made solely to Rio Tinto Limited's members, as a body, in accordance with the Australian Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 11 July 2024. Our review work has been undertaken so that we might state to the members of Rio Tinto Limited those matters we are required to state to them in this report, and the further matters we are required to state to them in accordance with the terms agreed with Rio Tinto Limited, and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than Rio Tinto Limited's members, as a body, for our review work, for this report, or for the conclusion we have reached.

Jonathan Downer
for and on behalf of KPMG LLP
Chartered Accountants
15 Canada Square
London
E14 5GL
United Kingdom
31 July 2024
2024

Trevor Hart
Partner
Level 8/235 St Georges Terrace
Perth WA 6000

31 July

Lead Auditor's Independence Declaration under Section 307C of the Australian Corporations Act 2001

To the Directors of Rio Tinto Limited

I declare that, to the best of my knowledge and belief, in relation to the review of Rio Tinto Limited for the six months ended 30 June 2024 there have been:

- a) no contraventions of the auditor independence requirements as set out in the *Australian Corporations Act 2001* in relation to the review; and
- b) no contraventions of any applicable code of professional conduct in relation to the review.

This declaration is in respect of Rio Tinto Limited and the entities it controlled as at or during the six-months ended 30 June 2024.

KPMG

Trevor Hart
Partner
Perth
31 July 2024

Rio Tinto financial information by business unit

	Rio Tinto interest %	Segmental revenue ^(a)		Underlying EBITDA ^(a)		Depreciation and amortisation		Underlying earnings ^(a)	
		2024 US\$m	2023 US\$m	2024 US\$m	2023 US\$m	2024 US\$m	2023 US\$m	2024 US\$m	2023 US\$m
Six months ended 30 June									
Iron Ore									
Pilbara	(b)	14,398	14,705	8,856	9,541	1,087	1,036	5,295	5,712
Dampier Salt	68.4	199	192	61	54	11	10	21	22
Evaluation projects/other	(c)	1,649	1,356	(246)	59	-	-	(248)	(50)
Intra-segment	(c)	(1,040)	(653)	136	138	-	-	102	103
Total Iron Ore Segment		15,206	15,600	8,807	9,792	1,098	1,046	5,170	5,787
Aluminium									
Bauxite	(d)	1,407	1,091	513	279	203	189	198	18
Alumina	(e)	1,510	1,406	175	36	66	105	63	(70)
North American Aluminium	(f)	3,435	3,457	811	779	397	349	308	315
Pacific Aluminium	(g)	1,368	1,303	182	111	76	69	69	55
Intra-segment and other		(1,576)	(1,456)	(20)	12	-	1	(19)	1
Integrated operations		6,144	5,801	1,661	1,217	742	713	619	319
Other product group items		342	462	10	10	-	-	6	6
Product group operations		6,486	6,263	1,671	1,227	742	713	625	325
Evaluation projects/other		-	-	(94)	(87)	-	-	(70)	(65)
Total Aluminium Segment		6,486	6,263	1,577	1,140	742	713	555	260
Copper									
Kenecott	100.0	1,250	832	456	139	382	213	25	(93)
Escondida	30.0	1,676	1,427	1,128	863	216	173	501	411
Oyu Tolgoi	66.0	1,022	826	509	320	178	146	167	55
Product group operations		3,948	3,085	2,093	1,322	776	532	693	373
Evaluation projects/other		460	402	(289)	(240)	3	3	(236)	(175)
Total Copper Segment		4,408	3,487	1,804	1,082	779	535	457	198
Minerals									
Iron Ore Company of Canada	58.7	1,333	1,221	540	399	113	101	172	120
Rio Tinto Iron & Titanium	(h)	839	1,011	348	287	104	101	160	118
Rio Tinto Borates	100.0	388	401	96	102	33	30	42	56
Diamonds	(i)	149	250	(63)	70	19	17	(65)	44
Product group operations		2,709	2,883	921	858	269	249	309	338
Evaluation projects/other		29	6	(234)	(169)	-	-	(232)	(159)
Total Minerals Segment		2,738	2,889	687	689	269	249	77	179
Reportable segments total									
Simandou iron ore project	(j)	-	-	(7)	(318)	-	-	(17)	(114)
Other operations	(k)	49	97	92	(77)	157	137	(52)	(173)
Inter-segment transactions		(107)	(154)	10	(17)			4	(18)
Central pension costs, share-based payments, insurance and derivatives				(158)	167			(71)	147
Restructuring, project and one-off costs				(111)	(84)			(77)	(60)
Central costs				(494)	(512)	51	43	(405)	(453)
Central exploration and evaluation				(114)	(134)			(95)	(114)
Net interest								204	81
Underlying EBITDA/earnings		28,838	28,239	12,875	12,703	2,888	2,543	6,259	6,424
Items excluded from underlying EBITDA/earnings				59	141			58	(603)
Reconciliation to Group income statement									
Share of equity accounted unit sales and intra-subsidary/equity accounted unit sales		(1,978)	(1,515)						
Net impairment reversals/(charges)	(l)			6	(1,175)				
Depreciation and amortisation in subsidiaries excluding capitalised depreciation				(2,719)	(2,405)				
Depreciation and amortisation in equity accounted units				(275)	(238)	(275)	(238)		
Taxation and finance items in equity accounted units				(483)	(373)				
Finance items				(566)	(748)				
Consolidated sales revenue/profit before taxation/depreciation and amortisation/net earnings		26,802	26,667	8,115	6,930	2,821	2,485	5,808	5,117

Rio Tinto financial information by business unit (continued)

Capital expenditure (a)(m)

	Rio Tinto interest %	Capital expenditure for the six months ended 30 June		Operating assets ⁽ⁿ⁾ as at	
		2024 US\$m	2023 US\$m	30 June 2024 US\$m	31 December 2023 US\$m
Iron Ore					
Pilbara	(b)	1,247	1,085	18,260	17,959
Dampier Salt	68.4	11	9	158	146
Evaluation projects/other	(c)	-	-	736	780
Intra-segment	(c)	-	-	(141)	(243)
Total Iron Ore Segment		1,258	1,094	19,013	18,642
Aluminium					
Bauxite	(d)	71	79	2,440	2,649
Alumina	(e)	130	151	1,167	1,315
North American Aluminium	(f)	457	314	10,622	10,582
Pacific Aluminium	(g)	47	53	321	340
Intra-segment and other		-	-	867	997
Total Aluminium Segment		705	597	15,417	15,883
Copper					
Kennecott	100.0	332	327	2,465	2,606
Escondida	30.0	-	-	2,893	2,844
Oyu Tolgoi	66.0	635	585	16,200	15,334
Product group operations		967	912	21,558	20,784
Evaluation projects/other		3	5	199	262
Total Copper Segment		970	917	21,757	21,046
Minerals					
Iron Ore Company of Canada	58.7	117	120	1,298	1,347
Rio Tinto Iron & Titanium	(h)	97	107	3,330	3,386
Rio Tinto Borates	100.0	23	25	465	502
Diamonds	(i)	34	37	87	29
Product group operations		271	289	5,180	5,264
Evaluation projects/other		-	15	878	873
Total Minerals Segment		271	304	6,058	6,137
Reportable segments total					
Simandou iron ore project	(j)	742	-	1,192	738
Other operations	(k)	12	32	(2,359)	(2,634)
Inter-segment transactions				21	20
Other items		43	49	(769)	(1,015)
Total		4,001	2,993	60,330	58,817
Add back: Proceeds from disposal of property, plant and equipment		17	8		
Total purchases of property, plant & equipment and intangibles as per cash flow statement		4,018	3,001		
Add: Net debt				(5,077)	(4,231)
Equity attributable to owners of Rio Tinto				55,253	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 62 to 69).

- Segmental revenue, Underlying EBITDA and Capital expenditure are defined and calculated in note 3 from pages 37 to 39. Underlying Earnings is defined and calculated within the Alternative performance measures section on pages 63 to 65.
- Pilbara represents the Group's 100% holding in Hamersley, 50% holding in Hope Downs Joint Venture, 54% holding in Western Range Joint Venture and 65% holding in Robe River Iron Associates. The Group's net beneficial interest in Robe River Iron Associates is 53%, as 30% is held through a 60% owned subsidiary and 35% is held through a 100% owned subsidiary.
- 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 Jonquièrre (Vaudreuil), Yarwun, 80% interest in Queensland Alumina and 10% interest in São Luis (Alumar).
- f. North American Aluminium represents the Group's 100% interest in Alma, Arvida, Grande-Baie, ISAL, Kitimat, Laterrière, 40% interest in Alouette, 25.1% interest in Bécancour, 20% interest in Sohar and 50% interest in Matalco.
- g. Pacific Aluminium represents the Group's 100% interest in Bell Bay, 59.4% interest in Boyne Island, 79.4% interest in Tiwai Point and 51.6% interest in Tomago. We have entered into agreements to increase our interest in Boyne Island and Tiwai Point, however those transactions had not completed at 30 June 2024.
- h. Includes our interests in Rio Tinto Iron and Titanium Quebec Operations (100%), QIT Madagascar Minerals (QMM, 80%) and Richards Bay Minerals (attributable interest of 74%).
- i. Relates to our (100%) interest in the Diavik diamond mine and diamond marketing operations.
- j. Rio Tinto Simfer UK Limited (which is wholly owned by the Group) holds a 53% interest in Simfer Jersey Limited (Simfer Jersey), a company incorporated in Jersey. Simfer Jersey, in turn, has an 85% interest in Simfer S.A., the company that will carry out the Simandou mining operations in Guinea. Simfer Jersey also owns 100% of Simfer InfraCo Guinée S.A., a company incorporated in Guinea, which will deliver Simfer Jersey's scope of the co-developed rail and port infrastructure. Additionally, Simfer Jersey owns 100% of Simfer Marine Singapore Pte Ltd, a Singaporean entity, which will own the transshipment vessels (TSV) and holds a 100% interest in Simfer Marine Guinée S.A., a Guinea entity, which will operate the TSV. As at 30 June 2024, the Group, therefore, has a 45.05% indirect interest in Simfer S.A. and a 53% indirect interest in both Simfer InfraCo Guinée S.A. and Simfer Marine Singapore Pte Ltd. These entities are consolidated as subsidiaries and together referred to as the Simandou iron ore project.

Notes to financial information by business unit (continued)

- k. Other operations includes our 86% interest in Energy Resources of Australia, sites being rehabilitated under the management of Rio Tinto Closure, Rio Tinto Marine, and the remaining legacy liabilities of Rio Tinto Coal Australia. These include provisions for onerous contracts, in relation to rail infrastructure capacity, partly offset by financial assets and receivables relating to contingent royalties and disposal proceeds.
- l. Refer to note 5 for allocation of impairment reversals/(charges) between consolidated amounts and share of profit in EAUs.
- m. Capital expenditure is the net cash outflow on purchases less sales of property, plant and equipment, capitalised evaluation costs and purchases less sales of other intangible assets as derived from the Group cash flow statement. The details provided include 100% of subsidiaries' capital expenditure and Rio Tinto's share of the capital expenditure of joint operations but exclude equity accounted units.
- n. Operating assets of the Group represents equity attributable to Rio Tinto adjusted for net (debt)/cash. Operating assets of subsidiaries, joint operations and the Group's share relating to equity accounted units are made up of net assets adjusted for net (debt)/cash and post-retirement assets and liabilities, net of tax. Operating assets are stated after the deduction of non-controlling interests; these are calculated by reference to the net assets of the relevant companies (i.e., inclusive of such companies' debt and amounts due to or from Rio Tinto Group companies).

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 in proportion to our equity interest (after adjusting for sales to/from subsidiaries). The reconciliation can be found in note 3.

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. The reconciliation of profit after tax to underlying EBITDA can be found in the segmental information note on page [39](#).

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.

Six months ended 30 June	2024 US\$m	2023 US\$m
Underlying EBITDA	12,093	11,728
Consolidated sales revenue	26,802	26,667
Share of equity accounted unit sales and inter-subsidiary/equity accounted unit sales eliminations	1,978	1,515
	28,780	28,182
Underlying EBITDA margin	42 %	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.

Six months ended 30 June	2024 US\$m	2023 US\$m
Pilbara		
Underlying EBITDA	8,856	9,541
Pilbara segmental revenue	14,398	14,705
Less: Freight revenue	(1,145)	(913)
Pilbara segmental revenue, excluding freight revenue	13,253	13,792
Pilbara underlying FOB EBITDA margin	67 %	69 %

Underlying EBITDA margin from Aluminium integrated operations

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

Six months ended 30 June	2024 US\$m	2023 US\$m
Aluminium		
Underlying EBITDA - integrated operations	1,661	1,217
Segmental revenue - integrated operations	6,144	5,801
Underlying EBITDA margin from integrated operations	27 %	21 %

Underlying EBITDA margin (product group operations)

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

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Copper		
Underlying EBITDA - product group operations	2,093	1,322
Segmental revenue - product group operations	3,948	3,085
Underlying EBITDA margin - product group operations	53 %	43 %

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Minerals		
Underlying EBITDA - product group operations	921	858
Segmental revenue - product group operations	2,709	2,883
Underlying EBITDA margin - product group operations	34 %	30 %

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.

Alternative performance measures (continued)

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

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

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

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

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
Six months ended 30 June					
Net earnings	8,115	(2,225)	(82)	5,808	5,117
Items excluded from underlying earnings					
Impairment (reversals)/charges ^(a)	(18)	(37)	-	(55)	828

impairment (reversals)/charges	(10)	(5)	-	(5)	52
Foreign exchange and derivative losses/(gains):					
- Exchange gains on external net debt, intragroup balances and derivatives ^(b)	(38)	6	2	(30)	(98)
- Losses/(gains) on currency and interest rate derivatives not qualifying for hedge accounting ^(c)	69	4	2	75	(24)
- Gains on embedded commodity derivatives not qualifying for hedge accounting ^(d)	(3)	(1)	(3)	(7)	(76)
Change in closure estimates (non-operating and fully impaired sites) ^(e)	(44)	3	-	(41)	(27)
Total excluded from underlying earnings	(34)	(25)	1	(58)	603
Underlying earnings	8,081	(2,250)	(81)	5,750	5,720

(a) Refer to note 5 for allocation of impairment (reversals net of charges)/charges between consolidated amounts and share of profit in EAJUs.

(b) Exchange gains on external net debt, intragroup balances and derivatives includes post-tax foreign exchange losses on net debt of US\$132 million (30 June 2023: US\$6 million) offset by post-tax gains of US\$162 million (30 June 2023: US\$104 million) on intragroup balances, primarily as a result of the Australian dollar weakening against the US dollar.

Alternative performance measures (continued)

- (c) Valuation changes on currency and interest rate derivatives, which are ineligible for hedge accounting, other than those embedded in commercial contracts, and the currency revaluation of embedded US dollar derivatives contained in contracts held by entities whose functional currency is not the US dollar.
- (d) Valuation changes on derivatives, embedded in commercial contracts that are ineligible for hedge accounting but for which there will be an offsetting change in future Group earnings. Mark-to-market movements on commodity derivatives entered into with the commercial objective of achieving spot pricing for the underlying transaction at the date of settlement are included in underlying earnings.
- (e) For the six months 30 June 2024, a post-tax credit of US\$41 million (30 June 2023: US\$27 million) arose from the change in discount rate applied to provisions for close-down, restoration and environmental liabilities at legacy sites where the environmental damage preceded ownership by Rio Tinto, from 2.0% to 2.5% (30 June 2023: from 1.5% to 2.0%).

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 period.

Six months ended 30 June	2024	2023
Net earnings (US\$ million)	5,808	5,117
Weighted average number of shares (millions)	1,622.7	1,621.0
Basic earnings per ordinary share (cents)	357.9	315.7
Items excluded from underlying earnings per share (cents) ^(a)	(3.6)	37.2
Basic underlying earnings per ordinary share (cents)	354.3	352.9

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

Six months ended 30 June	2024	2023
Income excluded from underlying earnings (US\$m) (refer to page 64)	(58.0)	603.0
Weighted average number of shares (millions)	1,622.7	1,621.0
Items excluded from underlying earnings per share (cents)	(3.6)	37.2

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.

Alternative performance measures (continued)

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.

Six months ended 30 June	2024	2023
	US\$m	US\$m
Profit before taxation	8,115	6,930
Add back		
Finance income	(272)	(245)
Finance costs	381	536
Share of profit after tax of equity accounted units	(422)	(431)
Items excluded from underlying earnings	(34)	899
Add: Dividends from equity accounted units	421	287
Calculated earnings	8,189	7,976

Finance income	272	245
Finance costs	(381)	(536)
Add: Amounts capitalised	(222)	(120)
Total net finance costs before capitalisation	(331)	(411)
Interest cover	25	19

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.

	2024 (cents)	2023 (cents)
Six months ended 30 June		
Interim dividend declared per share	177.0	177.0
Underlying earnings per share	354.3	352.9
Payout ratio	50 %	50 %

Alternative performance measures (continued)

APMs derived from cash flow statement

Capital expenditure

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

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

Rio Tinto share of capital investment

Rio Tinto's share of capital investment represents our economic investment in capital projects.

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

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Rio Tinto's share of capital investment	4,010	3,001

Purchase of property, plant and equipment and intangible assets	4,018	3,001
Less: Equity or shareholder loan financing received/due from non-controlling interests ^(a)	(349)	-
Rio Tinto share of capital investment	3,669	3,001

(a) On 11 July 2024, we received US\$575 million from Chalco Iron Ore Holdings Ltd (CIOH), of which US\$349 million relates to CIOH's share of capital expenditure incurred on the Simandou project to 30 June 2024. Refer to note 12 for further details.

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.

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Net cash generated from operating activities	7,056	6,975
Less: Purchase of property, plant and equipment and intangible assets	(4,018)	(3,001)
Less: Lease principal payments	(212)	(213)
Add: Sales of property, plant and equipment and intangible assets	17	8
Free cash flow	2,843	3,769

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.

	Six months ended 30 June 2024					
	Financial liabilities			Other assets		
	Borrowings excluding overdrafts (a) US\$m	Lease liabilities ^(b) US\$m	Derivatives related to net debt (c) US\$m	Cash and cash equivalents including overdrafts (a) US\$m	Other investments (d) US\$m	Net debt US\$m
At 1 January	(13,000)	(1,351)	(429)	9,672	877	(4,231)
Foreign exchange adjustment	37	22	(21)	(30)	-	8
Cash movements excluding exchange movements	15	212	(2)	(389)	(422)	(586)
Other non-cash movements	69	(300)	(43)	-	6	(268)
At 30 June	(12,879)	(1,417)	(495)	9,253	461	(5,077)

(a) Borrowings excluding overdrafts of US\$12,879 million (31 December 2023: US\$13,000 million) differs from Borrowings on the balance sheet as it excludes bank overdrafts of US\$3 million (31 December 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\$461 million (31 December 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 period. It demonstrates the degree to which the Group's operations are funded by debt versus equity.

	30 June 2024 US\$m	31 December 2023 US\$m
Net debt	(5,077)	(4,231)
Net debt	(5,077)	(4,231)
Total equity	(57,164)	(56,341)
Net debt plus total equity	(62,241)	(60,572)
Net gearing ratio	8%	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.

	2024 US\$m	2023 US\$m
Six months ended 30 June		
Profit after tax attributable to owners of Rio Tinto (net earnings)	5,808	5,117
Items added back to derive underlying earnings	(58)	603
Underlying earnings	5,750	5,720
Add/(deduct):		
Finance income per the income statement	(272)	(245)
Finance costs per the income statement	381	536
Tax on finance cost	(105)	(191)
Non-controlling interest share of net finance costs	(236)	(207)
Net interest cost in equity accounted units (Rio Tinto share)	28	26
Net interest	(204)	(81)
Adjusted underlying earnings	5,546	5,639
Annualised adjusted underlying earnings	11,092	11,278
Equity attributable to owners of Rio Tinto - beginning of the period	54,586	50,634
Net debt - beginning of the period	4,231	4,188
Operating assets - beginning of the period	58,817	54,822
Equity attributable to owners of Rio Tinto - end of the period	55,253	51,625
Net debt - end of the period	5,077	4,350
Operating assets - end of the period	60,330	55,975
Average operating assets	59,574	55,399
Underlying return on capital employed	19 %	20 %

Metal prices and exchange rates

		Six months to 30 June 2024	Six months to 30 June 2023	Increase/ (Decrease)	Year to 31 December 2023
Metal prices - average for the period					
Copper	- US cents/lb	412	396	4 %	386
Aluminium	- US\$/tonne	2,358	2,329	1 %	2,250
Gold	- US\$/troy oz	2,203	1,932	14 %	1,941

	Six month average to 30 June				At 30 June		At 31 December	
Exchange rates against the US dollar	2024	2023	Increase/ (Decrease)	2024	2023	Increase/ (Decrease)	2023	
Pound sterling	1.27	1.23	3 %	1.26	1.26	- %	1.28	
Australian dollar	0.66	0.68	(3) %	0.67	0.66	2 %	0.69	
Canadian dollar	0.74	0.74	- %	0.73	0.75	(3) %	0.76	
Euro	1.08	1.08	- %	1.07	1.09	(2) %	1.11	

South African rand	0.053	0.055	(4)	%	0.054	0.053	2	%	0.054
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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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